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RECORD

Washington
WASHINGTON UNIVERSITY IN ST. LOUIS

Vol. 16 No. 32/May 14, 1992



Exacting Task: A workman measures the spacing between rows of some 10,000 chairs that are being placed in Brookings Quadrangle for Commencement exercises. Ed McComas, vice president of Cleantech, a contracted custodial service in charge of the project, says the task takes four workers three and a half days, weather permitting.

131st Commencement

Washington University will bestow degrees on some 2,300 students

Washington University will bestow degrees on more than 2,300 students Friday, May 15. The 131st Commencement ceremony will begin at 8:30 a.m. in Brookings Quadrangle. In case of rain, Commencement exercises will be held at the St. Louis Arena, 5700 Oakland Ave., beginning at 10 a.m.

Burton Wheeler, Ph.D., professor of English and chair of religious studies, will serve as grand marshal of the ceremonies. The grand marshal oversees Commencement activities and leads the graduating students in the procession into Brookings Quadrangle. Norris Kelley Smith, Ph.D., professor emeritus of art history and archaeology, will serve as the honorary grand marshal. Members of the class of 1942, celebrating their 50th-year reunion, also have been invited to march in the procession.

Marian Wright Edelman, the founder of the Children's Defense Fund, will deliver the Commencement address following opening remarks by Lee M. Liberman, chairman of the University's Board of Trustees. Edelman also will receive an honorary doctorate of humanities.

Edelman's talk, titled "The Measure of Our Success," is taken from the title of her book that was released on this Mother's Day, May 10. A leading advocate for children, Edelman began her career in the mid-1960s in Jackson, Miss., as the director of the Legal Defense and Education Fund of the National Association for the Advancement of Colored People.

In 1968 Edelman founded the Washington Research Project, which

became the Children's Defense Fund (CDF) in 1973. CDF advocates the prevention of adolescent pregnancy and the improvement of child health, education, child care, youth employment, child welfare and mental health and family support systems. Because of Edelman's dedication and leadership, CDF is considered one of the nation's most active and effective organizations devoted to children's and family issues.

Four others also will receive honorary degrees. Frank Dixon, M.D., founder and director emeritus of the Research Institute of the Scripps Clinic in La Jolla, Calif., will receive a doctor of science; A. E. Hotchner, J.D., author and playwright, will receive a doctor of letters; Jacqueline Joyner-Kersey, Olympic track and field gold medalist, will receive a doctor of laws; and Edward C. Stone Jr., Ph.D., director of the Jet Propulsion Laboratory and a vice

• The interesting lives of eight graduates are profiled inside Pages 4-7

president of the California Institute of Technology, will receive a doctor of science degree.

Raymond Fernanda Staples, senior class president, will give the student Commencement address. The Dallas, Texas, native will give a talk titled "We Are The Ones: Beyond Race, Religion and Politics, Toward Humanity." Staples is a summa cum laude candidate in urban economics with a minor in business.

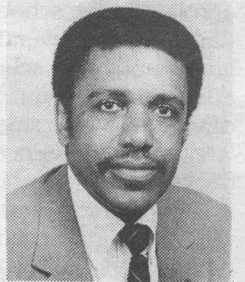
Chancellor William H. Danforth will then confer undergraduate and graduate degrees, with the assistance of Provost Edward S. Macias, Ph.D.

Continued on p. 3

McLeod named College of Arts and Sciences dean

James E. McLeod, director of the African and Afro-American Studies program and adjunct associate professor of German, has been named dean of the College of Arts and Sciences at Washington University, Chancellor William H. Danforth announced.

Effective July 1, McLeod, 47, will be responsible for administration of the undergraduate programs in arts and sciences and the general education of all undergraduates at the University. As dean of the College of Arts and Sciences, he will provide leadership for the entire undergraduate program, including direction of the undergraduate advising system, recommending students to the faculty for the awarding of the bachelor of arts degrees, and working with the curriculum committee of the faculty in developing recommendations concerning curriculum and degree requirements.



James E. McLeod

He will serve as the principal liaison of the Faculty of Arts and Sciences with key University departments and with administrators responsible for undergraduate education in other schools of Washington University. McLeod served as assistant dean of the Graduate School of Arts and Sciences at Washington University from 1974 to 1977 and as assistant to Chancellor Danforth from 1977 to 1987.

Chancellor Danforth said, "Professor McLeod is an able administrator who has served with distinction in a number of key positions where he has done much to enrich the lives of undergraduates. He has a clear understanding of the challenges and problems facing our University and higher education today and into the 21st century. At Washington University nothing is more important than undergraduate education, and we are pleased that he has agreed to accept this vital position."

In 1991, McLeod was honored by alumni as one of Washington University's distinguished faculty at the annual Founders Day celebration.

In recommending McLeod for the position, Martin H. Israel, Ph.D., dean of the Faculty of Arts and Sciences, noted, "Professor McLeod has good judgment,

Continued on p. 12

Hirsh receives Acoustical Society's Gold Medal

Ira J. Hirsh, Ph.D., Edward Mallinckrodt Distinguished University Professor of psychology and audiology, will receive the Acoustical Society of America's prestigious 1992 Gold Medal for his "contributions to the understanding of the auditory process," according to the society. He received the award at the society's annual meeting May 13 in Salt Lake City, Utah.

Hirsh also is director of research emeritus and senior research scientist at the Central Institute for the Deaf (CID), where most of his scientific work was done. Hirsh's citation says that his "career is an impressive blend of original scientific contributions, able administration, and prudent and discerning application of scientific knowledge to various applied areas, especially hearing impairment."

The Acoustical Society of America is a premier group of scientists and engineers concerned with sound and its effects on people. The annual Gold Medal award is presented in the spring

to a society member who has made significant contributions to acoustics.

"We at Washington University are honored to have such an accomplished individual on our faculty," said Washington University Chancellor William H. Danforth. "The Gold Medal acknowledges the very important contributions of Professor Hirsh and reflects the high esteem of his colleagues."

"The CID Research Department's worldwide reputation for excellence is owed in great measure to innumerable contributions from Dr. Ira Hirsh," said CID Director Richard G. Stoker, Ph.D.

Hirsh has been a member of the psychology faculty since 1951, the year he also became affiliated with CID. He served as dean of the Faculty of Arts



Ira J. Hirsh

and Sciences from 1969 to 1973 and chair of the Department of Psychology from 1983-87.

A former president of the Acoustical Society, Hirsh has published some 130 articles in professional journals, in addition to his classic 1952 book *The Measurement of Hearing*. His research interests include binaural hearing (involving both ears), speech perception, effects of noise and the timing and rhythmic aspects of sound perception.

He is a member of the National Academy of Sciences and holds the Whettnall Medal of the Royal Society of Medicine. He is a fellow of the American Association for the Advancement of Science, American Psychological Association, American Speech and Hearing Association and the Acoustical Society of America. He recently completed two terms as chair of the National Research Council's Commission of the Behavioral and Social Sciences.

Inside: **MEDICAL RECORD**

• Renal division receives \$2.6 million to fund research center. Page 8

• Drug controls herpes simplex in the eye. Page 9

• Researcher evaluates futuristic hearing aids. Page 10

Urban Law Clinic puts textbook theory into practice for students

An expert witness recently testified in a federal court that poor health care at the Moberly (Mo.) Correctional Center caused at least two inmate deaths. The testimony made front-page news but what readers didn't know was that the court examination — and much of the work behind-the-scenes — was done by students at Washington University's School of Law.

The students on the case were all enrolled in the school's Urban Law Clinic, one of several internship programs under the school's Clinical Education Program. The program is designed to give students hands-on lawyering experience by putting textbook theory into practice.

The clinic, directed by law professor Clark D. Cunningham, J.D., operates in conjunction with Legal Services of Eastern Missouri, a non-profit organization that offers free legal services to the region's residents. In the clinic, students act as the primary attorneys on cases — taking depositions, mapping strategies, negotiating with opposing attorneys and arguing in court. They agree to work a minimum of 24 hours a week and hold regular office hours at the clinic's office in the Central West End.

For law student Dawn Morville, the clinic was an invaluable learning tool. By working on the Moberly prison case, she had the opportunity to examine expert medical witness Daniel Goodenberger, M.D., of the School of Medicine, in front of a federal judge.

The prison case is a federal class action suit that alleges a variety of constitutional violations.

"It was 'real lawyering,'" said Morville. "And there aren't many second-year law students who get the chance to do that."

The clinic has been working on various aspects of the Moberly case, *Lindsay v. Jones*, since 1990. Most recently the clinic opposed a proposed increase in the prison's population from 1,250 to 1,500. Cunningham said clinic students have identified some serious problems inside the prison and that he hopes to see significant changes in how health care is provided in the next few months.

The clinic takes on a variety of cases, some large-scale law-reform lawsuits like Moberly; others are individual. Law student Debbie Haan, who will graduate Friday, worked on a wrongful eviction case with a woman who couldn't afford the \$3,000 bond money she had to pay. Once the clinic won a court order to examine the landlord's records, the landlord abandoned the eviction and the woman's bond money was returned.

Other clinics under the school's Clinical Legal Education Program share the goal of offering students the chance to work on actual cases, said Karen Tokarz, J.D., LL.M., professor of law and director of the program. About two-thirds of the law school's student body participate in one of the programs.

Washington receives \$6.5 million bequest

Washington University has received a \$6.5 million bequest from the estate of the late Sarah Louise Glasgow Wilson, Chancellor William H. Danforth has announced.

The bequest is restricted to the support of faculty salaries for the School of Engineering and the College of Arts and Sciences. Wilson had previously made generous contributions for major campus construction projects, including the Newton R. Wilson Memorial Hall, the former Wilson Swimming Pool and the Ann Whitney Olin Women's Building, and also to support faculty salaries.

