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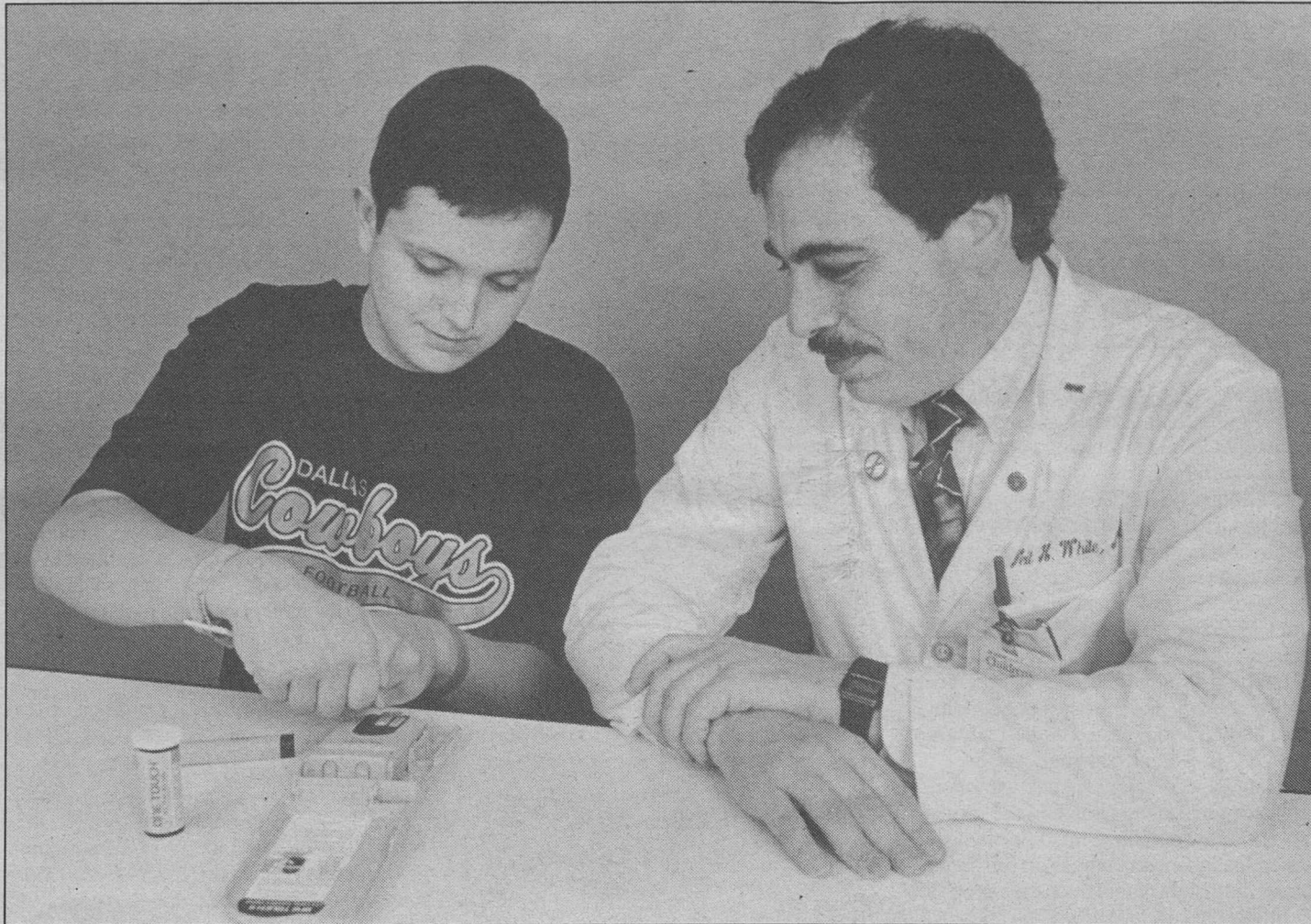
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Medical Update



Neil White, M.D., right, watches as patient Matt Falkenburry uses a blood glucose meter. Falkenburry uses the meter four times a day as part of a diabetes management program. White is the principal investigator in the study that will determine if insulin-dependent diabetes can be prevented.

Preventing diabetes

School of Medicine to participate in landmark diabetes clinical trial

The School of Medicine is participating in the first large-scale clinical trial to determine if insulin-dependent diabetes mellitus (IDDM) can be prevented.

As an affiliate center for the National Institutes of Health (NIH) study, researchers at the School of Medicine will screen relatives of people with IDDM (also called Type 1 diabetes) for specific antibodies associated with eventual development of this chronic debilitating disorder. Earlier studies have suggested that the presence of these antibodies in a person's blood indicates that he or she may develop diabetes within five years.

Nationwide, researchers need to screen between 60,000 and 80,000 people to recruit the 830 volunteers needed for the study, said Neil H. White, M.D., principal investigator for the St. Louis site and an associate professor of pediatrics at the medical school. White will conduct the research at St. Louis Children's Hospital. Preliminary studies conducted in animals and small trials in humans have shown that it may be possible to prevent IDDM by immunizing with insulin.

"This landmark study represents the first attempt to place decades of research on the etiology of IDDM into a large-scale clinical trial setting," said White. "The hopes are to determine whether IDDM can be prevented in susceptible individuals. If successful, this study could lead to the development of techniques to prevent the development of this disorder and its subsequent long-term morbidity and mortality."

People with the antibodies who agree to participate in the Diabetes Prevention Trial-Type 1 will be assigned to one of two trials according to the volunteers' degree of risk, which is determined by their level of antibodies and confirmed by further tests. Volunteers at higher risk for IDDM will be assigned randomly to a control group or to a group receiving insulin injections. Volunteers at lower risk will be assigned randomly to a control group or to a group receiving oral insulin. The insulin injection trial will begin immediately, and the oral insulin trial will begin in 1995.

Researchers now know that IDDM develops over several years and that symptoms of the disease do not appear until most of the insulin-producing cells have been damaged. When pre-diabetic mice were given insulin

prior to onset of diabetes, the mice developed smaller, less active beta cells that were less susceptible to immune destruction.

Using a combination of tests, it has become possible over the past decade to predict with considerable confidence who is at risk of developing diabetes over the next several years, White said. Advances in the understanding of the mechanism by which IDDM develops have allowed scientists to design strategies that have the potential of halting or delaying the disease. Administering insulin in a different manner than is given to treat diabetes, he said, may have the potential for preventing the full-blown disease and its life-threatening complications.

Each year, 11,000 new cases of IDDM are diagnosed in children and teenagers. Over time, diabetes can cause severe complications such as eye, kidney, nerve and

heart disease. IDDM occurs when white blood cells vital to the body's defense against infectious diseases launch a self-directed or "autoimmune" attack on the insulin-producing beta cells in the pancreas. Insulin regulates how cells use and store nutrients for energy.

The Diabetes Prevention Trial-Type 1 is sponsored by the National Institute of Diabetes and Digestive and Kidney Diseases in cooperation with the National Institute of Child Health and Human Development, the National Institute for Allergy and Infectious Diseases, the Juvenile Diabetes Foundation and the American Diabetes Association.

People between the ages of 3 and 45 who have relatives with IDDM are eligible for screening. For more information, call 454-4347.

Panel releases new guidelines for treatment, diagnosis of benign prostate enlargement

New guidelines regarding the diagnosis and treatment of benign prostate hyperplasia (enlargement) are urging doctors to use a more conservative approach to evaluate this common problem and to get patients more involved in choosing their own treatment, according to Bruce McClennan, M.D., professor of radiology at the Mallinckrodt Institute of Radiology, who helped develop the guidelines. The disorder affects half of men over age 60.

The guidelines recently were released by the Agency for Health Care Policy and Research, a part of the Department of Health and Human Services. McClennan was the only radiologist who served on the national panel that developed the guidelines.

Benign prostate hyperplasia (BPH) causes prostate gland enlargement and restricts urine flow. Symptoms often are progressive and include difficulty urinating, the need to urinate frequently and the inability to empty the bladder completely. In some cases, BPH is an annoyance that can disturb sleep. More severe cases can lead to recurring urinary-tract infections and kidney damage. The most popular treatment is a surgical procedure that also is one of the most common operations in older men. Other treatment options include medica-

tions such as Proscar, or simply watchful waiting.

The guidelines are likely to alter the way BPH patients are evaluated and also may reduce the cost of diagnosis and treatment, McClennan said.

"Patient involvement is strongly recommended by these guidelines," said McClennan. The guidelines include educational materials for doctors to give their patients. "This is a good change in terms of better informing the patient so he can participate in the process as a well-informed participant," he said.

The new guidelines tell doctors to start with simple, inexpensive tests to evaluate potential BPH patients, then perform more tests only if it seems necessary, McClennan said. For example, routine X-rays of the urinary tract no longer are recommended unless certain conditions are present, such as blood in the urine, McClennan said. In addition, another routinely performed test called cystoscopy should be done only in patients who opt for surgery. Cystoscopies are invasive examinations used to look inside the bladder and assess prostate blockage. The guidelines point to ultrasound as a noninvasive alternative to both of these tests.

Diana Carmichael appointed assistant dean of planning

Diana Carmichael has been named assistant dean for strategic and operations planning at the School of Medicine.

Carmichael's appointment was announced by Lee Fetter, associate vice chancellor and associate dean for administration and finance at the medical school.

"This promotion attests to the instrumental role that Diana has played in the successful development of planning at our medical school," said Fetter. "She has worked closely with all of the departments to help us assess our strengths and weaknesses and create a vision of the future. Her work is critical in support of our capacity to respond to the rapid changes occurring in our profession."

In her previous role as director of strategic and operations planning, Carmichael directed the departmental strategic planning process for all 18 clinical and basic science departments at the School of Medicine and worked with department chairs to implement plans relative to research, clinical care and teaching. As assistant dean, her responsibilities also will include coordination of the medical school's departmental strategic plans with the affiliated hospitals' clinical service line plans and the representation of the medical school in major inter-institutional medical campus planning initiatives.

Carmichael joined the School of Medicine in 1991 as the manager of operations planning. Before joining Washington University, she was a consultant with Price Waterhouse's national healthcare strategic consulting group and a senior healthcare consultant with Ernst & Young.

Carmichael received a bachelor's degree in kinesiology from the University of California, Los Angeles, in 1985 and a master's degree in hospital and healthcare administration from the University of Minnesota in 1988.

She is a member of the Association of American Medical Colleges and the American Hospital Association as well as vice president of the St. Louis Society for Healthcare Planning and Marketing.