Wilson was the widow of Newton R. Wilson, a Washington University School of Engineering alumnus. At the time of her death in 1938, she was recognized as one of St. Louis' most

generous philanthropists. Her contributions included a \$560,000 gift to Mary Institute, which at the time was operated as Washington University's preparatory division for girls.

Danforth said the success of higher education in this country is attributed to civic-minded citizens like Wilson. "Now over a half century after her death, Washington University again benefits from her foresight, wisdom and generosity; we are forever grateful," he said.

Wilson is remembered by Margaret Scudamore Gebauer of Baker, Fla., who received scholarship aid from her while a student at Washington University in 1922. "Mrs. Wilson once said, 'Money is like water; if it stands still it stagnates, but if it keeps flowing it is of value to many. Keep my gift flowing!'"

Staples urges class members to solve problems

Senior Class President Raymond F. Staples, who will deliver the student Commencement speech May 15, believes America's youth have inherited a "legacy" of problems from past generations.

But he's confident that his generation will solve them. Staples will detail how in his speech, titled "We Are The Ones: Beyond Race, Religion and Politics, Toward Humanity."

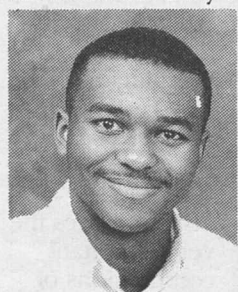
The problems are enormous, says Staples, who will graduate summa cum laude in urban economics with a minor in business. "There are more homeless people than ever before. AIDS has become the greatest health crisis of this decade. Many people do not have health care. We are struggling to build a post-Cold War economy," he said.

"We are the ones who must deal with these problems because we have no other choice."

Staples, who will enroll in a joint J.D./M.B.A. program this fall at Harvard University, also will discuss racial and religious problems in America. The nation is "supposed to be a great melting pot," he says, but "one thing is tearing the country apart. There is no cohesive-

ness among groups. Despite political, racial and religious differences, we all have one thing in common: our humanity. We all need to come together."

A native of Dallas, Texas, Staples has received many scholarship and



Raymond F. Staples

leadership awards, including membership in Phi Beta Kappa. An entrepreneur, he owns three businesses: an investment company, a shipping and storage service and, with partner Gregory Dinger, a business school junior, an import/export company linking Czechoslovakian buyers and sellers with their American counterparts. Staples was named a finalist for the Collegiate Entrepreneur of the Year Award from the Jefferson-Smurfit Center for Entrepreneurial Studies and the Small Business Association.



The Washington University Society for the Arts enjoyed a successful first year, thanks to the efforts of founding officers (from left) Adrienne Felder, Karen Ho and James Goldfarb. Shelly Botkin is not pictured.

Filling a void

Club promotes interest in the arts

Three years ago two freshmen learning about classical music felt more like singing the blues. They wanted to go to the symphony, but, not wanting to go alone, they wondered how to find other students who shared their interests.

To solve that problem, those two students, Adrienne Felder and James Goldfarb, now both seniors, established Washington University Society for the Arts (WUSA). WUSA, founded last fall, arranges for group tickets, transportation and a discussion by an artist following a performing arts event. The idea, as the mission statement says, is "to promote student interest in and awareness of the creative and performing arts both on campus and in St. Louis."

"New groups are founded all the time and many are successful," says Kim Elliott, assistant director of student activities. "But WUSA filled a real void on campus. I think students were always interested in such a group, but didn't know where to go."

One student, sophomore Heather Christy, agrees. "Last semester I really wanted to go to the symphony, but didn't motivate myself to do so until tickets were being sold in Mallinckrodt. The tickets were much less expensive and so easily accessible that it really motivated me to go."

So far, WUSA has offered \$5 tickets to the musical "Cats" and arranged discount tickets to "City of Angels." The group also purchased season tickets to all major theatres in town and raffled them off to students. WUSA provided transportation to the symphony three times. It also co-sponsored a weeklong residency by Chicago-based dancer/choreographer Jan Erkert.

The group holds monthly meetings where a professor discusses a topic in the arts. Between 20-30 students attend each monthly meeting.

Robert Small, an artist-in-residence and an internationally acclaimed dancer, talked about his adventures touring in Europe and performing in New York City. William Wallace, Ph.D., associate professor of art history, discussed his experiences in Italy last year researching the restoration of Michelangelo's Sistine Chapel paintings. Seth Carlin, Ph.D., professor of music, came to perform a short recital.

Students don't have to be members to attend meetings or arts events that WUSA arranges. The group's goal is simply to make arts events accessible to everyone on campus.

"If a student who normally wouldn't

get involved in the arts, goes to even one play or concert with us and enjoys it, then that's what WUSA is all about," says Ananda Martin, a freshman who is active in the group.

The idea for the group has really expanded since Goldfarb and Felder first brainstormed in their introductory music class.

"Originally we thought it would be good just to have a list of people you could call who you knew would be interested in the same type of events," says Goldfarb. "And then all the officers (Shelly Botkin and Karen Ho, in addition to Goldfarb and Felder) had ideas to also co-sponsor events on campus, be a clearinghouse for arts information for students and learn more about the arts by arranging informal talks by artists."

Each of the four officers is responsible for arranging events in different arts areas. And each student also has a different faculty adviser, someone who specializes in that particular area and can alert them to the most important upcoming events. Those advisers are Wallace; Michael Beckerman, Ph.D., associate professor of music; Henry Schvey, Ph.D., Performing Arts Department chair; and Mary Jean Cowell, Ph.D., associate professor of performing arts.

Plans are already being made for next year's events. For more information, call Martin at 935-2066.

Baseball Bears earn championship bid; will host regional

After an eight-year absence from NCAA postseason play, Washington's baseball team has earned a bid to this year's championship and will host the four-team Central Regional from Thursday, May 14, through Sunday, May 17, at Kelly Field.

The Bears (23-14-1), seeded fourth in the region, play the number one seed, William Penn College (32-1), at 4 p.m. on Thursday. Preceding the Washington-William Penn game, second-seeded Aurora University (30-6) battles third-seed and defending regional champion Simpson College (28-5) at noon.

The tournament continues on Friday, with Thursday's losers playing at noon, and Thursday's winners playing at 4 p.m. The winner of the Central Regional moves on to the Division III Finals, May 21-26 in Battle Creek, Mich.

NOTABLES

Ben Abella, a senior biochemistry major, will study at Churchill College at Cambridge University in England, through the Winston Churchill Fellowship. The fellowship, awarded to 10 students nationally each year by the foundation, will pay for Abella's tuition, room, board, living expenses and travel. The finalists are chosen by the foundation's screening committee. They are selected based on GRE scores, academic achievement, capacity for original or creative work, character adaptiveness and an essay about the critical problems of society. Abella wrote about his experience in science and other academic areas, as well as his plans for the future and how they relate to the world. At Cambridge, Abella will participate in a one-year master of philosophy program in genetics.

Joe Castelloe, a senior majoring in biology, is the recipient of the Marion Smith Spector Prize in Biology. In addition to an outstanding academic record, Castelloe produced two research papers of superb quality. The first, titled "High Resolution Tissue Printing on Agarose," was conducted under the supervision of **Joseph Varner**, Ph.D., Charles Rebstock Professor of biology. The second paper, titled "A Study of New Applications of Coalescent Theory in Cladistic Analysis," was conducted under the supervision of **Alan Templeton**, Ph.D., professor of biology.

Marcel Muller, Ph.D., professor of electrical engineering, and **Ronald Indeck**, Ph.D., assistant professor of electrical engineering, served as general chairman and local chairman of an International Magnetics Conference held at the Adams Mark Hotel in St. Louis. The annual conference, sponsored by the Institute of Electrical and Electronic Engineers, is attended by nearly 1,000 engineers and scientists representing industrial, academic and governmental institutions worldwide. During the four-day conference, more than 400 research papers and two evening symposia on topics of interest were presented, including a paper by doctoral graduate **Guo Mian** and Muller and Indeck, titled

Griffin receives Eliot Society's "Search" Award

W.L. Hadley Griffin, chairman of the executive committee for Brown Group Inc., St. Louis, and a Washington University Life Trustee, has received the University's Eliot Society Award.

The award is presented annually to an "outstanding citizen of Washington University." The sculpture award is a hand-wrought replica of "The Search," designed by Heikki Seppa, professor of fine arts.

Griffin was appointed a trustee of the University in 1967, vice chairman in



W.L. Hadley Griffin

1977 and chairman in 1983. He served as chairman of the Commission on the Future of Washington University, the Arts and Sciences Task Force, and as co-chairman of the Friends Council. He also served on

Membership Committee, the Law School Development Advisory Committee, and the Capital Gifts Committee. He is a member of the law school's National Council. In 1982 Griffin received the Distinguished Law Alumni citation.

Griffin, an active civic and business leader, was named by the St. Louis Globe Democrat as its "Man of the Year" in 1973.

"Transverse Correlation Length in Thin Film Media." The conference, first organized more than 40 years ago, met for the first time in St. Louis to recognize contributions to magnetic information storage technology by Washington University's laboratories.

David Serlin, a senior in the College of Arts and Sciences, is the recipient of the Harrison Daily Stalker Prize. The \$200 award is given annually to a graduating senior distinguished for both academic excellence in science and breadth of interests. Serlin entered the college in the Scholars Program in Medicine in 1988. He will graduate summa cum laude in May, after completing his double major in biology and English literature. He conducted his research under **Marc Schieber**, M.D., Ph.D., assistant professor of anatomy and neurobiology, and neurology and neurological surgery. Serlin's research paper was titled "Morphological Indications of Neuromuscular Compartmentalization in the Multi-Tendoned Extrinsic Finger Muscles of the Monkey Forearm." Serlin plans to enter the Washington School of Medicine this fall.

Kristin E. S. Zapalac, Ph.D., assistant professor of history, recently delivered a paper titled "Sharper Than Any Two-Edged S/word: Philology and Community in the Sixteenth Century" at the annual meeting of the Renaissance Society of America at Stanford University. At the invitation of the Women's Studies Program at Washington University, she repeated her lecture, titled "Engendering America: Images of the 'Other' for Armchair Adventurers, 1493-1555," which was originally delivered as a part of University College's Saturday Seminar series on the Impact of 1492.

Have you done something noteworthy?

Have you: Presented a paper? Won an award? Been named to a committee or elected an officer of a professional organization? The Washington University Record will help spread the good news. Contributions regarding faculty and staff scholarly or professional activities are gladly accepted and encouraged. Send a brief note with your **full name, highest-earned degree, current title and department** along with a description of your noteworthy activity to Notables, Campus Box 1070, or by electronic mail to p72245DP at WUVMC. **Please include a phone number.**

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Missouri's first

Center receives grant to launch Korean language program

The Joint Center for East Asian Studies will use a recently awarded federal grant to develop Missouri's first Korean language program.

The \$197,685 grant was awarded by the U.S. Department of Education. The center is a collaborative program between Washington University and the University of Missouri-St. Louis that addresses the growing need to improve understanding of East Asia.

The three-year grant will allow the center to develop a Korean curriculum that will include coursework in culture and history, according to Joe Allen, Ph.D., director of Washington's East Asian Studies program and co-director of the joint center.

"With this grant we can make the center truly an East Asian entity by including East Asia's third major player,"

said Allen. "We already have a wonderful base in China and Japan but it's time we expand."

The grant also will be used to teach Chinese at the UM-St. Louis campus; to form a development seminar for center faculty to learn more about Korea; and to start a colloquium series jointly sponsored by both universities. The first colloquium series will invite speakers to address the political economy of East Asia from a global perspective.

"Our hope is that the colloquium series will attract faculty and students from many disciplines and to stimulate new areas of scholarship," Allen said.

The grant also will help Korean language instruction reach students outside of St. Louis via the University of Missouri video network.

Olin graduates assist East European firms

A group of MBAs graduating this spring from the School of Business will spend up to two years in Eastern Europe helping businesses there manage the transition to free market capitalism.

Olin is one of 20 leading U.S. business schools that have formed a consortium to help match MBA graduates with firms needing management assistance in Eastern Europe. Known as the MBA Enterprise Corps, the program has been described as a "sort of Peace Corps for the finance and marketing set."

Olin MBAs have accepted the following assignments:

Bridget Blaise will bring marketing skills to Kraklovoposka Strojina Brno, an industrial machinery maker in Brno, Czech-Slovak Federal Republic.

Katherine Martin will assist in management duties at CHIRANA, a manufacturer of dental equipment and accessories in Prague, Czechoslovakia.

Eric Shaikewitz will assist with international marketing and general management at PHZ JUR-GAST, a foreign trade office in Wisla, Poland.

Ho places second in national writing contest

Karen Ho, a senior biochemistry major, has been named the second place winner in a national writing competition. Three awards were given nationally. The Elie Wiesel Prize in Ethics Essay Contest is administered by The Elie Wiesel Foundation for Humanity. The foundation was established by Elie Wiesel, a human rights activist, author, survivor of the Holocaust and recipient of the 1986 Nobel Peace Prize.

Ho also is an Arthur Holly Compton Scholar and recipient of the Barry M. Goldwater national science scholarship.

The Pittsburgh native, who says her three loves are music, writing and science, not necessarily in that order, says she wrote the essay "for fun" over winter break. Ho was about to get on a plane for home when Robert Wiltenburg, Ph.D., assistant dean in the College of Arts and Sciences, called.

"He said, 'I've got this writing thing and I heard you like to write, so why don't you come by my office and pick up the information?'" Ho recounts. "On the plane ride home, I read the information and I thought, 'Ethics and writing, I could really do this.'"

In mid-May, she will travel to New York City to receive her \$3,000 prize.

"When Roberta Goldman (executive director of the Elie Wiesel Foundation) called me to tell me about the prize I said, 'I don't care about the money, I just want to shake this man's hand!'"

Mike Simon will help develop a strategy for international expansion at FEROX, a heating and cooling equipment maker in Deoin, Czechoslovakia.

Marty Staples will assist in general management at TATRA, a Czech producer of furniture for homes, hotels and restaurants.

The corps was established in 1990 after Texas businessman H. Ross Perot and former White House Communications Director David Gergen challenged MBAs to open opportunity for American business in Eastern and Central Europe. The corps placed 41 MBAs in 1991 with government agencies and businesses in Czechoslovakia, Poland and Hungary. As many as 100 MBAs could be placed in 1992.

The MBA Enterprise Corps is based at the Kenan Institute of Private Enterprise at the Kenan-Flagler School of Business, University of North Carolina. Funding is provided by the Kenan Foundation, the U.S. Agency for International Development (AID), and other private organizations.

Ho's 5,000-word essay answered the question "Can Ethics Be Taught?" Her thesis was that whether we consciously teach ethics in school or not, ethics are a reflection of our society. We choose heroes in society that reflect our values, she asserts. Ho also advocated that people think hard about ethics, problem solving and conflict resolution in order to better achieve ethical and equitable solutions to problems.

"Why is it that we can watch the news and not feel this sense of outrage?" she asked in her essay. Ho says that ethics education should make us sit back and say, "Is this our ideal world? If not, what is our ideal and how can we achieve it?"

Commencement

continued from p. 1

Jessica W. Graae, a graduate student in voice, will sing "America the Beautiful" and Deborah G. Stinson, a graduate student in voice, will sing "The Alma Mater." The Mighty Mississippi Concert Band, conducted by Dan R. Presgrave, also will perform. Presgrave is director of instrumental ensembles at the University.

Following Commencement, the deans of the various divisions will hold receptions where diplomas will be distributed. For locations, see the Commencement calendar on page 12.

Gallery of graduates

Every member of the Class of 1992 has his or her own special talents, achievements, diverse backgrounds and experiences. The following stories tell about the interesting lives of eight graduating students.

STATS founder says program will impact her medical career

When Janet McGhee accepts her medical degree on Friday, she'll leave behind a thriving educational program she helped to establish. She was instrumental in forming Students Teaching AIDS To Students (STATS), a program in which Washington medical students visit junior high school classrooms to talk about AIDS and HIV infection.

For the last three years, McGhee has stayed busy with medical school and her work with STATS. She served first as a coordinator of the STATS program here, then for two years as a national director.

McGhee was finishing her first year of medical school when the STATS program began to occupy her time. Her awareness of the ignorance and cruelty directed at those who are HIV-positive was raised during a course she took on newborn medicine. A woman whose baby had died of AIDS spoke to the class about the difficulties she'd faced and how the experience had changed her family's life.

McGhee decided there must be something she could do so that people, especially children, wouldn't be so frightened of those carrying the virus. McGhee approached the course instructor, F. Sessions Cole, M.D., director of the Division of Newborn Medicine. Medical student Jennifer Jaeger also had approached Cole. He suggested the two get together. Shortly after, the St. Louis chapter of STATS was born.

The STATS program actually was started at the University of Missouri-Columbia School of Medicine by Grant Haven, a Washington University graduate. It was revised by McGhee and Jaeger before the first session at the Ferguson Middle School three years ago. "We changed things to get parents more involved, and we added a second day in the classroom where we bring in a person living with AIDS to talk with the kids," McGhee said.

The program targets students in the sixth, seventh and eighth grades. Medical students wanted to talk to children who were old enough to have thought about sex but probably weren't sexually active. However, Jaeger and McGhee learned otherwise. "The first time we taught, two of the young girls had gotten pregnant over the summer," McGhee remembers. "These were 11- and 12-year-olds just beginning the seventh grade ... that's a scary number."

Educational efforts are having some impact but work is still needed. Today, students appear to have a better grasp on the facts about the disease even before the program visits schools. "The kids know it's a virus, and they know it can knock out your immune system and that it can kill you, but they're still missing some big pieces of information," says McGhee. "There are a lot of rumors with kids that age about how you can or can't become infected."

The STATS program also promotes discussion of the HIV-virus between parents and children. Parents Night was one of the key aspects that McGhee and Jaeger added. The first night of the STATS program here has always involved parents. They receive literature, see a video their children will see, and have the opportunity to meet the AIDS sufferers who will talk to the children. A few parents have chosen to hold their children out of the STATS program. "Two women who came to Parents



Good medicine begins at home: Janet McGhee is postponing the start of her residency in pediatrics to take care of her own baby, Ian.

Night didn't want their children taking part because of their beliefs about condom use. But they did take home the brochures with the idea of discussing things with their daughters at home," McGhee said.

Condoms are one of several topics discussed by the second-year medical students who teach in the STATS program. McGhee says, "We didn't want to provide sex education for the school, but at the same time, you can't discuss AIDS responsibly and transmission of AIDS without discussing some sexual activity."

Students are taught that the only way to be absolutely safe is to abstain from sex. "But we tell students if you're going to have sex, then we want you to protect yourself," she said.

McGhee has now turned over the program to younger medical students. She and Jaeger stepped down earlier

this year from the national directorship of STATS. McGhee had thought for a while of continuing her involvement with the national program. "We were invited to stay on, and since I had deferred my residency until January, I was tempted, but I decided not to, and there was a sigh of relief from my husband about that," she said.

Even though McGhee won't be active on a national level, she is conducting a study to examine attitudes at Washington University regarding AIDS. McGhee's study will look at the impact of the STATS program on medical students who participate in it. "The study will deal with attitudes about AIDS and the potential impact of a program like STATS," she said.