Diana Carmichael

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 **Washington**
 WASHINGTON UNIVERSITY IN ST. LOUIS

Washington People

Majerus studies how blood clotting occurs

Americans swallow millions of aspirin tablets every year for relief from a wide variety of ailments. Thanks in large part to Philip Majerus, M.D., professor of medicine, many are now taking aspirin for an entirely new reason. He discovered how aspirin interferes with blood clotting — information that has led directly to the now-common practice of taking low doses of aspirin to prevent heart attack and stroke.

After 28 years of academic research, Majerus now is known internationally for this accomplishment and many other important findings. His laboratory has contributed significantly to our knowledge about how blood clotting occurs and how cells communicate with their ever-changing surroundings. Within the Washington University community, he has earned a reputation as an enthusiastic, humorous and outspoken colleague, as well as a valued mentor.

Surprisingly, his academic research career had a rather shaky start. Majerus, who graduated with honors from the Washington University School of Medicine in 1961, returned in 1966 to join the faculty as an assistant professor of medicine in the Division of Hematology/Oncology. He decided to apply his expertise in fatty acid synthesis to try to explain how these materials are formed in blood cells.

"I started out with red blood cells because there are more of those than anything else. But it turns out that red blood cells don't make any fatty acids," Majerus explained. "Then I looked at white blood cells, and they don't make fatty acids either. So then I was desperate. I thought I was going to be out of things to do for the rest of my career." He turned to another blood constituent called platelets and found, to his relief, that they did form fatty acids. Besides turning around Majerus' brief false start in academic research, the choice of working with platelets also got him interested in blood clotting.

Majerus began studying aspirin in the 1970s to try to find an explanation for one of this drug's few drawbacks, its tendency to cause bleeding. After several years of work, he and his colleagues found the answer. They discovered that aspirin indirectly affects tiny blood components called platelets. Platelets already were known as an important player in blood clotting; they migrate to wounds and clump together to form the initial framework of blood clots. Aspirin, the investigators found, prevents production of the protein that causes platelets to stick together. Their findings, published in 1975, were the first to explain precisely how aspirin prevents clotting.

At the time, a few researchers had considered the possibility that aspirin's anti-clotting properties might have a medical benefit. But clinical studies all had looked at very high doses, Majerus said. "The toxicity was so great that it tended to wipe out any detectable benefit," he said.

But Majerus' findings pointed to a way around the toxicity problem. He and his colleagues knew that platelets could not counteract the effects of aspirin because they cannot make proteins. Once hit, a platelet probably would be affected for its entire 10-day life span. Because aspirin's effect would not wear off, it seemed likely that a very low dose might be enough to reduce unwanted clotting.

Majerus and his colleagues turned to dialysis patients to test their theory. These patients wear plastic shunts in their arms for easy connection to dialysis machines; blood clots tend to form in the shunts and offer an easy window for monitoring clotting. In a 1979 study of 44 patients, Majerus found that low doses of aspirin — one half an adult tablet per day — significantly reduced clotting, and without side effects.

"That was the first real proof that low-dose aspirin could be an anti-thrombotic drug," Majerus said. The finding spurred dozens of clinical studies that have since established low-dose aspirin as a safe, protective agent against heart attack and stroke.

Majerus' work with aspirin is only part of his long line of research about how the body controls blood clotting. This process is regulated by a complex set of chemical reactions, set off by a wound or other disturbance. Proteins in the blood called clotting factors are "activated," one by one, to become enzymes. Each enzyme performs one step in the clotting scheme, then sets off the next step. The end result is the formation of a stringy protein called fibrin, which forms a mesh to cover wound sites and stop bleeding.

Majerus began looking at platelets' role in the clotting scheme in the early 1970s. At the time, it was clear that platelets helped plug up wounds, but more interestingly, that their arrival at the scene seemed to fuel the clotting process.

"But it wasn't known in molecular terms how that was actually happening," said Joe Miletich, M.D., Ph.D., professor of medicine and pathology. Miletich conducted platelet research as a graduate student in Majerus' lab.

Majerus' work went a long way toward explaining platelets' fueling effect. He and his colleagues found that platelets carry a receptor that mediates clotting reactions. They also learned that when platelets stick to a wound, their surfaces undergo changes; those changes cause clotting reactions to run thousands of times faster on the platelet surface than they would occur otherwise. "That helped explain how the body could have this extraordinary

to keep the clotting from getting out of hand and blocking off the whole blood vessel," he said.

More recently, Majerus has shifted his interest to a new topic: how cells respond to their environment. He focuses on a network of chemical reactions called the phosphatidylinositol messenger-generating system. Through this pathway, cells pick up signals from their environment and generate chemical messengers that travel inside the cell to initiate the needed response. The pathway is thought to regulate vital activities such as cell movement and growth.

So far, Majerus and his colleagues have identified nine of 20 to 30 enzymes thought to make up this signaling pathway.

For example, an enzyme he discovered last year acts as an on/off switch to control DNA synthesis during cell division. This enzyme also may play a role in depression; Majerus suspects the link because it is inhibited by lithium, a drug used to treat depression. His discovery of another enzyme in the pathway provided the first explanation for the cause of Lowe's syndrome, a serious disorder involving mental retardation, cataracts and severe kidney problems. The disease develops in people with an abnormal form of the enzyme.

Majerus' accomplishments today are a far cry from his teenage years as a self-described "juvenile delinquent." He was turned around by a high school chemistry teacher who got him involved in studying chemistry. Majerus later completed a bachelor's degree from Notre Dame University in only three years and then earned his medical degree. He spent three years as a research associate at the National Institutes of Health before joining the Washington University faculty.

Since then, he has been honored many times for his work. Majerus is a member of the National Academy of Sciences and a fellow of the American Association for the Advancement of Science. He has held editorial responsibilities at several major scientific journals, including the Proceedings of the National Academy of Sciences. He served as editor of the Journal of Clinical Investigation for five years.

But colleagues say that, by far, his most important contribution is his impact on the hematology division and the people who have trained in it. Specifically, he is regarded as an excellent mentor. A huge proportion of the people who have trained in Majerus' laboratory have gone on to successful careers themselves, said Kornfeld. "He has had a major impact on the training of the next generation of people in hematology/oncology."

Majerus' success as a mentor stems from his enthusiasm for science and medicine, his creativity and a willingness to plunge into new areas, colleagues said. "He is a role model in that he's very knowledgeable and analytical and enthusiastic and is willing to share all those things with students, fellows and postdocs," Kornfeld said.

"Phil has an unusually gifted talent for identifying good people, but even more important than that, for evoking the best possible work from them. He is an absolute master at getting people to realize their best potential," Miletich said.

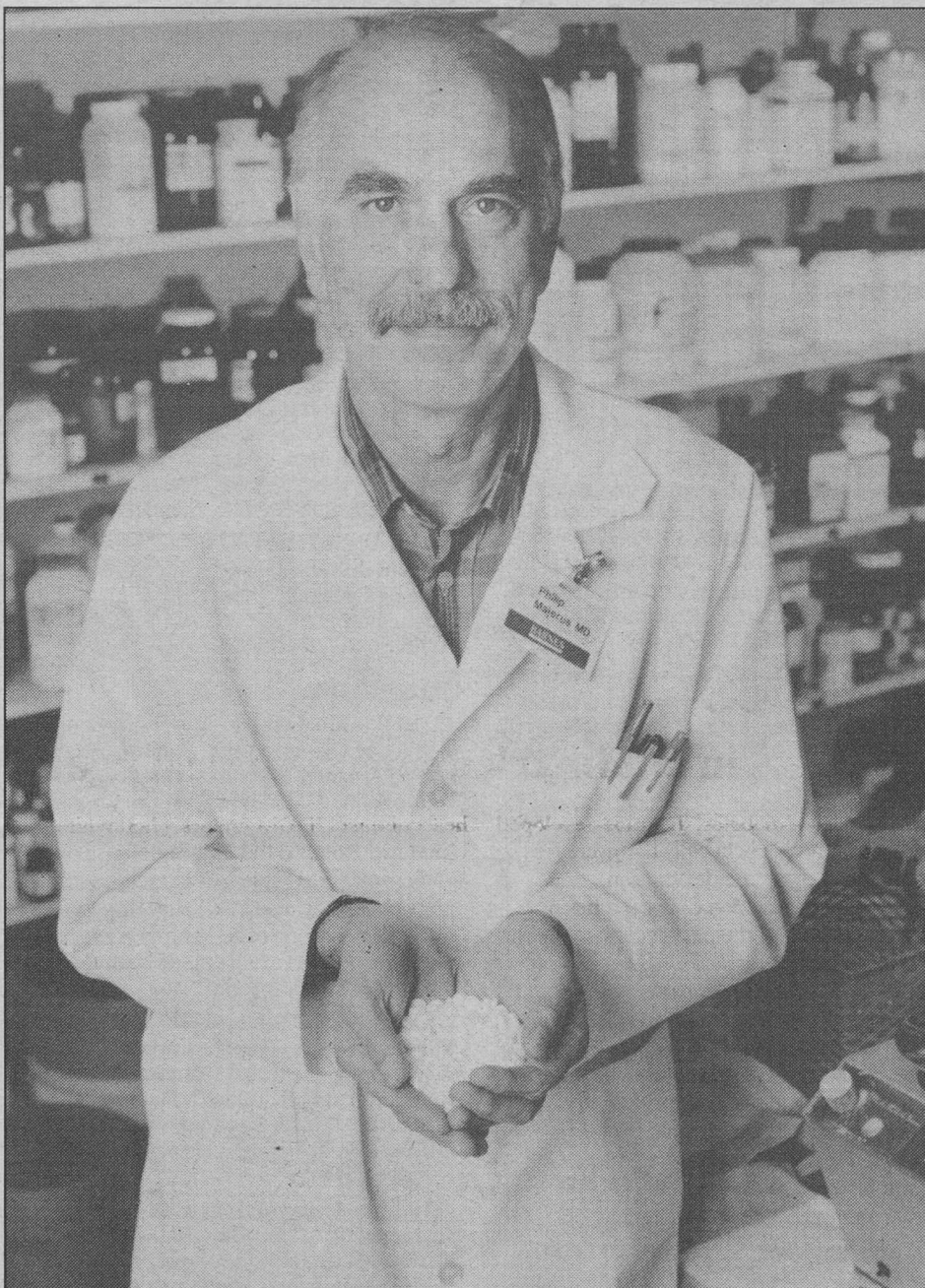
That potential is realized, in part, because Majerus holds his trainees to high standards, Miletich added. "He challenges and challenges everything and gets you angry enough that you will work as hard as necessary to prove something to him," he said. "Once he's confident that you've proved something, he's your biggest supporter and fan. That combination of things has led him to be a very good mentor for a very large number of people."