Particularly alarming to McGhee are studies like the one published in the journal *Academic Medicine*. The study indicates that between 40 and 50

percent of graduating medical students believe they should have a choice as to whether to treat AIDS patients. McGhee says, "Some residency programs in places such as New York City and San Francisco are having trouble filling their slots. That's against the basic principles of medicine."

She'll have time to concentrate on the study because her pediatric residency at St. Louis Children's Hospital doesn't begin until January. McGhee delayed her residency to spend time with husband, Bill, and infant son, Ian.

Of her involvement with STATS, McGhee says, "It had a profound influence on my whole medical school experience. It will make me a better doctor because talking to those kids forced me to be able to take complicated medical terminology and turn it into real English. That's a skill that every doctor needs." — Jim Dryden

Graduate seeks challenge in business abroad

Bridget Blaise realized long ago that international expertise would play an important role in her career, but she never expected polka lessons to enter into her business education. Yet ethnic dances, fine pastries and Slavic beer will be part of a cultural training program that prepares her for a volunteer management role in Eastern Europe.

Blaise is one of five graduates in the Olin School of Business Master's of Business Administration (MBA) Program who has signed on with the MBA Enterprise Corps. The corps is a consortium of 20 top business schools working to place graduating MBAs with firms struggling to manage their transition to free markets.

"Going there and trying to make a positive impact on this company struck me as a very interesting challenge," Blaise said. "But I know what it's like to go abroad and learn a new language. Since I'm starting at ground zero, it's going to take awhile to get up-to-speed."

MBAs placed through the enterprise corps agree to spend at least one year with their host company. Blaise will work in marketing for an industrial machinery manufacturer in Brno, the Czech-Slovak Federal Republic. She heads first to corps headquarters at the University of North Carolina for an intensive eight-week cross-cultural training program. Blaise, who now

speaks French and basic German, will be getting a crash course in Czech.

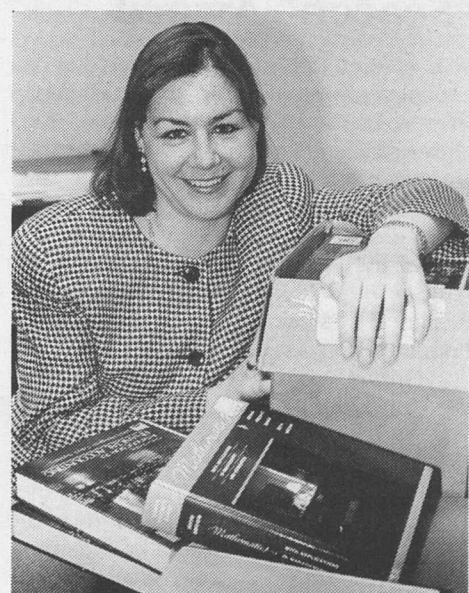
Blaise's international interests sprang from French courses she took while a student at Notre Dame De Sion High School in her hometown of Kansas City, Mo. Her undergraduate major in European studies and economics from Vanderbilt included five months at the university's branch in the South of France.

She began her business career at a regional bank office in Nashville, Tenn., but international interests soon led her to the firm's Washington, D.C., office. There she spent more than two years in the international trading department, helping Fortune 500 clients hedge against losses in foreign currency transactions.

"I had a real strong liberal arts background, but working helped me realize there were a lot of basic business skills I needed to refine. Getting my MBA is something I'd always planned to do," Blaise said.

Blaise continued to add international experience while working toward her MBA at Olin. She was a summer intern in the New Jersey office of Exxon International, where she conducted financial research for a pending tax litigation case. The fall 1991 semester found her in the exchange program at the Manchester School of Business in England.

"Manchester has the largest



Bridget Blaise has volunteered to work with a firm in Eastern Europe after graduation.

international exchange program of any school in the world," Blaise said. "It was a fabulous opportunity to interact with very sharp, top-notch people who share my interest in business. I learned a lot about the European mindset."

She hopes her new position in Czechoslovakia will provide an opportunity to expand her understanding of Europe. "I love to travel and look at art and I hope to do plenty of both while I'm over there."

— Gerry Everding

Accident victim trains as occupational therapist, dreams of giving back

Graduating from Washington University will be bittersweet for Kathy Schmeidler, a young woman who has spent the last 10 years turning a personal tragedy into triumph. It will be a culmination of sorts for the 31-year-old, who worked the better part of a decade to earn her spot among the 49 graduates from the School of Medicine's Program in Occupational Therapy. And it will be a beginning, too, as she embarks on a career helping others learn to do what she has done so well.

Schmeidler was 20 years old when a near fatal car crash in her hometown of Wichita, Kan., left her unconscious for eight days and suffering massive brain damage. When she awoke, she could not walk, talk or feed herself, and doctors questioned whether she would ever regain use of her right arm.

A hospital regimen of five therapies twice daily — physical, speech, occupational, recreational and music — helped put her body and brain back in sync, while family and friends filled in the blanks of her splintered memory by singing her favorite songs and showing her familiar photos.

"They had to teach me who I was, what I was and my self-care skills," Schmeidler says of therapists who assisted her recovery. "They brought me back, with the help of God and my family."

One therapist in particular is etched into one of her earliest memories. She says the event was more like a dream than reality and it embarrasses her still. "I remember telling a woman 'I hate you,' and I remember it so vividly because I've never said that to anyone. And the woman was my occupational therapist," Schmeidler recalls, adding that her therapist later confirmed the "dream" had occurred during a "bad day" of therapy.

Fortunately, bad days were few for Schmeidler. Her rapid physical recovery whittled in half a projected three-month hospital stay, though she remained an outpatient for three months to receive occupational therapy. On the day she was discharged from the hospital, she remembers telling her mother that if she ever

went to college, she wanted to become a therapist.

Several months after her release, Schmeidler returned to her work as a dietetic assistant at St. Francis Regional Medical Center in Wichita, tailoring diets to the health care needs of patients. In addition, she volunteered in the occupational therapy department at St. Joseph Medical Center, where she had been treated.

"The more I learned about therapy, the more I wanted to become a therapist," she says. "It never left my mind and something inside me said this is what you must do with your life."

In January 1985, at 6 a.m. over breakfast one day, Schmeidler decided to investigate college curriculums for occupational therapy. By day's end, she was enrolled in two classes at Kansas Newman, a private, four-year college in Wichita. A student year-round ever since, she has attended Washington University since 1989.

"It has taken me so long and I had so many things against me," says Schmeidler, who worked full time through much of her education. "But my Mom and Dad kept telling me I could do it. I'm very happy I had the motivation to succeed because otherwise I might not have made it."

The road hasn't always been smooth. At one point during her coursework here, Schmeidler was on the verge of failing classes in neuroscience and anatomy. Even though she was studious, her instructors saw she was not succeeding. Learning difficulties — deficits in visual perception, sequencing and long-term memory — that had gone undetected throughout her first years of college became apparent with the more difficult coursework.

At the suggestion of her instructors and Carolyn Baum, Elias Michael Director of the occupational therapy program, Schmeidler underwent 12 hours of testing to determine her difficulties. Support services were then designed to address her special needs.

"The people here at Washington University were not only concerned about my academic performance, but



Kathy Schmeidler (left) works with 14-month-old Alicia Welch, while supervised by Michelle Kibby, occupational therapist at St. Louis Children's Hospital.

about me as a person and how I was functioning," she says. "They tailored the program to fit my needs: My teachers met individually with me, I taped lectures, I took tests in distraction-free environments with no time limit and I worked with a cognitive psychologist. They taught me how to learn again. This was the best school for me; if I had gone anywhere else I might not have made it."

Schmeidler says she values what she has been through because it has made her a better person who is more sensitive to life and the needs of

others. She hopes her experience will enhance how she cares for patients because she has a greater appreciation for what they are going through. "Every disability is different and each person is different, but I have been through similar things. I have been in a wheelchair and I know what it feels like not to know how to do anything for myself. I can relate on that level."

"I want to help other people the way so many people have helped me," she says. "I feel like occupational therapy is a way I can give back."

— Kleila Carlson

Brown helps define environmental concerns for African-Americans

Kevin L. Brown is helping African-Americans realize the environmental movement means more than saving the whales or an endangered species.

Brown, who will receive a law degree from Washington University May 15, was a St. Louis delegate to the First National People of Color Environmental Leadership Summit in Washington, D.C., last year.

African-Americans formerly viewed the environmental movement as a white community concern that focuses on "saving plants and whales," says Brown. But now the situation is changing. African-Americans are gradually defining their own environmental concerns. "We are not going to allow issues to be dictated to us by mainstream environmental groups," says Brown, who has worked as a legal intern for the Environmental Defense Fund.

"Our issues have not been related to saving an endangered species. People of color who live in the cities are concerned about transportation departments running highways through their communities and the related air pollution problems. They are concerned about the high level of lead substances found in their children." Through activities like the leadership summit,

African-Americans are addressing these concerns, says Brown, who was a panelist at the 1991 environmental conference in Oakland, Calif., sponsored by the Careers Environmental Internship Program.

As a law student, Brown always has been interested in whether African-Americans are treated equal to their white counterparts under the legal system and in other aspects of life. He has taken courses in employment discrimination, for example, as well as those in environmental law. It was his interest in equity issues involving African-Americans that led him to conduct a study of whether toxic wastes are disproportionately dumped in St. Louis' African-American communities.

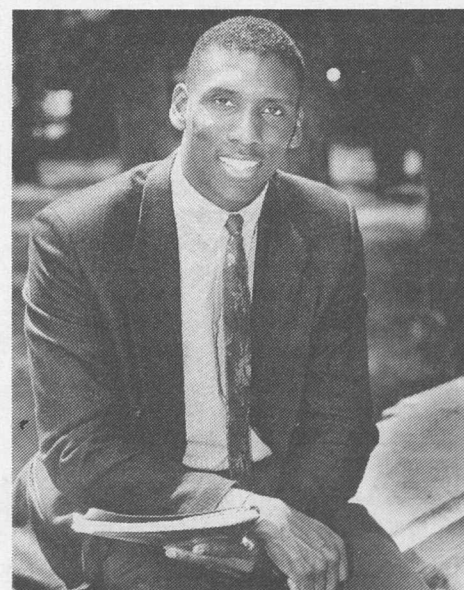
Brown took a course in fall 1990 titled Hazardous Waste and Substances taught by Richard J. Lazarus, J.D., professor of law. "I asked him if he had any research that addressed environmental racism and he said no, but I could do it," Brown wrote a class paper on the topic.

The next semester, he conducted the study of selected African-American and white communities in St. Louis for an independent research project with Lazarus. For the project, Brown

reviewed census tracts for 30 African-American neighborhoods located in the city's northern section and 30 comparable white neighborhoods located in the southern area. Using information contained in the annual Toxic Release Inventory, which reports on toxic chemicals released by industrial facilities, he concluded that St. Louis' African-American communities "are being dumped upon in air, water and soil out of proportion to their white community counterparts. While African-Americans make up a smaller proportion of the city population, they hold 68 percent more environmental release of chemicals than their white community counterparts."

Brown says "this means that in African-American communities, you see more smokestacks, garbage, vacant lots and flydumping." Companies that participate in flydumping dump garbage on vacant lots when people are asleep, he says.

Brown wants to rectify the situation. He hopes to battle environmental racism in a future job. "I want to approach state and national officials and get them to address the problem," he says. "I want to raise the level of awareness in our community. White communities, such as those in Times



Kevin Brown wants to improve the quality of life for African-Americans.

Beach, are very organized. They say 'not in my backyard.' Then the garbage is put in African-Americans' backyards. I want to let African-American people know they can organize. They don't have to put up with it. I want to improve the quality of life for African-Americans."

— Carolyn Sanford

Gallery of graduates

Tackling a playbook or playwright, Hess remains a crowd pleaser

Senior drama major Ben Hess says there are strong parallels between performing Shakespeare in full costume and playing middle linebacker for the Washington University Bears.

"In both cases you're playing for a crowd," says the actor/athlete, who led the Bears in tackles last season. "The rush I got from scoring a touchdown, which is rare for a defensive linebacker to do, is the same kind of feeling as when you're on stage delivering a pivotal plot point. Also, the ensemble of a cast is extremely similar to football, which is such a team game."

Hess, who has played sports since he was five, didn't step on a stage until he was a college freshman.

He got his first taste of the lime-light at Thurtene Carnival his freshman year. Hess was the "first-round draft pick" for the lead in his fraternity's skit, titled "The Last Temptation of Mother Goose." The 6-foot-1, 205-pound linebacker was Theta Xi's Big Bad Wolf.

That experience inspired Hess to take Acting I the next semester. The course focuses on improvisation, acting exercises and beginning scene work. For the final project, each student performed a scene from a contemporary play. Hess did a scene from "Strange Snow," a comedy by Stephen Metcalf.

That was when the acting bug bit. "I was just fascinated by bringing the text to life and being on stage," recalls Hess.

By the middle of his sophomore year, Hess had switched his major from business to performing arts. Soon, Hess was cast in his first Performing Arts Department mainstage acting role as the Australian James Hopper in "Lady Windemere's Fan." He has appeared in almost every mainstage production since then. Hess also found time to perform with other local theatre groups. Last summer he performed with Theatre Factory and currently he can be seen in "Wings," a play being produced by the Orthwein Theatre.

Once he switched his major from business to drama, Hess had two playbooks to learn. One features the X's and O's of football coach Larry Kindbom and the other, works by Shakespeare, Moliere and other literary luminaries of the past centuries. With a lot of hustle, determination and discipline, Hess was able to interweave his two pursuits. The same work ethic that made Hess a success in football, has made him a success in acting.

Sometimes the problems came down to logistics — how to attend class, football practice and play rehearsals all in one day, and still find time to study. During the football season Hess often would be in class all day, go to football practice until 6 p.m., shower quickly at the gym, and head on to 7 p.m. rehearsal, grabbing a bite to eat on the way. Rehearsals typically ended at 10 p.m. and Hess would head back to his fraternity to study.

"Everything Ben has accomplished, he has done through hard work and discipline," notes Ann Marie Costa, artist-in-residence in the Performing Arts Department.

That he succeeded was no surprise to coach Kindbom, who is one of Hess' biggest fans.

"Ben is someone who's taken the Washington University experience to the fullest," says Kindbom. "He's a multi-dimensional character and at times it's been hard on him. But he's been able to somehow incorporate the two together and enjoy the best of both worlds."

"As a coach or a teacher, you can

lead your players and students to a certain level and then the really good ones go beyond that level, which is what Ben did," adds Kindbom. "He has accomplished so much because of his hard work and strong work ethic. He took that middle linebacker position and created something on a higher level."

Director Costa echoes those words when she describes working with Ben in "Tartuffe," a Moliere play that was produced this semester.

"Ben took the role of Cleante, who in the play is a very practical character, and brought a dimension of good humor, that isn't usually there."

Although Cleante is not a large role, it is believed to be the voice of the playwright, Moliere, himself.

Hess says his unusual choice of majors raised some eyebrows and earned him some good-natured ribbing, particularly from his football friends. Still, many of his teammates came to watch Hess perform on stage.

"It was the first time at least five of my frat brothers had ever come to a theatre," notes Hess.

Costa points out that often Hess' football friends came from as far away as Atlanta and Asheville, N.C. Family members, from parents and grandparents to his great-aunt, would also come to many of his productions.

Kenan Pollack, Hess' roommate sophomore year and fraternity brother, remembers being a little envious when Hess became a performing arts major.

"Being a political science major, it always seemed like a lot more fun acting for a class than studying out of a book. At first Ben was a little concerned about the practicality of acting, but he wasn't as happy in business as he thought he'd be, so he went for what he really enjoyed. 'It's a pretty unusual combination of interests,'" observes Pollack, "but if you're good at both things, people respect you."



Ben Hess is aiming for the West Coast to work in film and television.

Pollack showed his respect by attending every one of Hess' performances.

"Besides," Pollack says with a laugh, "in the beginning I also felt compelled to go, otherwise Ben would punch me really hard."

Hess is aiming for the West Coast to work in film and television. He is on the waiting list at the California Institute of the Arts in Valencia, 45 minutes from Los Angeles. Costa applauds this plan.

"I think Ben has a naturalness to him that will work very well in film and TV," says Costa. "I think he will do very well in film."

— Debby Aronson



Mark Minnick has been self-employed in the cattle industry since he was 7 years old.

'Til the cows come home

Senior juggles herds and homework

Mark Minnick got his first bank loan when he was 7 years old. With the money, he bought two cows.

Now a graduating senior at Washington, Minnick's herd has grown to more than 20 cows. Via telephone, he continues to oversee his herd on his parent's farm in Jamesport, Mo.

He also manages occasional visits home, bringing his college roommates to the farm. "They run around like little kids when they get there," he said, laughing. "They're both from Chicago."

Minnick may have needed his parents to co-sign the loan, but even from the beginning, he made his own business decisions regarding his cows. "The major decisions about individual animals were made separately (from his father's herd). I kept some, sold others. You keep the ones that improve the herd. Decisions about the herd, such as feed and pasture, were made together."

Minnick never had to work at a fast-food restaurant for minimum wage. Instead, he made a couple thousand dollars each summer showing and selling cattle. Throughout the summer months, he hauled his cows to fairs across the Midwest. "I never had any other summer jobs," he explained. Minnick used the money from selling cows to help his parents pay off their farm. All of the prize money he won for having quality cows was deposited into a savings account.

"We went to 13 fairs one summer. It was good exposure for the cattle. People were interested in buying them," Minnick said. Sometimes, the demanding schedule forced him to miss school. "The high school was very understanding about that," he said. "They would let people miss school to help out on the farm. For a long time, the town was based on agriculture."

In addition to raising cows and going to high school, Minnick led 4-H Club project groups, teaching children about electricity and showing cattle. He also taught Bible school, was president of the National Honor Society, and served as salutatorian of his 1988 graduating class. His accomplishments earned him a Loretta A. Backer scholarship to attend Washington University.

When Minnick reached Washington University, he didn't slow down. Working on his double major in history and education, he also found time for

several Campus Y projects.

Minnick performed as a clown during Thurtene Carnival. Although he was entertaining the general audience at Thurtene, he was most interested in performing before a select group of kids. The Campus Y brought children from Kinloch, Mo., an impoverished section of North County, down to the carnival.

Thurtene wasn't Minnick's first experience clowning around. As a 4-H member, he had performed for nursing homes in Jamesport. Before the carnival, Campus Y arranged for a professional clown to give an informational talk. "It was a refresher course for me. I had already talked to a number of professional clowns while in high school."

Minnick personally knew the children from Kinloch because he had spent many Saturdays tutoring them through the Campus Y. He helped the children, who were in elementary school and junior high, with English, math, history and reading.

"I remember one girl who was writing a short paper on the Bill of Rights. She could say a lot about it, but couldn't get anything on paper. So I repeated her own words back to her for her to write down. Later, she proudly told me that she had gotten a B+, the highest grade she had ever received in that class," he said.

Minnick said his parents always encouraged him to get involved in many activities. Shrugging his shoulders, Minnick said he doesn't think it's so unusual to attend school, oversee a business, and stay involved in countless organizations. When he has time, he also likes to write short stories, play basketball and football, and read western literature and biographies.