His proteges now are conducting research at this institution and others on a wide variety of topics, including blood clotting, immunology and gene expression. Fittingly, Majerus said their success is his most valued accomplishment.

Majerus also has played an instrumental role in the hematology division's dramatic growth over the past 20 years, said Kornfeld. The two have shared the post of division director since 1973. When they joined the division together in 1966, it had only two faculty members and a few clinical fellows. Today, it comprises a total of some 100 faculty, students and trainees. Recently, Majerus accepted a new administrative responsibility as the Department of Medicine's vice chairman for financial affairs. In that post, his goal is to help the department find the resources to meet upcoming challenges.

Outside of his professional life, Majerus is married and has four children and three grandchildren. His wife, Janet, is the mayor of University City and a writer. He enjoys mountain climbing, skiing and backpacking. And yes, he does take aspirin every day.

— Juli Leistner



"He has had a major impact on the training of the next generation of people in hematology/oncology."

— Stuart Kornfeld

ability to generate blood clots quickly but keep the clotting reactions localized right where they are needed," Miletich said.

"He was among the first to focus on the importance of the surfaces of cells such as platelets as being the site where clotting factors actually work," said longtime colleague Stuart Kornfeld, M.D., professor of medicine and of biochemistry and molecular biophysics. "He did the pioneering work in that area, and that is a major contribution to the understanding of clotting."

Majerus also has helped explain how the explosive clotting process is kept in check once a wound is sealed. In 1984, his lab isolated the human version of a protein called thrombomodulin, which sits on the surface of cells that line blood vessels. Researchers have since learned how thrombomodulin helps turn off the clotting cascade. After a clot is fully formed, a clotting protein called thrombin gets out of the clot into the bloodstream, encounters thrombomodulin, and sticks to it. That interaction triggers biochemical reactions that eventually stop further clot formation, Miletich said.

"It's a very elegant system that the body has developed

Calendar

March 3-12



Exhibitions

"The Near Distance: James McGarrell's St. Louis Years" by McGarrell, prof. emeritus of art. Through March 27. Gallery of Art, upper gallery, Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends. 935-5490.

Student Juried Art Show. Opening: 5-7 p.m. March 4. Continues through March 20. Bixby Gallery, Bixby Hall. Hours: 10 a.m.-4 p.m. weekdays; 1-5 p.m. weekends. 935-6597.

"The Work of Joseph Allen Stein" by architect Stephen White, asst. dean, School of Architecture, Roger Williams U., Bristol, R.I. Through March 4. Exhibit in Givens Hall corridor. Hours: 9 a.m.-8 p.m. weekdays and weekends. 935-6200.



Films

Thursday, March 3

7 and 9 p.m. Filmboard Foreign Series. "Triumph of the Will" (1936, B&W), in German with English subtitles. Room 100 Brown Hall. Cost: \$3. **For 24-hour Filmboard hotline, call 935-5983.**

Friday, March 4

7 and 9:30 p.m. Filmboard Feature Series. "Bob Roberts" (1992). (Also March 5, same times, and March 6 at 7 p.m.) Room 100 Brown Hall. Cost: \$3.

Midnight. Filmboard Midnight Series. "Attack of the Killer Tomatoes" (1978). (Also March 5, same time, and March 6 at 9:30 p.m.) Room 100 Brown Hall. Cost: \$3.

Tuesday, March 8

7 p.m. Chinese Film Series. "Assassination," with English subtitles. Room 219 South Ridgley Hall.

Wednesday, March 9

7 and 9 p.m. Filmboard Classic Series. "The Devil to Pay" (1930, B&W). (Also March 10, same times.) Room 100 Brown Hall. Cost: \$3.



Lectures

Thursday, March 3

9:30 a.m. Tenth Annual Edward Massie Lecture. "The Value of Angioplasty in Managing Coronary Artery Disease: Can It Be Cost Effective?" Spencer B. King III, prof. of medicine (cardiology) and radiology and director, Interventional Cardiology, Emory U., Atlanta. Clopton Aud., 4950 Children's Place.

Noon. Genetics seminar. "Multiplex Sequencing: Technology Development and Application to the Goals of the Human Genome Project," Doug Smith, Collaborative Research Inc. Room 816 McDonnell Medical Sciences Bldg. 362-7072.

Noon. Pediatrics research seminar. "Activation of Calmodulin Dependent Protein Kinase During Insulin Secretion," Michael L. Landt, research assoc. prof., Dept. of Pediatrics. Third Floor Aud., St. Louis Children's Hospital. 454-6128.

4 p.m. Architecture lecture. "Street Architect," Tom Cohen, architect, Johannes/Cohen

Collaborative architectural firm, St. Louis. Cohen, owner and designer of Fitz's root beer stand, will discuss outside opportunities in architecture. Room 116 Givens Hall.

4 p.m. Biology and biomedical sciences student-organized seminar. "Hybridization and Phylogenetics: An Empirical Approach," Lucinda McDade, asst. prof. of ecology and evolutionary biology, U. of Arizona, Tucson. Room 322 Rebstock Hall.

4 p.m. Earth and planetary sciences colloquium. "Late-stage Evolution of U.S. Atlantic Type Passive Continental Margins," Thomas W. Gardner, prof., Dept. of Geosciences, Pennsylvania State U., University Park. Room 362 McDonnell Hall.

4:30 p.m. First Annual Maya Zuck Lecture in Early Childhood Education. "Language and Literacy Development: How Important Is Reading Books With Preschoolers?" Catherine E. Snow, prof. of education and academic dean, Harvard Graduate School of Education, Cambridge, Mass. Room 149 McMillan Hall. 935-6707.

Friday, March 4

Noon. Cell biology and physiology seminar. "K⁺ Channels and ATP: Both Sides Now," John P. Adelman, asst. prof., Vollum Institute of Oregon Health Sciences U., Portland. Room 423 McDonnell Medical Sciences Bldg. 362-6944.

4 p.m. Anatomy and neurobiology seminar. "How Many Somatosensory Cortical Areas Fit Onto the End of a Fingertip?" Harold Burton, assoc. prof., Dept. of Cell Biology and Physiology and prof., Dept. of Anatomy and Neurology. Room 928 McDonnell Medical Sciences Bldg.

4 p.m. Assembly Series lecture/demonstration. "The Art of Musical Improvisation." John Zorn's 12-piece ensemble group, Cobra, will perform improvisational avant garde jazz. Steinberg Hall Aud. 935-5285.

4 p.m. Microbial pathogenesis seminar. "Microbial Stress Reactions and Pathogenesis," Staffan Normark, research prof., Dept. of Molecular Microbiology. Room 775 McDonnell Medical Sciences Bldg.

6 and 8:30 p.m. WU Association Travel Lecture Series. "Antarctic Adventure," Theodore J. Walker, research marine biologist, lecturer and founder of the first whale observatory on the West Coast. Graham Chapel. Cost: \$4.50 at the door. 935-5212.

Saturday, March 5

11 a.m.-12:30 p.m. University College Saturday Seminar. "Satellite Imagery, Anthropology and Conservation Policy: A Madagascar Example," Robert W. Sussman, prof. of anthropology. Room 362 McDonnell Hall. 935-6788.

3:30 p.m. Assembly Series performance. "Building Peace" by Talk to Us, an interactive theatrical troupe from U. of Michigan, Ann Arbor. The Gargoyle. (Activities begin at 2 p.m. and continue through 5 p.m. with a food reception.) 935-5285.

Sunday, March 6

1 p.m. Assembly Series Mary T. Hall Seminar on Population and Development. "An Agenda to Restrain Growth," Nafis Sadik, executive director, U.N. Population Fund. (Discussion groups begin at 2:30 p.m.; lecture by Werner Fornos of the Population Institute at 4:15 p.m.) May Aud., Simon Hall. Continues at 4 p.m. March 7 in Room 215 Rebstock.

Monday, March 7

9 a.m. Pharmacology thesis defense. "The Development of a Computer-aided, Rational Drug Design System and Its Application to the HIV-1 Protease," Chris M.W. Ho, graduate student, Master of Science Training Program. Room 521 Medical Library.

10 a.m. Molecular Genetics Program thesis defense. "A Structure-function Analysis of Transcriptional Regulation of the PDGF A-chain Gene Mediated by WT1, the Wilms' Tumor Suppressor Protein," Ahao Yi Wang, student, Division of Biology and Biomedical Sciences. Room 8841 Clinical Sciences Research Bldg. 362-1421.

Noon. Molecular biology and pharmacology seminar. "Design and Evaluation of Chemical Probes for Steroid Receptors—An Approach to Protein Structure Using Experiments and Theory," John A. Katzenellenbogen, Roger Adams Professor of Chemistry, U. of Illinois, Champaign-Urbana. Room 3907 South Bldg.

Noon. Neurology and neurological surgery research seminar. "Respiratory Control: Why Should Neurologists Care About Mechanisms?" George B. Richerson, asst. prof., Dept. of Neurology, Yale U., New Haven, Conn. Schwarz Aud., first floor, Maternity Bldg. 362-7177.

3 p.m. Geometry seminar. "Topological Deformation Rigidity of Higher Rank Lattice Actions on Tori," Nantian Qian, prof., Dept. of Mathematics, Pennsylvania State U., University Park. Room 216 Cupples I Hall. 935-6726.

4 p.m. Assembly Series seminar. The Thomas Hall Lecture, "Whose Empowerment? The Politics of Women, Population and the Environment in the 1990s," Betsy Hartmann, author and activist on women's health and reproductive rights. (A continuation of the March 6 Mary T. Hall Seminar on Population and Development.) Room 215 Rebstock Hall. 935-4620.

4 p.m. Immunology seminar. "Erythropoietin Receptor: Structure/Function and Its Relationship to Disease," Gregory D. Longmore, asst. prof., depts. of Medicine and Cell Biology and Physiology. Third Floor Aud., St. Louis Children's Hospital.

7-8:15 p.m. Molecular biophysics biophysical evening. "Evolution of Protein Structure," David States, assoc. prof., depts. of Genetics and Biochemistry and Molecular Biophysics. (Dinner: 6:30 p.m.) Room 423 McDonnell Medical Sciences Bldg.

8 p.m. Architecture lecture. "Modern and Ancient in Rationalist Architecture: The Case of Terragni," Diane Ghirardo, prof. of architecture, U. of Southern California, Los Angeles. Steinberg Hall Aud.

Tuesday, March 8

12:10 p.m. Brown Bag Research Seminar. "Effect of Hip and Ankle Walking Strategies on Peak Plantar Pressures: Implications for Neuropathic Ulceration," Virginia Buckles, research asst. prof., Program in Physical Therapy. Room B104, Classroom C, Boulevard Bldg. 286-1400.