He offers a simple explanation. "I grew up in a town of 600 people. In high school, there really was nothing else to do. If there was something to do, you did it," he said. Minnick said his parents often ask why he hasn't become involved in even more activities while at college.

Minnick will attend the University of Arizona to begin work on a master's degree in history. He plans to teach someday. When he moves to Arizona, Minnick will continue his long-distance partnership with his father.

— Deborah Parker

Pulling through dark times

Years underground teach miner value of education

Terral Smith, a distinguished and proper-looking man, looks like the professor out of a movie script. When he talks, in his slow, measured manner, he exudes wisdom, patience and compassion. Little wonder that when he walks the courtyards and halls of Washington University, he is easily mistaken for a faculty member here.

But the 35-year-old Smith arrived at Washington University from his native Wyoming two years ago not to teach undergraduates almost half his age, but to join them in pursuit of a common dream, a university diploma. On graduation day, he will fulfill that dream when he receives his bachelor's degree in economics.

Smith's wisdom has been honed only partially by books and classroom learning. He came to Washington University after working for 16 years a quarter of a mile beneath the earth as a heavy equipment mechanic for the General Chemical Corp.'s soda ash mine near Green River, Wyo. There, more than a thousand workers such as Smith contributed to the mining of trona, an onyx-like mineral that is refined into soda ash, a major component in baking soda and laundry and dish detergents, among other products.

Smith began his mining career in 1974, right out of high school. His life, which soon included a wife and two children, rapidly accelerated and expanded beyond the job to include activities with the local union, the United Steel Workers of America. Five years after he started his job, the self-described "brash" 23-year-old, upon the goading of a veteran union hand, ran against the incumbent president for the top union post. He threw himself into the fray of politics and, to the surprise of many, emerged the winner, beating a popular political pro who had previously served as a representative in the Wyoming state legislature.

"The president was a dynamic person with a charisma like Ronald Reagan's," Smith said. "But I didn't beat him; he lost. There were a lot of disgruntled members, and I guess I looked like someone who would put the time in and work at it."

He served a three-year term in which he helped bring about needed changes, saved the 1400-member union some money and admittedly made

mistakes that he says taught him much. At times, he found himself in over his head. The experience of leading a large number of people at such a young age was invaluable, Smith said, and launched him into an often-frenzied extracurricular career that saw him serve as a member of various safety committees at the local and state levels, a lobbyist of the Wyoming legislature, and as a political activist for the Southwestern Wyoming Labor Council. In fact, the Wyoming Wunderkind has served in so many capacities as a labor activist that he has trouble citing his various contributions and terms. One thing that does not elude him is the impulse that drove him to participate.

"At the time I ran for president, I didn't like the way I was being treated, nor the way the rest of the workers were being treated," he said. "I saw a lot of problems with safety, for one, that weren't being addressed. I'm not the kind of person who likes to be led blindly, to have decisions made for me. I figured the best way to avoid that happening was to get involved."

The same determination to take the bull by the horns resurfaced in Smith five years ago when he decided to pursue the college education that had not fit into his schedule for more than a dozen years. He began taking classes at Western Wyoming College, a junior college in the area, with an eye toward political science as a major. He pursued this part-time endeavor with the same gusto that he had shown with his union and political activism sidelines: instead of a four- to eight-hour class load, a burden for any full-time worker, Smith took 13 to 14 hours a semester at the community college, compiling a 4.0 grade point average while planning where he would go to earn his bachelor's degree.

"My college adviser was terrific," Smith recalled. "When I told him I was thinking of leaving the state to finish up, he pulled out the college issue of U.S. News and World Report and pointed to Washington University and told me to give them a shot. So, I applied, and I was accepted. I also considered the University of Wyoming, Grinnell (Iowa) and Oberlin College, but I'm very happy I came here."

Smith was aided by a scholarship and the assistance of his wife, Mary



Non-traditional student Terral Smith with wife, Mary Beth, and daughters, Jamie (left) and Dena.

Beth, who works as a typesetter. She also has a 20-hour-per-week job as a cashier at the Maryland Heights Schnucks to make ends meet. Coming from a state that has more cattle than people and arriving in St. Louis, a major city by anyone's standards, was just one of many adjustments that Smith made. "St. Louis, with its 62 square miles, has as many people as all of Wyoming with 56,000 square miles, but we took the culture shock in stride," Smith said. "My biggest leap was from a community college to an institution that is as rigorous as Harvard. The reading requirements here are staggering compared with what I was used to, and the competition for good grades is very tough."

But, as in the past, experience pulled the former union president through the dark times.

"Sixteen years underground in a trona mine lets you see the value of an

education," Smith observed. "I'd been through tough times before, and that experience helped motivate me. I knew how to go the extra mile to get the work done. In a way, it's frustrating to watch some of the traditional students as they face adversity because you know they haven't seen much of it before, so they don't have much to draw on. You want to tell them they'll get through the tough times, but they just have to find out on their own. Experience is one key advantage for a non-traditional student like myself."

Next up for Smith is law school. So far, he has been accepted at St. Louis University and the University of Wyoming, and he is waiting word from Washington University. He wants to parlay his experience and interests in people, government and economics into a position as a labor arbitrator, mediator or labor representative.

— Tony Fitzpatrick

American Indian will incorporate culture into her work

It took coming to a big city like St. Louis for Greer McSpadden, a Cherokee from rural Oklahoma, to appreciate more fully what it means to be an American Indian.

"I had my doubts about how much I would learn about Indians in St. Louis," said McSpadden. "It's paradoxical, but I have gained an even greater appreciation of my family and tribe through the graduate program here."

It wasn't just the distance that gave McSpadden a new perspective. She also credits the Center for American Indian Studies with giving her access to a range of resources she might not have had in her native Tahlequah, Okla. From research projects to lectures by some of the country's most prominent American Indians, the center offered a pan-Indian view, says McSpadden.

"As students, we learn a great deal from one another: information on specific tribes, their problems and how they resolve them," she said.

Formed two years ago, the center provides advanced social work education to American Indians who plan to take their expertise back to their

communities. The center is part of the George Warren Brown School of Social Work. McSpadden and Betty Ransom, a Lumbee Indian, will be the first students to graduate with their master's degree in social work by participating in the center's program.

After graduation, McSpadden will return to Tahlequah, the capital of the Cherokee Nation, a 14-county area in Oklahoma that is home to some 66,000 Cherokees. She will work as a behavioral health clinician for her tribe, practicing a kind of social work that blends traditional Indian ways with modern schools of thought.

"Most non-native social workers have a tendency to view Indian communities as deficient or problematic. As an Indian social worker, I want to concentrate on the healthy aspects of Indian culture such as the natural helping system built into extended families and native healing traditions like the talking circle," she said.

The talking circle is a traditional American Indian ceremony considered the oldest form of natural therapy. The circle brings native people of all ages

together in a quiet, respectful manner for the purposes of teaching, listening, learning and sharing, said McSpadden. Within the sacred circle, people are encouraged to speak not only from the minds, but from the hearts, she said.

"In the circle, all persons are valued, respected and listened to. There is an American Indian belief of right time, right place, right people hearing right things and we rely on that belief within the circle," she said.

McSpadden also plans to integrate a home-based mental health program with the existing clinical program. Instead of requiring clients to come to an office for counseling sessions, the clinician will offer to visit the family in the home. During these visits, she hopes to act as a helper within the family system.

McSpadden, who has a bachelor's degree from Northeastern State University in Tahlequah, was active in the Cherokee Nation before coming to Washington. She screened children at the Cherokee Head Start and determined membership eligibility into the tribe at the Cherokee Nation Registration. McSpadden also coordinated the



Greer McSpadden will return to her tribe in Oklahoma to work as a behavioral health clinician.

first National Women's Symposium of the Cherokee Nation, a grassroots effort to include rural and Indian women in the national women's movement.

— Nancy Mays

MEDICAL RECORD

Tuberculosis vaccine may slow progress of deadly leishmaniasis

A modified tuberculosis vaccine could prevent or slow the progress of a disfiguring and potentially deadly parasitic disease, called leishmaniasis, that afflicts 12 million people worldwide, say scientists at the School of Medicine.

Early results from the laboratory of David G. Russell, Ph.D., associate professor of molecular microbiology, show that progression of leishmaniasis in mice is slowed by the anti-tuberculosis vaccine, BCG (bacillus Calmette-Guerin), modified to contain a gene from the *Leishmania* parasite.

Russell and colleagues Barry Bloom, Ph.D., and Nancy Connell, Ph.D., of the Howard Hughes Medical Institute at Albert Einstein College of Medicine in New York, developed the vaccine during the last year and are currently testing it in mice.

In theory, the injected vaccine reaches the bloodstream where it is "swallowed" by macrophages, white blood cells that are the first line of defense against infection. Once inside the macrophage's "stomach," the bacteria in BCG begin to make copies of the *Leishmania* protein. Russell and Bloom hypothesize that production of the foreign *Leishmania* protein within macrophages may stimulate the immune system to "activate" the macrophages, allowing them to recognize and destroy *Leishmania* parasites. Once stimulated, the immune system can continue to activate infected macrophages and could form the basis of long-term, protective immunity, Russell says.

It is still too early to know whether the vaccine can prevent *Leishmania* infection, but Russell reports that the modified BCG appears to be slowing the appearance of the disease. "It may be that we have disease protection but we can't say yet," he says. "At least we have a delay in disease onset."

Although rare in the United States, leishmaniasis is a disease that taxes the health care systems of many Third World countries. Leishmaniasis is endemic in these countries because rodents and the sandflies that transmit the disease are plentiful. *Leishmania* begin their life cycle in desert and forest rodents. Sandflies that bite infected rodents carry the parasite to humans.