3 p.m. Anatomy and neurobiology seminar. "Motor Controllers for the Hand," Marc Schieber, asst. prof., Dept. of Neurology. Room 241 Compton Hall. 362-7043.

4 p.m. Dept. of Biology Viktor Hamburger Lecture. "On the Formation of the Topographic Neuronal Connection From Retina to Brain," Friedrich Bonhoeffer, prof., Max Planck Institute for Developmental Biology, Tübingen, Germany. Room 215 Rebstock Hall. 935-6824.

4:10 p.m. Anthropology colloquium. "An Economy of Affect: How Male and Female Officers Respond to Violence in Pittsburgh," Bonnie McElhinny, Mellon Fellow in the Humanities and visiting asst. prof., Dept. of Anthropology. Room 149 McMillan Hall.

5 p.m. Tumor genetics group seminar. "Allelic Loss in Ductal Carcinoma in Situ of the Breast," Diane Radford, asst. prof., Dept. of Surgery. Room 228 Biotechnology Center, 4559 Scott Ave. 362-7149.

5:05 p.m. Central Institute for the Deaf seminar on progressive sensory loss. "Progressive Hearing Loss and Cochlear Fluids and Circulation," Alec N. Salt, asst. prof., Dept. of Otolaryngology. Second Floor Aud., Central Institute for the Deaf.

Wednesday, March 9

7:30 a.m. Obstetrics and Gynecology Grand Rounds. "Diabetes in Pregnancy: When Sweet Turns Sour," William L. Holcomb Jr., asst. prof., Dept. of Obstetrics and Gynecology. Clopton Aud., 4950 Children's Place. 362-3122.

11 a.m. Assembly Series lecture. "Facing Up to Cultural Diversity," an Asian Students Association lecture with Michael Woo, Institute of Politics at Kennedy School of Government, Harvard U., Cambridge, Mass. Graham Chapel. 935-5285.

3 p.m. Geometry seminar. "A Variational Problem in Laquerre Geometry," Emilio Musso, prof., Dept. of Mathematics, U. of Rome, La Sapienza, Italy. Room 199 Cupples I Hall. 935-6726.

4 p.m. Biochemistry and molecular biophysics seminar. "Nitrogenase Structure and Function," Douglas Rees, prof., Dept. of Chemical Sciences, California Institute of Technology, Pasadena. Cori Aud., 4565 McKinley Ave. 362-1080.

4 p.m. Physics colloquium. "Quantum Tunneling in Disordered Metals," Susan

Coopersmith, AT&T Bell Laboratories, Murrayhill, N.J. Room 204 Crow Hall.

4:30 p.m. Mathematics colloquium. "Primitive Actions of Lie Groups in Geometry," Wolfgang Ziller, prof., Dept. of Mathematics, U. of Pennsylvania, Philadelphia. Room 199 Cupples I Hall.

Thursday, March 10

Noon. Genetics seminar. "Huntington's Disease: Location Cloning Using Haplotypes," Marcy MacDonald, asst. prof. of neurology, Molecular Neurogenetics Unit, Harvard Medical School, Cambridge, Mass. Cori Aud., 4565 McKinley Ave. 362-7072.

4 p.m. Dept. of Anesthesiology Sixth Annual C.R. Stephen Lecture. "Inhaled Nitric Oxide: A Selective Pulmonary Vasodilator," Warren M. Zapol, prof., Dept. of Anesthesia, Harvard Medical School, Cambridge, Mass. Moore Aud., 4580 Scott Ave. 362-6978.

4 p.m. Architecture lecture. "Expo '92: A Pavilion." Visiting Professor Antonio Sanmartin of Barcelona, Spain, discusses the Pavilion at the Exposition '92 in Seville, Spain. Room 116 Givens Hall. 935-6200.

4 p.m. Biology and biomedical sciences student-organized seminar. "Genetic Analysis of the Generation of Asymmetry in *C. elegans* Embryogenesis," Ken Kemphues, assoc. prof. of genetics, Cornell U., Ithaca, N.Y. Erlanger Aud., McDonnell Medical Sciences Bldg. 362-2722.

4 p.m. Chemistry seminar. "Recent Advances in Main Group and Transition Elements," H.W. Roesky, prof. of chemistry, Institute for Inorganic Chemistry, U. of Gottingen, Germany. Room 311 McMillan Lab.

4 p.m. Earth and planetary sciences colloquium. "The Case for a Subsurface Biosphere at Submarine Hydrothermal Vents," Jody Deming, assoc. prof., Quaternary Research Center, U. of Washington, Seattle. Room 362 McDonnell Hall.

4:30 p.m. Loeb colloquium. "Maximal Ergodic Theorem for Free Groups," Elias M. Stein, prof., Dept. of Mathematics, Princeton U., Princeton, N.J. Room 199 Cupples I Hall.

5 p.m. International Affairs lecture. "Italy: The Nature of the Current Crisis," Raymond Grew, prof. of history, U. of Michigan, East Lansing, and fellow, Center for the History of Freedom, WU. (Registration: 4:45 p.m.) Brown Hall Lounge. Pre-registration required. 935-6777.

Friday, March 11

Noon. Cell biology and physiology seminar. "Mechanisms of Elastic Fiber Assembly," Elaine C. Davis, research asst. prof., Dept. of Cell Biology and Physiology. Room 423 McDonnell Medical Sciences Bldg.



Music

Friday, March 4

7:30 p.m. A Cappella Invitational performance. "Jammin' Toast" combines the talents of the Brown Derbies, a men's ensemble from Brown U., Providence, R.I., Measure-4-Measure, a women's group from Vassar College, Poughkeepsie, N.Y., the Greenleaves, WU women's group, and the Pickers, WU men's group. (Also March 5, same time.) Edison Theatre. Cost: \$6 for the general public; \$4 for WU students, faculty and staff with valid I.D.

8 p.m. New Music Circle performance. John Zorn's Cobra, a 12-piece improvisational ensemble, will perform avant garde jazz. Sponsored by New Music Circle, KWUR, Vintage Vinyl and All That Jazz, a student group. Steinberg Hall Aud. Cost: \$13 for the general public; \$7 for students with valid I.D. 935-5952.

Saturday, March 5

8 p.m. Voice recital. "Soirée Française," an evening of French art songs, features Robyn Reso, doctoral student in musicology and professional vocalist, accompanied by doctoral student Garry Ziegler on the piano.

Co-sponsored by St. Louis Alliance Française and Dept of Music. Steinberg Hall Aud. 935-5581.

Sunday, March 6

3 p.m. Wind Ensemble and Chamber Winds concert. Performance is directed by Dan Presgrave, instrumental coordinator and lecturer in music. Graham Chapel. 935-5505.

8 p.m. Voice recital. Program features soprano Angela Noelle Mark, a senior. Music includes a group of early Italian songs. Graham Chapel. 935-5581.

Friday, March 11

8 p.m. Graduate voice recital. Performance features mezzo-soprano Denise Stookesberry, graduate student. Stookesberry will be accompanied by Gail Andrews, vocal coach and accompanist. Graham Chapel. 935-5581.



Performances

Saturday, March 5

8 p.m. "Stage Left" series presentation. "Stuff as Dreams Are Made On," with Fred Churchack performing a one-man version of "The Tempest." (Also March 6 at 7 p.m.) Drama Studio, Room 208 Mallinckrodt Center. Cost: \$12 for the general public;

Calendar guidelines

Events sponsored by the University — its departments, schools, centers, organizations and its recognized student organizations — are published in the Calendar. All events are free and open to the public, unless otherwise noted.

Calendar submissions should state time, date, place, sponsor, title of event, name of speaker(s) and affiliation, and admission cost. Quality promotional photographs with descriptions are welcome. Send items to Judy Ruhland at Box 1070 (or via fax: 935-4259). Submission forms are available by calling 935-4926.

The deadline for all entries is noon Tuesday one week prior to publication. Late entries will not be printed. The Record is printed every Thursday during the school year, except holidays, and monthly during the summer. If you are uncertain about a deadline, holiday schedule, or any other information, please call 935-4926.

Theatrical troupe examines social issues

Talk To Us, an interactive theatrical troupe from the University of Michigan, will perform at 3:30 p.m. Saturday, March 5, in The Gargoyle. The event is part of "Building Peace," an afternoon sponsored by the Baha'i Student Association.

The performance, part of the Assembly Series, is free and open to the public.

Talk To Us, formed in 1987 and composed of students and other members of the University of Michigan community, is committed to examining crucial social issues such as racism and sexism. In the performances, the scenes "freeze" at a specific dramatic point in the action; the characters then face the audience and begin a discussion with the audience.

The program "Building Peace," which

Juried art exhibit showcases student works

The third annual juried art show for students will run March 4-20 in Bixby Gallery, Bixby Hall. An opening reception will be held from 5 to 7 p.m. Friday, March 4, in the gallery.

This year's show features 50 works selected by jurors Cara McCarty, curator of Decorative Arts at the Saint Louis Art Museum, and Phyllis Plattner, painter and professor of art at the Maryland Institute College of Art and Design.

The show's works, which were selected from about 175 submissions, were completed by University students enrolled in sculpture, graphics, fashion, ceramics/glass, photography, printmaking and drawing/painting. As in previous years, there were no restrictions on the size, format or subject of the entries.

\$10 for senior citizens and WU faculty and staff; and \$8 for students. 935-6543.

Sunday, March 6

2 p.m. Edison Theatre "ovations! for young people series presentation." "New Kid," a play about new immigrants and their struggles adjusting to life in a new country. Presented by Green Thumb Theatre for Young People. Edison Theatre. Cost: \$8. 935-6543.



Miscellany

Friday, March 4

4 p.m. Retirement options presentation. "Investment Options for Faculty and Staff," John H. Biggs, chairman and chief executive officer, TIAA-CREF. Presented by Human Resources and the WU Chapter of the American Association of University Professors. May Aud., Simon Hall. 935-5990.

Saturday, March 5

9 a.m.-noon. Fine Arts calligraphy workshop. Instruction by Teresa Kragnes, instructor, fine arts evening program. Bring supplies and samples of work. Room 212 Bixby Hall. Cost: \$30. Pre-registration required. 935-4643.

9:30 a.m.-4:30 p.m. Thurtene four-on-four volleyball tournament for students only. Free T-shirts for all participants; cash prizes awarded. Cost: \$20. Athletic Complex. For times and more details, call Howie Olson at 935-3109.

Monday, March 7

7-10 p.m. Office of Continuing Medical Education seminar. "Internal Medicine Review," a series of seminars covering topics from allergy/immunology to rheumatology, will be held Monday evenings through May 23. The topic March 7 is endocrinology. Speakers are Richard E. Ostlund Jr., assoc. prof., Dept. of Medicine and Roberto Civitelli, asst. prof., Dept. of Medicine. Steinberg Amphitheatre, Jewish Hospital. For schedules and cost info., call 362-6893.

Thursday, March 10

7:30 a.m. Office of Continuing Medical Education seminar. "Gastrointestinal Surgery: Refresher Course and Update." (Continues through March 11.) Ritz-Carlton Hotel, 100 Carondelet Plaza, St. Louis. For schedules, cost and reservation info., call 362-6893.

begins at 2 p.m. in The Gargoyle, will look at diversity within a context of unity in the hope of creating a firm foundation for peace. Activities will include a cross-cultural fashion show put on by Ashoka and the Association of Black Students and a discussion of religious perspectives on peace by several student groups. A variety of ethnic food will be available at 5 p.m.. For program information, call 725-1028.

The program is co-sponsored by the Assembly Series, Ashoka, Association of Black Students, Baha'i Student Association, Black Panhellenic Council, Hillel Foundation B'nai B'rith, Interfraternity Council, Lutheran Student Movement, Shades, STAR (Students Together Against Racism), Student Educational Service, Student Union, Wesley Fellowship and Women's Panhellenic Association.

"Both jurors said they were very impressed with the quality of all the submissions, so it is a real honor to be selected for the show," said senior Macy Chadwick, president of the Fine Arts Council. "The exhibit is a good way for students to get some exposure for their art."

First-place winners in each category will receive cash prizes. The winners will be announced at the March 4 reception.

The free exhibit is sponsored by the Fine Arts Council with support from Student Union.

Bixby Gallery is open 10 a.m. to 4 p.m. weekdays and 1 to 5 p.m. weekends.

For more information, call 935-4643.

First Asian American elected to Los Angeles City Council discusses cultural diversity

Michael Woo, who is running for California secretary of state, will give the Asian Student Association Lecture at 11 a.m. Wednesday, March 9, in Graham Chapel. His lecture, "Facing Up to Cultural Diversity," is part of the University's Assembly Series and is free and open to the public.

Woo, who served for eight years as a member of the Los Angeles City Council, gave up his council seat to enter the hotly contested, nationally observed 1993 race for Los Angeles mayor. He outdistanced 22 other candidates in the primary election but lost the run off after receiving



Michael Woo

250,000 votes (46 percent of the total cast).

In the fall of 1993, Woo became a fellow at the Institute of Politics at The Kennedy School of Government at Harvard Univer-

sity. As part of the fellowship, he taught an urban politics course. Beginning in March he will be a visiting professor at the University of California, Los Angeles.

Woo graduated from the University of California, Santa Cruz, in 1973 and went on to Berkeley, where he received a master's degree in urban planning. Six months after taking a job at a non-profit urban-planning research center in San Francisco, he was hired by state Senate Majority Leader David Roberti and became a key speech writer and policy adviser.

In 1981, Woo waged an underdog campaign for the 13th District city council seat and shocked the Los Angeles political establishment by taking 42 percent of the vote against an incumbent endorsed by the mayor, thereby forcing a run off. Although Woo lost that race, he ran again four years later and won, becoming the first Asian American to be elected to the city's governing body.

The lecture is co-sponsored by the Asian Student Association, Assembly Series, Council of Students of Arts and Sciences and Student Union. For more information, call 935-4620.

Sports

Women's Basketball

Last Week: Washington 69, Chicago 59

This Week: NCAA Regional, 7 p.m. Saturday, March 2, vs. winner of Aurora/Wartburg, Field House

Season Record: 22-3 (13-1 UAA championships)

For the fifth year in a row, the women's basketball team is bound for the NCAA Division III tournament. The Bears, ranked sixth in one national poll, were awarded the top seed in the Central region and received a first-round bye. On Saturday, the Bears will host the winner of Wednesday's first-round game between fourth-seeded Aurora (Ill.) University and fifth-seeded Wartburg (Iowa) College. Admission is \$4 for adults, \$2 for students with ID and \$2 for children 12 and under.

Washington earned an automatic bid to the 40-team tourney by winning the University Athletic Association (UAA) title. The Bears clinched an outright UAA crown by toppling Chicago by 10 points last Saturday. Senior Sarah Goldman, Nashville, Tenn., once again provided the heroics. Capping a five-game stretch in which she averaged 23.6 points per contest, Goldman tallied a game-high 24 points versus the Maroons, with 16 points coming in the final nine and a half minutes. She also became Washington University's all-time leader in assists and moved within 10 points of becoming the fourth Bear to record 1,000 career points. Also contributing to the win were senior Stacy Leeds, Muskogee, Okla., who netted 10 points, five steals and six assists, and sophomore Dana Bryant, Franklin, Tenn., who chipped in with nine points and six boards.

The Bears enter the tournament carrying a 12-game overall win streak and a string of 10 straight wins against Division III foes in the Field House.

Men's Basketball

Last Week: Washington 91, Chicago 55

This Week: Season Complete

Final Season Record: 18-7 (11-3 UAA)

Despite winning 11 of its last 12 NCAA Division III contests and 17 of its last 20, Washington came up short in its quest for a fifth NCAA postseason tournament berth. Due to the South region's strength, the Bears' late-season performance and 18-7 record was not impressive enough to garner a top-five regional ranking. This is the first time in Washington history that a team that won 18 or more regular season games was denied a berth in the NCAA tournament.

"When we were 8-5 back in early January we knew our chances of making the tournament would be remote, unless

we won the conference championship," said Bears Coach Mark Edwards. "The top teams in the region all started strong and maintained their ranking throughout the season. I'm pleased, however, with our season and the progress we made. We have laid the foundation for next season."

Washington returns all five starters next year and a majority of its key reserves. Sophomore guard Gene Nolan, Chicago, who averaged a team-high 15.7 points per game this season, led the Bears with 16 points in their season-ending rout of Chicago. Nolan finished the year with a school-record 82 three-point field goals. Against Chicago, sophomore forward Brent Dalrymple, Des Peres, Mo., contributed 13 points, 11 rebounds and four assists while junior forward Jeff Hutz, Terre Haute, Ind., chipped in with 12 points, eight rebounds and three assists.

Baseball

Recent Games: Washington 3, Millsaps 2; Millsaps 8, Washington 6; Rhodes 7, Washington 6; Rhodes 11, Washington 3

This Week: Noon Saturday, March 5, vs. Webster University, Kelly Field; 1 p.m. Sunday, March 6, vs. University of Missouri-Rolla, Kelly Field.

Season Record: 1-3

With a limited number of outdoor practices under their belts, the Bears ventured south to Memphis, Tenn., to open the 1994 baseball season Feb. 19-20. Under the direction of first-year coach Ric Lessmann, Washington won its season opener before dropping its next three games. All-region pitcher Kirt Ervin, Highland, Ill., was sharp in his season-opening debut, scattering five hits in six and two-thirds innings in the Bears' 3-2 win over Millsaps. The Bears broke a ninth-inning tie on an RBI double by junior Bob Wallace, Cary, Ill.

Women's Tennis

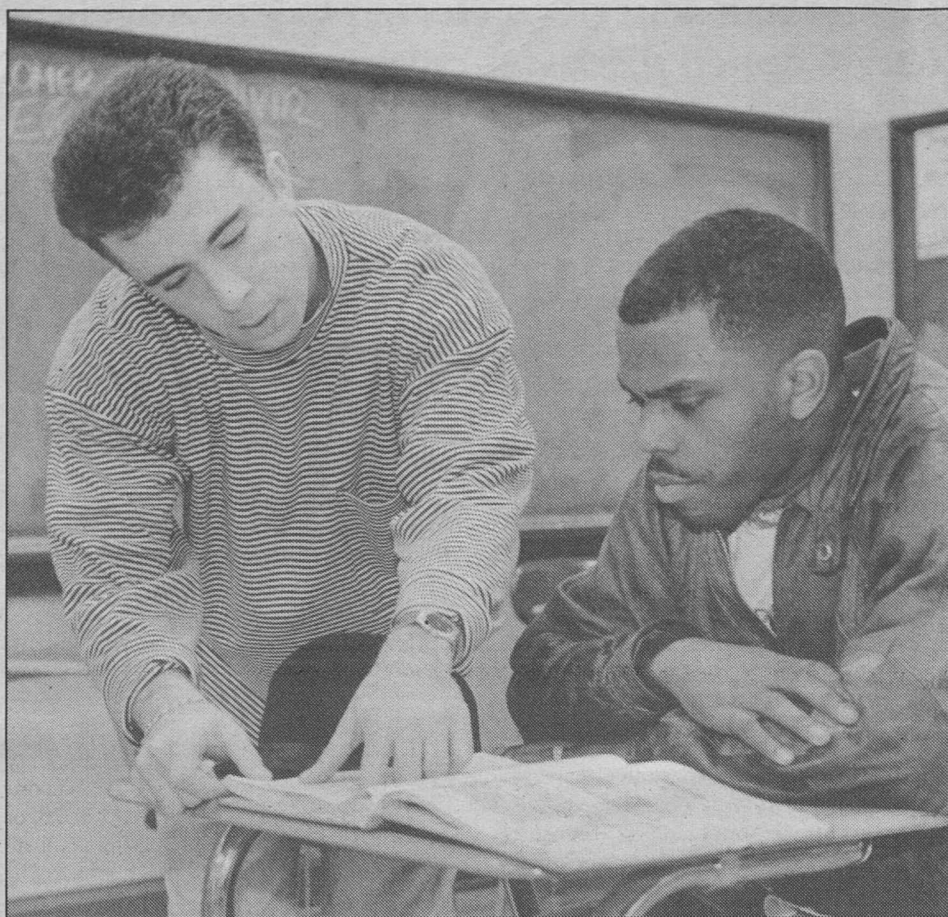
Last Week: Washington 7, Missouri 2

This Week: Idle

Season Record: 1-0

The women netters opened the spring portion of the 1993-94 season with a blistering 7-2 win over Division I Missouri-Columbia. The Bears won each of the top five singles flights and the top two doubles matches en route to victory. The Bears' number-one player, junior Tara Salamone, Greenlawn, N.Y., cruised to a 6-1, 6-2 first-singles win over Sonja Moe and joined senior Kim Villena, Cincinnati, Ohio, for a 6-1, 6-3 first-doubles victory.

The Bears depart Thursday, March 12, for the annual weeklong spring trip to Hilton Head, S.C.



Senior Josh Rahn tutors Jason Johnson, a Soldan International Studies High School student.