Since most of the 12 million people currently infected with *Leishmania* live in Third World nations like India, Pakistan, and Ethiopia, it's no surprise that many Americans had never heard of leishmaniasis until U.S. soldiers infected during the Persian Gulf War returned home with the disease. Despite their extensive preparations for warfare in the Gulf region, the U.S. military was as ill-equipped as Third World nations to deal with the biological threat of *Leishmania* infection. The numbers show that all humans are fighting a losing battle against *Leishmania* because there is no drug to prevent infection. The 25 documented cases of *Leishmania* infection among U.S. troops represent only a minute fraction of the thousands of people who will be infected by *Leishmania* this year, Russell says.

There are three types of leishmaniasis: cutaneous, visceral and mucocutaneous. The majority of *Leishmania* infections among U.S. soldiers caused cutaneous leishmaniasis, a slow-healing disorder that causes massive skin lesions. Some of the soldiers infected by *Leishmania tropica*, the organism that causes cutaneous disease, also developed visceral leishmaniasis which can spread to the bone marrow. Visceral leishmaniasis also can be spread via infected blood. The third form, mucocutaneous leishmaniasis, is a

devastating and often deadly disease that invades the mucosal tissues, disintegrating the cartilage around the nose and nasal cavity. Although rare, cases of mucocutaneous leishmaniasis have been reported in the United States.

With the exception of mucocutaneous leishmaniasis, most *Leishmania* infections are dangerous only if they are not treated with the drug pentamidine. Pentamidine must be administered intravenously, and, because of its toxicity, requires medical supervision during treatment, further increasing the cost of its administration. Fortunately, the U.S. soldiers were treated with pentamidine. But residents of areas where the disease is endemic aren't so fortunate. The cost alone can be enough to keep it out of the hands of many doctors in the Third World.

Even if pentamidine were available, distributing the drug in Third World countries is another problem. An example of the often insurmountable challenge faced by World Health Organization authorities is the recent devastating outbreak of leishmaniasis in the previously uninfected war zone on the Ethiopian and Sudanese border. Last year, 30,000 people perished from visceral leishmaniasis in that region, despite the fact that there are medical centers there that can treat people. The devastating combination of poverty and war kept many treatable patients from receiving the drugs they needed. "It's a no-go area because of the war, and even if one could go there, there's no money to provide the drugs," Russell says. The scenario is not an atypical one for many Third World countries.

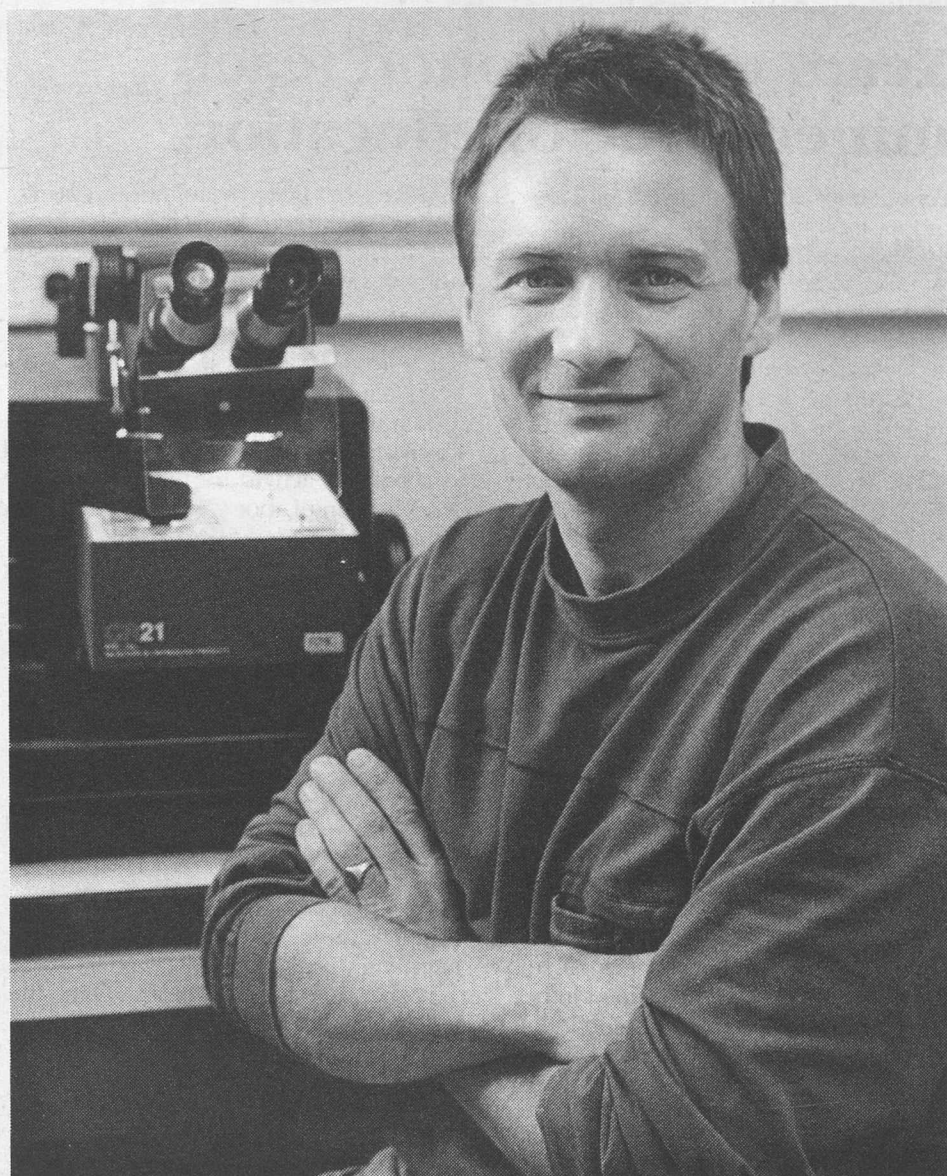
'It may be that we have disease protection but we can't say yet. At least we have a delay in disease onset.'

—David G. Russell

A vaccine for leishmaniasis is an appealing and ultimately inexpensive option when compared to the cost of pentamidine treatment and hospitalization, Russell says. But, while there may be worldwide demand for such a vaccine, there's not a comparable supply of dollars for *Leishmania* vaccine research. In fact, there is little incentive for pharmaceutical companies to sponsor research on tropical diseases like leishmaniasis because there is almost no hope that a company would ever recoup its research expenditures, Russell says. Without help from pharmaceutical companies, the vaccine work is left to academic scientists like Russell who are funded by grants from the federal government or private foundations.

Both economics and science factored into the decision to use BCG as a carrier for the *Leishmania* vaccine. Although Russell first used small fat particles, called liposomes, to shuttle the vaccine into mice, he felt that BCG would be a much better alternative for several reasons. "Liposomes look great experimentally, but they are very difficult to make on a commercial scale," he says. "On the other hand, BCG is already well studied, and a large percentage of the world's population is already inoculated with BCG."

If the approach makes sound economic sense, BCG's appeal is even greater from the perspective of science.



David G. Russell, Ph.D., associate professor of molecular microbiology, is studying leishmaniasis, a disease that taxes the health care systems of many Third World countries.

Russell, who has spent years studying how *Leishmania* infect the human immune system, says the main component of BCG, *Mycobacterium bovis*, the dead tuberculosis bacteria, infects blood cells in a manner similar to *Leishmania*. The approach developed by Russell and Bloom allows BCG to infect white blood cells as they normally would. Only this form of BCG also carries the instructions to produce a *Leishmania* surface protein once it gets inside the macrophage.

Understanding how *Leishmania* manage to inhabit macrophages without giving the "correct signal" is a major focus of Russell's work. It appears that *Leishmania* do this by applying their own sort of "stealth" technology. For example, the free-swimming parasite that first enters a person's bloodstream releases many different proteins. Each protein is a potential target for the host's immune system, Russell explains. "The form of the parasite that lives within macrophages doesn't release anything larger

than an amino acid. So it avoids giving the host antigens, or 'targets,' that it can home in on."

The modified BCG vaccine is essentially offering a better target to the host's immune system. If the vaccine works as planned, Russell says, the macrophage will recognize the protein fragment, and signal other cells of the immune system to remain on the lookout for invading *Leishmania* for several years. This sequence of events was previously achievable only through infection and the protracted natural healing process, Russell notes.

While a vaccine based on this design may not ever be made in the United States, Russell thinks it has tremendous potential for use in the developing world. "The low cost and ease of production, coupled with its already widespread acceptance as an anti-tuberculosis vaccine, makes recombinant BCG a highly desirable vehicle for vaccination against infections such as leishmaniasis."

—Jim Keeley

Renal division named O'Brien research center

The renal division has been designated one of six George M. O'Brien Kidney and Urological Diseases Research Centers by the National Institutes of Health (NIH).

The new center will receive \$2.6 million in NIH funding over the next five years to conduct multidisciplinary studies that lead to a better understanding of the cellular and molecular biological basis of kidney and urological diseases. Marc Hammerman, M.D., professor of medicine and director of the renal division, will serve as the principal investigator.

The center's investigations will focus on expression of genes involved in growth factor synthesis and ion transport during embryonic kidney development, and the roles that the products of such genes play in that development.

Maldevelopment of the kidney and urinary tract accounts for nearly 30 percent of renal failure in children. Researchers hope to find treatments to prevent developmental kidney disorders.

In addition to Hammerman, other researchers involved in directing projects are: Stephen L. Gluck, M.D., associate professor of medicine and assistant professor of cell biology and physiology; Robert W. Mercer, Ph.D., assistant professor of cell biology and physiology; George F. Schreiner, M.D., Ph.D., associate professor of medicine and of pathology; and V. Matti Vehaskari, M.D., assistant professor of pediatrics.

The centers are named for the late Illinois Congressman, George M. O'Brien, who suffered prostate cancer.