Students volunteer at area high schools — from page 1

In a community-wide outreach program, which includes Soldan, University students visit about 55 schools a year. The students, who are involved in the International Student Resource Group at Stix International House, discuss life in such far-away countries as Turkey and Ethiopia. Aron Vqbaeb Abraha, a graduate student in chemistry, has helped translate English into Ethiopian for two Ethiopian students at Soldan.

"It sounds trite but we want to make the world a better place to live," said Beverly Abrahamson, coordinator of the International Resource Program. "We try to help American students learn about the world by talking about geography, school systems, economics, etc., in other countries and by answering all their questions, however trivial. At the same time, our international students are learning about America."

In another program, seven engineering and science students are volunteering as mentors at Soldan where they meet regularly with students to help them prepare for the Greater St. Louis Science Fair April 15-19 and the St. Louis Public Schools Mathematics Fair March 10-12.

Music is another form of communication that is bringing together University and high school students. James Henry, an advanced doctoral student in musical composition, has spent two years working as a resident composer at the Central Visual and Performing Arts High School, a St. Louis magnet school. Henry spends an average of 12 hours a week at the school,

where he teaches, writes new pieces for the school's ensembles and works with students who exhibit a special interest in musical composition. In addition, Henry and some of his students are working together to compose a symphonic work that will be included in the St. Louis Symphony Orchestra's Young Concert Series in October.

"Jim's students at Central Visual and Performing Arts High School, who have been described as some of the most troubled and incorrigible in the school, have enjoyed significant success and pride in their own personal accomplishment," said Craig Monson, Ph.D., professor and chair of the Department of Music. "I am pleased to say that Jim, too, has grown considerably through participation in the program and has discovered what are likely to be his greatest strengths as a contributing musician and composer by working with people in a practical, hands-on way that involves intense, direct interaction."

Henry said interactive programs between the University and area high schools benefit all involved.

"Most of my students had never tried composing before; they pictured composers as geniuses huddled in the corners of dark rooms creating compositions," Henry said. "Now they know they can do it. For me, it's the chance of a lifetime. I'm learning a lot about the students, myself, teaching and composition. I guess it's true that the teacher often learns more than the students."

— Susannah Webb

Window to the world

Student newspaper has global focus

Junior Swathi Rao and some fellow students are offering the Washington University community a window to the world.

Rao, a political science and French major, is a founder and editor-in-chief of the new Washington University Window, a student-run weekly newspaper that began publication March 1. The Window, which has a circulation of 2,500, focuses on national and international news. The free newspaper is distributed every Tuesday. Student Life, the other student publication at Washington, is published on Tuesdays and Fridays.

Rao, along with four other founders, created the newspaper to help inform students about world events. She said students often are overwhelmed by the "never-ending cycle" of exams, papers and deadlines. "Any national or international event, even an important one, tends to be overshadowed by more immediate concerns," she said. Even students who try to keep up with world events face obstacles, she added. "The students who live on campus do not have access to cable. Those students who are willing to subscribe to a major newspaper find that the information is outdated before they get the paper in their mailboxes."

By providing a timely publication with an international focal point, the Washington University Window will make it easier for students to know what's happening around the world, Rao said. Of course, the Window is not only for students. "There's something

for everybody," said the editor-in-chief. In addition to national and international news and analysis, the Window features sections on culture, sports, business, editorials and a photo essay. The culture section is a round-up of local cultural and entertainment activities.

Fifteen students, including those serving as editors and managers, are members of the Window's editorial board. Additionally, the paper has 10 reporters.

The newspaper is a member of the Associated Press wire service. Each week the editors and reporters will condense and personalize the wire stories, often using comments from University faculty, said Rao, a former news reporter, assistant news editor and features editor for Student Life.

Although the Window has a global focus, news will be personalized to address student and University concerns, said Rao, who worked as an editorial writer for the Topeka Capital-Journal last summer. In addition, students and administrators will write guest columns. In the premiere issue, Chancellor William H. Danforth wrote a welcome column to the Window staff.

Running a student newspaper was a dream "I never thought would come true," said Rao, whose idea launched the publication. She said the chancellor and Justin X. Carroll, dean of student affairs, as well as other University officials, have been very supportive.

The other Window founders are senior Christopher Lewis, production manager; sophomore Kristen Rassbach, business manager; junior Stephen Sukanek, advertising manager; and sophomore Emily Engelland, photo director. The newspaper's offices are located in Room 312 Prince Hall.

For more information, call the Washington University Window office at 935-7501.

— Carolyn Sanford



Swathi Rao

Next book to cover brain research pioneers — from page 1

afterlife that during mummification, when other organs, including the kidneys and liver, were preserved, the brain was scooped out of the skull and discarded.

Even when early scientists, such as Alcmaeon, a Greek from the fifth century A.D., suggested that the brain was the central organ of sensation and thought, the theory was not uniformly accepted. For example, the best known of the Greek philosophers, Aristotle, suggested that the brain tempered the "heat and seething" of the heart. The brain, he suggested, acted like a radiator. To Aristotle, the large human brain simply suggested the most rational of hearts.

On the other hand, Finger also realized that ancient understanding of the brain and its functions often was more logical than many people today would imagine.

"You have to understand brain theories in the social and scientific context in which they were formed," says Finger. "All these ideas had roots in rational, logical thought. And, while many are ridiculed today, each theory contributed to the field and spurred further research on the brain."

A prime example, says Finger, is phrenology, a discarded theory from the early 19th century that suggested skull features reflected the development of underlying parts of the cerebral cortex responsible for specific behaviors. The phrenologists looked for bumps that would correlate with language, sense of color and even love of children. Finger reminds readers that "although the phrenologists were fair game for sarcasm, they must be credited with the important new idea that the cerebral cortex could be subdivided into functional units."

Painful discussion

Another issue Finger addresses is the question of whether to classify pain as a true sensation, like taste, smell, sight and sound.

From Graeco-Roman times through the Renaissance, scholars thought that because pain could come from many sources, internal, external or mental, it must be different from the traditional five senses. Pain also was considered different from other senses because it lacked its own specific end organ, i.e., a tongue, a nose, an eye or an ear.

The earliest list of pains, found in the Nirvana Sutra, an ancient Indian document from about 200 B.C., included both physical and emotional pains. These include birth pains, aging pains, disease pains, death

pains, pain of parting with loved ones or things, pain of meeting with something or someone disliked and the pain of not reaching a goal. In the 11th century, pain was described in 15 ways, such as compressing, itching, pricking, stabbing and throbbing. Emotional pain was not included in this list.

Pain relief has been sought as early as written history. A 4,000-year-old clay tablet found in the Mesopotamian city of Nippur lists henbane, a poisonous herb, as a pain treatment. Poppy juice (opium) has been used for several thousand years.

Although some of these agents provided mild help, they were unable to completely block pain. This meant that surgery was a particularly challenging procedure. In fact, says Finger, the mark of a good surgeon was the ability to work on moving targets and to get the job done quickly. Only with the introduction in the 1840s of gaseous anesthetics, such as nitrous oxide and ether, were major operations involving body parts like the chest possible.

Both nitrous oxide (laughing gas) and ether first were used in social settings, Finger notes. Laughing gas parties and "ether frolics" were popular forms of entertainment in the 1700s. After noticing that party goers would hurt themselves and not be aware of the pain, in the case of laughing gas, or become unconscious and then recover, in the case of ether, physicians began using both during operations.

For those readers interested in medical trivia, Finger's book is filled with other little-known historical facts about the medical profession. For example, while the first hospitals in the world were established by 400 B.C. in India, the first medical exam to establish a doctor's expertise wasn't instituted until 931 A.D. From this point on, physicians rose in power and esteem.

The response to *Origins* has been so positive that Finger's publisher has asked him to write a second book for a more general audience. Tentatively titled "Epochs of the Brain," each chapter of that book will focus on a particular pioneer in brain research from a different time period. Finger's goal is to "put flesh on the bone. I want to make these individuals come alive. What made them tick? How did they see things differently? What enabled them to make important discoveries and how did those discoveries affect others?"

— Debby Aronson

Campus Watch

The following incidents were reported to the Hilltop Campus Police Department during the period Feb. 21-28. Readers with information that could assist the investigation of these incidents are urged to call 935-5555. This summary is provided as a public service to promote campus safety.

Feb. 21

10:10 a.m. — A wallet and keys were reported stolen from a student's room in Lee Residence Hall sometime between 10 and 10:10 a.m.

7:30 p.m. — A student's 1982 Chevrolet Camaro was reported stolen from the parking lot at the corner of Millbrook and Skinker sometime between 5 and 7:30 p.m. The automobile was recovered Feb. 26 in the 5700 block of Oakland Avenue. The steering column was broken and the radio was missing.

Feb. 22

10:34 a.m. — A student's 18-speed bicycle was reported stolen from a bicycle rack at Olin Library sometime between 7 p.m. Feb. 17 and 2 p.m. Feb. 18.

1 p.m. — A videocassette recorder (VCR) was reported stolen from Room 325 Mudd Law Building. The VCR has been missing since November.

2:03 p.m. — A student's 12-speed bicycle was reported stolen from No. 4 Millbrook Apartments sometime between 4 p.m. Feb. 20 and 10 a.m. Feb. 21.

4:15 p.m. — A Panasonic monitor/recorder was reported stolen from Brown Hall sometime between 3:15 and 4:15 p.m.

6:30 p.m. — A student's clothing and a checkbook were reported stolen from No. 4 Millbrook Apartments sometime between 6:30 and 11:30 p.m. Feb. 21. The checkbook was recovered at 3 p.m. Feb. 22 on Greenway Walk.

8:45 p.m. — Baseball equipment was reported stolen from a student's vehicle parked in the lot at Millbrook Apartments.

Feb. 24

2:16 p.m. — Two boxes of portfolios were reported stolen from Room 114 Simon Hall sometime between 9 p.m. Feb. 12 and 2 p.m. Feb. 23.

Feb. 26

4 p.m. — A faculty member's wallet was reported stolen from Room 509 McMillen Lab sometime between 3 p.m. Feb. 24 and 4 p.m. Feb. 26.

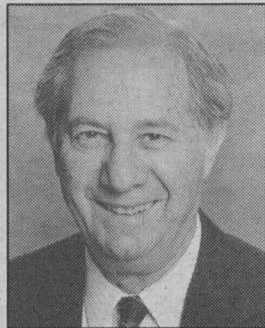
Four other incidents of petty theft and vandalism were reported during that period.

News Analysis

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

Healthcare plan will create more red tape, says Weidenbaum

Murray Weidenbaum, Ph.D., Edward Mallinckrodt Distinguished University Professor and director of the Center for the Study of American Business, was a chief economic adviser to former President



Murray Weidenbaum Ronald Reagan. He has been a leading advocate of using economic analyses to weigh the costs and benefits of government regulation. He is the author of five books on business and economics and has written or co-authored several hundred articles on public policy issues.

President Bill Clinton's healthcare reform proposal will stand to mixed reviews, but Weidenbaum said that one effect of the proposed health plan is clear: it will create four new levels of bureaucracy in medical care before a doctor ever sees a patient.

"Clearly, the Clinton Plan contains price controls and taxes, but under different names," Weidenbaum said. "The American people should be aware of the added bureaucracy — and cost — of this healthcare reform proposal."

According to Weidenbaum, the new layers of bureaucracy that will separate doctors from patients are:

- A new, seven-member National Health Board that will oversee state plans and health alliances.
- Each state will be required to create a bureaucracy to carry out its new "responsibilities."
- Healthcare alliances form the next level of red tape, negotiating with healthcare plans, determining benefits, enrolling members and setting fees.
- Health plans are the next level, organized by insurance companies, hospitals or other healthcare providers. Healthcare providers who "actually take care of sick people" are at the bottom of the pyramid.

Weidenbaum said that "even though the talk is all about patient power, the Clinton proposal contains a great many punitive provisions in the event that people do not conform to the details. For example, if a person does not want to enroll in any healthcare plan, the regional alliance will do it for him or her — and double the regular premium. The Council of Economic Advisers estimates that the regional alliances will need 50,000 new hires — that's at least \$1 billion in additional overhead."

English department seeks applicants for prizes

The Department of English is seeking applicants for a variety of student literary prizes. The deadline to submit samples of poetry, fiction and essays is March 4. Cash prizes range from \$50 to \$125. Students may apply for more than one award.

The Academy of American Poets Prize is open to both undergraduate and graduate students. The Roger Conant Hatch Prize is designated for the best undergraduate writer of lyric poetry. The Norma Lowry Memorial

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

Of note

During the Gordon Research Conference on the Chemistry and Biology of Peptides held in Ventura, Calif., **Garland R. Marshall**, Ph.D., director of the Center for Molecular Design, professor of molecular biology and pharmacology, and of biochemistry and molecular biophysics and of biomedical computing, received the Vincent duVigneaud Award for his contributions to the chemistry and biology of peptides. ...

Moon H. Nahm, M.D., associate professor of medicine and of pathology, received a \$22,000 grant from the National Multiple Sclerosis Society for a project titled "T and B Cell Response to NP-MBP in B10.PL Mice." ...

Arthur Osver, professor emeritus of fine arts, received a St. Louis Arts Award from the Arts and Education Council of Greater St. Louis. He received the honor for "Excellence in the Arts." ...

Marc Saperstein, Ph.D., Gloria M. Goldstein Professor of Jewish History and Thought and chair of the Program in Jewish and Near Eastern Studies, was elected as a fellow of the American Academy for Jewish Research.

Speaking of

Several faculty members as well as a student at the School of Medicine presented papers at the VIIth International Congress on Cleft Palate and Related Craniofacial Anomalies held in Australia. **Adam C. Eaton**, a medical student, and **Jeffrey L. Marsh**, M.D., professor of plastic and reconstructive surgery and of surgery in pediatrics (plastic and reconstructive), presented "Differential Management for Differential Diagnosis of Velopharyngeal Dysfunction." **Donald V. Huebener**, D.D.S., associate professor of plastic and reconstructive surgery, and Marsh presented "Initial Management of Cleft Lip and Palate Infants: The Use of a Passive Molding Appliance." Marsh and **Harlan R. Muntz**, M.D., associate professor of otolaryngology, spoke on "Autogenous Posterior Pharyngeal Wall Augmentation." Muntz also delivered a paper titled "Use of Flexible Fiber Optic Nasopharyngoscopy for Prescribing Treatment of Velopharyngeal Dysfunction" and "The Effective Adenoideotomy on Velopharyngeal Closure in 15 Children." Marsh additionally spoke on "Plagiocephaly: Differential Diagnosis Based on Endocranial Base Morphology" and "Lip Adhesion and Alveolar Molding Plates." Marsh, along with **Michael W. Vannier**, M.D., professor of radiology at the School of Medicine's Mallinckrodt Institute of Radiology, presented "Craniofacial Growth in Crouzon and Apert Patients Following Craniofacial Surgery in Infancy" as well. Marsh and Vannier also spoke on "3-D Imaging From CT and MR Scans." Marsh also presented "Intravascular Veloplasty: Does It Affect Velopharyngeal Function?" and "The Role of Prosthetics in Management of Velopharyngeal Dysfunction," which he presented with **W. Donald Gay**, D.D.S., instructor in otolaryngology. The faculty presented the talks with several staff members from St. Louis Children's Hospital. ...

Stephen H. Legomsky, J.D., D.Phil., Walter D. Coles Professor of Law, delivered a presentation on recent legal trends and themes in immigration during an interdisciplinary federal judges' program held in the Woodrow Wilson Library at the Smithsonian Institution in Washington. The program was co-sponsored by the

Fund Prize for poetry is for undergraduates and graduate students as well. The F. Ward Denys Prize is for a sophomore student "who shows the greatest degree of general excellence in the required work in English." The Dramatics Club of St. Louis Prize encourages creative work in the study of dramatic literature. Graduate and undergraduate students may apply.

For more information, call Sue Eggemeyer in the English department at 935-5120.

Smithsonian and the Federal Judicial Center in Washington. ...

Gerhild Scholz Williams, Ph.D., professor of Germanic languages and literatures, will deliver the keynote address at a conference on Renaissance 2000 — A Change of Epochs to be held on April 14 in Chemnitz, Saxony, in Germany. Her talk will elaborate on the historical perspective of epochal change implicit in the Renaissance of the year 1600. The Free State of Saxony will host the conference.

On assignment

James K. Bashkin, Ph.D., assistant professor of chemistry, has been reappointed to the editorial advisory board of the Chemical Reviews journal.

To press

Randall Duncan, Ph.D., research instructor of medicine, and **Keith A. Hruska**, M.D., Ira M. Lang Professor of Medicine, wrote an abstract titled "Integrin $\alpha_v\beta_3$ Stimulation of the Osteoclast Plasma

Membrane Calcium Pump is Mediated by Tyrosine Kinase Activity." The piece, which they wrote with three others, was published in the Journal of the American Society of Nephrology. In addition **Kensuke Yamakawa**, M.D., a research fellow in the Renal Division and a co-author of the abstract, presented the work during the American Society of Nephrology's meeting held in Boston. ...

Gary W. Kronk, manager of personal computer support services, co-authored an article titled "Update on Comet Swift-tuttle" that was published in a recent issue of *Icarus*, an astronomy journal.

Guidelines for submitting copy:

Send your full name, complete title, department, phone number and highest-earned degree, along with a typed description of your noteworthy activity to *For The Record*, c/o Carolyn Sanford, Campus Box 1070, or p72245cs@wuvmd.wustl.edu. Items must not exceed 75 words. For information, call Sanford at 935-5293.

Jonathan Turner receives top award from electronics professionals' group

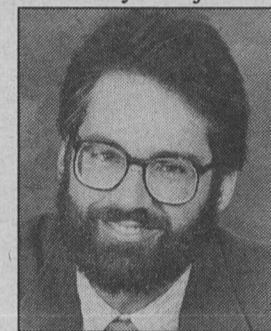
Jonathan S. Turner, Ph.D., professor and chair of computer science, has been named the recipient of the 1994 Koji Kobayashi Computers and Communications Award from the Institute of Electrical and Electronics Engineers Inc. (IEEE). The organization of electronics professionals is based in New York.

IEEE presents the award to individuals for outstanding technical contributions in the integration of computers and communications. The prize consists of a bronze medal, a certificate and \$2,000. Turner will accept the award during the institute's GLOBECOM conference to be held Nov. 28-29 in San Francisco.

Turner received the award "for fundamental contributions to communications and computing through architectural innovation in high-speed packet networks," according to the citation.

Turner, who joined Washington University in 1983 from Bell Laboratories in Chicago, is an internationally recognized expert in the design and analysis of

switching systems. He designed the University's Project Zeus switch, which



Jonathan S. Turner

is a campus-wide, pacesetter research program exploring the endless possibilities of ultra-fast fiber optic switching systems (called ATM for asynchronous transfer mode). Project Zeus is one of the earliest test beds for the electronic information superhighway. Within two years, most of the departments at the University will be connected to the Project Zeus ATM network.

can transmit video, audio and text data 10,000 times faster than current telephone lines. The switch is considered by many experts to be the best in the world.

International Office needs program volunteers

The International Office is looking for volunteers to participate in its community connections programs.

The Host Family Program is designed to promote cultural exchange between international students and local families. As part of the program, volunteers invite students to share in family celebrations, as well as sports or cultural events, at least once a month. Volunteers may be from single or multigenerational households. Host families do not provide living accommodations for the students.

The Speak English With Us Program matches community volunteers with international students, faculty and researchers from

both the Hilltop and Medical campuses who want to improve their understanding of the English language and culture. Volunteers meet with a participant once a week at a mutually convenient location. Volunteers are not required to be trained teachers or have any special language skills.

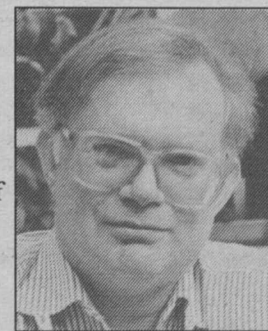
Volunteers also are needed to assist with the International Student Resource Group. Students in the group speak about their countries at various community organizations in St. Louis. The volunteers will provide transportation when the students speak at area schools.

For more information, call the International Office at 935-5910.

Campus Author

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).

The way our bodies work and how we affect the world around us is the focus of a new textbook by **George B. Johnson**, Ph.D., professor of biology and of genetics. The goal of *Human Biology: Exploring Concepts* is to educate an important audience, non-science majors, in an area of primary concern — biology. Abundantly illustrated in full color, *Human Biology: Exploring Concepts* is a new kind of textbook that focuses on key biological concepts to explain the workings of the human body. By focusing on key concepts, the student gains a basic understanding of underlying principles before attempting to piece together detailed information. Students will learn how human beings function at the cellular level and in the biosphere. (Wm. C. Brown Publishers, Dubuque, Iowa, Melbourne, Australia, and Oxford, England)



George B. Johnson

Opportunities & personnel news

Hilltop Campus

The following is a list of positions available on the Hilltop Campus. Information regarding these and other positions may be obtained in the Office of Human Resources, Room 126 North Brookings Hall, or by calling 935-5990. Note: All positions require three letters of recommendation.

Programmer/Analyst III

940107. *Computing and Communications.* Requirements: Bachelor's degree; good language and people skills; ability to work with minimal supervision; ability to learn quickly and adapt to new circumstances; experience with use and management of desktop computers; knowledge of desktop data base technology in a client/server environment highly desired; familiarity with DOS, Macintosh systems; knowledge of Novell, Appletalk, Windows and TCP/IP networking highly desired. Resume required.

Programmer/Analyst II

940108. *Computing and Communications.* Requirements: Associate's degree, bachelor's degree preferred; good language and people skills; ability to work with minimal supervision; ability to learn quickly and adapt to new circumstances; experience with use and management of desktop computers; knowledge of desktop data base technology in a client/server environment highly desired; familiarity with DOS, Macintosh systems; knowledge of Novell, Appletalk, Windows and TCP/IP networking highly desired. Resume required.

Counselor

940142. *Student Educational Service.* Requirements: Master's degree; experience in secondary, post-secondary or higher education preferred; knowledge of physiological testing; familiarity/experience with the problems of academically high-risk and disadvantaged students; familiarity with the problems of disabled students. Resume required.

Assistant Accountant

940145. *Biology.* Requirements: High school graduate; basic understanding of accounting and budgeting; strong book-keeping, clerical and verbal skills; demonstrated abilities in developing and using Excel spreadsheets on a Macintosh computer, and in inputting and using other financial systems; knowledge of FIS and grants budgeting strongly preferred; ability to handle simultaneous, multitask assignments; ability to work under deadline pressures; effectively support and interact with a diverse group; ability to demonstrate sound independent judgment; initiative and the ability to work with minimal supervision; strong organizational skills; typing 35 wpm with accuracy. Clerical tests required.

Technical Service Specialist

940146. *Campus Stores.* Requirements: High school graduate; capable of providing technical support and sales consultation for computer hardware, software and peripheral sales to University departments; capable of installing systems and software and maintaining and servicing equipment; capable of inventory control of service areas and sales; ability to support a broad array of equipment. Resume required.

Library Services Assistant, Part-time

940148. *Law Library.* Requirements: Some college, bachelor's degree preferred; typing 40 wpm with accuracy; library technical service experience, law library technical experience preferred; library updating experience (loose leafs, pocket parts, etc.); experience with computers; attentiveness to detail. Clerical tests required.

Secretary/Receptionist, Part-time

940157. *Computer and Communication Research Center.* Requirements: Some college; typing 50 wpm with accuracy. Duties: Maintain calendars, schedules and files; make travel arrangements; type routine correspondence, classwork; assist in

fiscal activities of center; assist in annual report preparation; assist in coordination of research progress reviews; coordinate center technical report distribution; coordinate mailings of networking and communications program; assist in departmental accounting procedures; maintain office supplies. Clerical tests required.

RN/LPN

940160. *Health Services.* Requirements: Registered nurse and/or licensed practical nurse for weekend infirmary duties. Schedule: (32 weekends), fall and spring semesters; may be eight or 12 hours from 7:30 a.m. Saturdays to 7:30 a.m. Sundays. Application and resume required.

Technical Sales Specialist

940177. *Campus Stores.* Requirements: Some college, bachelor's degree preferred; knowledge of personal computers and popular software; experience using a variety of microcomputer peripherals, such as modems and printers; must be physically able to lift system components; must be able to work evening and Saturdays. Resume required.

Oiler

940179. *Euclid Power Plant.* Requirements: High school graduate; skill in the use of tools and equipment; a general understanding of power plant machinery; a history of dependability; mechanical aptitude; ability and willingness to follow instructions; one year experience as an oiler in a plant of comparable size or comparable work experience. Application required.

Clinical Physician, Part-time

University Health Service. Washington University is seeking a physician with strong clinical focus coupled with interest and experience in the issues of adolescent healthcare. Special consideration will be given to candidates with an orientation toward health promotion and education. Qualifications: M.D. degree; three years of clinical practice beyond medical residency; board certification in family practice, internal medicine, or adolescent medicine; experience in college health or community health education preferred; progressive, creative and student-oriented disposition, as well as strong interpersonal communication skills are essential. The position is available in summer 1994. Salary commensurate with education, training and experience. Please submit a letter of application, resume and three current letters of recommendation to Laurie Reitman, M.D., Director of Student Health, Washington University, Campus Box 1201, One Brookings Drive, St. Louis, Mo., 63130-4899.

Medical Campus

The following is a partial list of positions available at the School of Medicine. Employees who are interested in submitting a transfer request should contact the Human Resources Department of the medical school at 362-4920 to request an application. External candidates may call 362-7195 for information regarding application procedures or may submit a resume to the Human Resources office located at 4480 Clayton Ave., Campus Box 8002, St. Louis, Mo. 63110. Please note that the medical school does not disclose salary information for vacancies, and the office strongly discourages inquiries to departments other than Human Resources.

Social Worker MSW

940428-R. *Psychiatry.* Schedule: Part-time, 20 hours per week. Requirements: Master's degree in social work or ACSW licensed clinical social worker; ability to identify the critical unit to work within therapy. Will be doing assessments and intervention in family therapy.

Medical Research Technician

940468-R. *Pediatrics.* Requirements: Bachelor's degree; one year experience in a lab setting; ability to prepare buffers for electrophoresis; experience with molecular

biologic techniques, such as blotting and hybridization preferred.

Statistical Data Analyst

940580-R. *Psychiatry.* Requirements: Master's degree in math, computer science, data processing or related field; one to two years related experience; knowledge of WordPerfect, spreadsheets, LANS, DOS and UNIX; ability to use PC graphics packages for production of presentation-quality graphics and familiarity with large data base management.

Medical Research Technician

940581-R. *Pathology.* Requirements: Bachelor's degree with background in cell and molecular biology and/or biochemistry; one to two years lab experience; ability to work independently under guidelines from supervisor; tissue culture, protein purification, DNA and RNA analyses skills.

Secretary II

940582-R. *Psychiatry.* Requirements: High school graduate or equivalent; three years university experience; neat, accurate and able to organize work; confident and courteous manner; knowledge of WordPerfect; typing 60 wpm.

Medical Research Technician

940583-R. *Psychiatry.* Requirements: Bachelor's degree with knowledge of all theoretical aspects of molecular biology; interest in genetics; practical experience with PCR and DNA sequencing (automated DNA sequencer or manual gels) preferred.

Medical Research Technician

940586-R. *Cell Biology.* Schedule: Full-time with occasional evenings and weekends. Requirements: Bachelor's degree in biology, chemistry or related field; one to two years experience as a lab technician; knowledge of molecular biology; knowledge of techniques in working with DNA.

Staff Therapist

940599-R. *Psychiatry.* Schedule: Part-time, 10 hours per week, variable. Requirements: Master's degree; counseling experience; knowledge of medical terminology, diagnosis, procedures.

Medical Secretary

940601-R. *Psychiatry.* Schedule: Part-time, 22.5 hours per week. Requirements: High school graduate or equivalent; post-high school education/training desired; excellent verbal and written communication skills; experience in proofreading, composing and patient scheduling; familiarity with IBM/WordPerfect; typing 65 wpm.

Human Resources Associate, Recruitment

940606-R. *Administration.* Requirements: Bachelor's degree or three years related experience, emphasis on human resources, behavioral sciences or life sciences; good verbal communication skills; ability to interpret or search out skill requirements indicated on personnel requisitions.

Compensation Specialist

940607-R. *Administration.* Requirements: Bachelor's degree or equivalent education/experience in human resources, business or behavioral science; knowledge of wage and salary laws; good judgment, discretion, communication skills; familiarity with WordPerfect 5.1.

Earned Income Credit available

Last year more than \$250 million in Earned Income Credit (EIC) was refunded to the working poor in Missouri. More than 272,000 Missouri families received this tax benefit.

This year the maximum credit is larger than ever — \$2,364 as compared with \$2,211 last year. Refunds of this magnitude could be a real help to families in financial need. Many Missouri workers suffered from a loss of wages due to the 1993 floods. This means more families than before may qualify for EIC this year. Many qualified families are unaware of the credit's availability.

Employees who may qualify for this larger credit should contact the Office of Human Resources at the Medical Campus or the Hilltop Campus for a brochure and an Internal Revenue Service phone number for more information.

Bradley supports higher education — from page 1

address, Bradley discussed U.S.-Western European relations.

Considered one of the most eloquent and prophetic speakers on the issue of race relations in this country, Bradley has established himself as a serious voice in the national dialogue on racism, pluralism and discrimination. He sees a critical link between tense race relations and the decay of American cities. He advocates significant national investment and increased personal responsibility to halt the economic and moral deterioration of urban America.

A long-time proponent of higher education and worker retraining, Bradley devised in 1991 a new way to pay for higher education. The plan, known as Self-Reliance Loans, was enacted in 1993 to make higher education affordable for all Americans regardless of family income. The program allows students to use future earnings to pay for college. Self-Reliance Loans also will help adults going back to school and displaced workers who need additional training to re-enter the job market.

Bradley, who was a leading proponent of the North American Free Trade Agreement, co-authored the report that served as the blueprint for the recently completed GATT negotiations.

Bradley's interest in using the tax system to protect the environment dates to 1980, when he helped craft the financing system for the Superfund toxic-waste cleanup. He also has introduced legislation to track medical waste in oceans, prevent oil spills, restore and preserve beaches, rivers and wildlife, and ban toxic

lead from the environment. Additionally, he promotes an energy strategy that encourages conservation, recycling and the use of alternative fuels such as clean natural gas.

Bradley graduated from Princeton University in 1965 with honors in American history. He was awarded a Rhodes Scholarship to Oxford, where he earned a graduate degree after studying politics, philosophy and economics. As an undergraduate, Bradley was a three-time basketball All-American and won the Sullivan Award as the country's outstanding amateur athlete. In 1964 he was captain of the U.S. basketball team that won the gold medal at the Tokyo Olympics.

After returning from Oxford in 1967, Bradley played professional basketball for 10 years with the New York Knicks. In 1970 and 1973, the Knicks won the National Basketball Association championship with Bradley as a starting forward. Bradley received wide acclaim for *Life on the Run*, a book he wrote in 1976 about his years with the Knicks. His second book, *The Fair Tax*, was published in 1982 and helped popularize the ideas that eventually became the Tax Reform Act of 1986.

Bradley, who served in the Air Force Reserve from 1967 to 1978, attaining the rank of first lieutenant, is the subject of a John McPhee book. McPhee turned his New Yorker profile of the basketball star into the book *A Sense of Where You Are*, published in 1978.

Bradley's wife, Ernestine Schlant Bradley, is a professor of German and comparative literature at Montclair State College in New Jersey.

— Susan Killenberg