Potential treatment in sight

Retinal regeneration occurs after microsurgery

A team of investigators has for the first time surgically removed a single layer of cells from the retina of the eye without damaging the cells surrounding it.

The study involving Macaque monkeys also found that the cells, known as retinal pigment epithelium (RPE), will regenerate and replace those removed by the surgery.

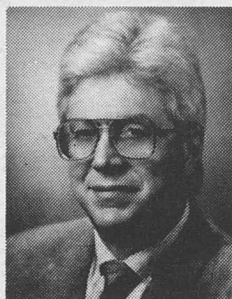
The finding could lead to a solution for those who suffer age-related macular degeneration, the leading cause of blindness in Americans over age 55. Studies estimate that by 1995 almost 750,000 people will be blind in one or both eyes as a result of age-related macular degeneration.

Investigators in the study included Henry J. Kaplan, M.D., Lucien Del Priore, M.D., Ph.D., and Martin S. Silverman, Ph.D.

Their research in the monkey could explain what occurred with one of their human patients, whose vision has been improved. "She had lost central vision as a result of age related macular degeneration," says Kaplan, head of the Department of Ophthalmology and Visual Sciences.

"For a year, her vision remained at the level of 20/400 or less. Then suddenly she started to notice vision coming back. When we saw her three weeks ago, her vision had improved to 20/60. She may be the human counterpart of the monkey experiment."

In both the monkey and in Kaplan's patient, RPE cells repopulated the area from which they had been surgically removed. "It took months for the damaged pigment epithelium to regenerate and grow, but ultimately it did just that," Kaplan says.



'Even in patients ... in whom we didn't think we would get a return of central vision, we may start to see it return 12 to 18 months following surgery.'

—Henry J. Kaplan

The RPE cells provide nourishment for the retina's photoreceptor cells, or rods and cones, that are responsible for sight. Kaplan found that as the RPE cells regenerate, the outer segments of photoreceptors, that also are disrupted by the surgery, start to re-grow and assume normal configurations. The findings were a surprise because it has generally been thought that the cells of the various layers of the retina were incapable of regeneration.

Macular degeneration is a condition in which the center of the eye's retina, called the macula, is not able to properly process light into vision. "The retina is like the film in a camera," says Kaplan. "If vision problems involve the macula, you can have the remainder of the retina

thickness are removed from the eye.

"Many people thought it wouldn't even be possible to remove the pigment epithelium, and it's not easy to do, but we succeeded," Kaplan says. It is the first time the RPE cells have been successfully removed without disrupting the underlying Bruch's membrane, which prevents repair and causes scar tissue to form.

Ophthalmologists have long been working on ways to transplant the RPE cells to replace damaged cells, but Kaplan's research indicates that may not be necessary. And regeneration of the cells means surgeons could avoid worrying about tissue rejection, the major complication in most transplant procedures.

On his initial examination of the RPE cells following surgery in the monkey, Kaplan didn't know if vision would be restored because the regenerated cells have no pigment. "We looked immediately after surgery; we looked nine months later and it looked the same, like nothing had happened." Only when he got the tissue under a microscope did Kaplan see a significant difference.

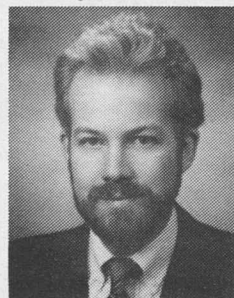
"Nobody thought this was possible before," Kaplan says. "Even in patients with age-related macular degeneration in whom we didn't think we would get a return of central vision, we may start to see it return 12 to 18 months following surgery."

Drug prevents reactivation of herpes simplex in eye

Researchers have found that oral acyclovir, long used as a treatment for genital herpes, can prevent reactivation of the herpes simplex virus in the eye.

Jay S. Pepose, M.D., Ph.D., associate professor of ophthalmology and visual science, led a team of investigators studying how to prevent reactivation of the herpes virus. Herpes simplex, which causes cold sores, skin lesions and eye infections, is present but inactive in 90 percent of all people.

The herpes simplex virus is a leading cause of infectious keratitis, a disease characterized by redness of the eyes, sensitivity to light, and blurring of vision. Some 500,000 people develop corneal infections from the virus each year. Repeated viral infections can lead to scarring of the cornea, and in extreme cases to loss of vision. Herpes simplex is the most common cause of corneal blindness in industrialized nations.



Jay S. Pepose

In a pair of related studies, Pepose and his colleagues looked at factors that can induce viral reactivation in mice. Eighty mice were inoculated with the herpes virus by corneal infection. When the virus became inactive the mice were exposed to ultraviolet light. Ultraviolet-B light is believed to play a role in reactivation of the virus.

Half of the mice in the study were given oral acyclovir in their drinking water. Of that group, only one mouse experienced reactivation of the virus. In the mice that did not get the drug, 80 percent experienced reactivation.

"These are pretty convincing numbers," says Pepose. "We looked not only at the cornea, but also at a group of nerve cells called the trigeminal ganglia. That's where the virus first becomes activated and from there

moves down the nerves into the cornea. We confirmed that in the group that got acyclovir, the drug prevented viral replication in the nerve cells as well as the cornea.

"That's important because the more often the virus is reactivated, the worse the scarring gets in the cornea," Pepose says. He suggests acyclovir be considered as a prophylactic treatment in patients with herpes infections of the cornea that reactivate frequently.

Most people have herpes simplex and were infected when they were very young. Pepose explains, "Your aunt has a cold sore, and she kisses you. You could get infected with the virus." The herpes virus travels from the area where the kiss was placed—the lips, skin, or eyes—into sensory nerve cells where in most people it remains inactive.

In most people, the virus will attack the same area each time it is reactivated. The same is true for those with eye problems. Viral reactivation usually leads to the condition herpetic keratitis. Frequent corneal infections can cause scarring which leads to vision problems.

One of the most promising new treatments under investigation for scarring is the excimer laser. Unfortunately, says Pepose, use of the laser apparently has the potential to reactivate the herpes virus.

In a second study, Pepose and his investigators found that the excimer laser can reactivate the virus in mice. Between 20 and 60 percent of the mice in the study had the herpes virus reactivated. The reactivation rate depended upon how many laser pulses and how deep into the cornea the procedure probed.

In humans the excimer laser has been used to eliminate scar tissue produced by infections such as herpes, but Pepose says that procedure can backfire. "There are a few reported cases where the laser was used to excise the scarring, and it ended up reactivating the virus," he says.

intact, but you don't have clear vision. That film doesn't develop like it should." Macular degeneration can occur in two ways, "wet" or "dry." Kaplan is studying the wet form of the disease, which involves abnormal blood vessels and scarring of the macula. The surgery he has helped to pioneer will not correct the dry form of the disease at the present time.

During the microsurgical procedure, RPE that are only one cell layer in

However, knowing that the laser can reactivate the virus and knowing that oral acyclovir can prevent reactivation could lead to safer procedures in the future. "We can give patients acyclovir, and then use the excimer laser to go after the scarring in the cornea," says Pepose. In fact, he says many clinicians already routinely use the drug. But it helps to produce this kind of data showing that oral acyclovir can prevent reactivation, he says.

"You have to be careful not to equate mouse and man," he says. "In this kind of an experimental study we can answer certain questions that cannot be addressed clinically. We couldn't take a person with herpes simplex keratitis and purposely expose him to ultraviolet light, then give acyclovir to see if it's going to work." He says evidence from the mouse study will lead to future work where patients with frequent herpes simplex reactivations will be given acyclovir and studied over time to see if the drug lessens the number of reactivations.

Mahoney named human resources director

Judith A. Mahoney has been named director of the medical school's Human Resources Administration.

Human Resources is a newly formed office that oversees the former personnel and affirmative action offices. Mahoney will guide this reorganization, and in addition be responsible for compensation, benefits, recruitment, and employee relations and services.

"Judy Mahoney brings the expertise and background to establish a progressive and responsive Human Resources office that will better support departmental needs," says Val Hambley,



Judith A. Mahoney

Whether the drug should be given to patients prophylactically remains in question. "In patients with genital herpes, there are symptoms which warn the patients that a breakthrough of the disease may be coming on," Pepose says. "In patients with herpetic keratitis, by the time you see those symptoms, the virus has already been reactivated and has begun replicating in the eye."

That means many eye patients would have to take acyclovir constantly for it to have the desired prophylactic effect. "Acyclovir is a relatively benign drug, so the side effects would be few," says Pepose. But it is an expensive drug and could cost patients more than \$100 a month.

The frequency of reactivation will have to be weighed against the cost of keeping patients on the drug, says Pepose. But at the very least, he says, patients who have excimer laser surgery on their eyes, should probably receive the drug to prevent a reactivation of the virus.

assistant dean for administration at the medical school.

Mahoney has worked in human resources for the past 10 years. She has extensive experience in compensation and benefits administration, employee relations and policy development, staffing and recruitment, and employee development. Before joining Washington University, she was staff manager of human resources at GTE Corp., Wentzville, Mo. Prior to that, she spent two years as employee and labor relations administrator for Contel Services Corp., and seven years at Contel of Illinois, first as a human resource specialist and then coordinator of safety and security.

She received her bachelor's degree in history in 1976 and a master's degree in industrial safety in 1981, both from Northern Illinois University.

MEDICAL RECORD

Crawford wins awards

Susan Crawford, Ph.D., professor of biomedical communication and director of the School of Medicine Library and Biomedical Communications Center, has received two awards for her work.

She received the President's Award and the Marcia C. Noyes



Susan Crawford

Award of the Medical Library Association (MLA). The President's Award is given annually to an individual who has made exceptional contributions to the profession;

the Noyes Award, the MLA's highest honor, recognizes lasting and outstanding achievements.

Crawford has authored or edited 121 papers and monographs. She has published papers in: Bulletin of the Medical Library Association (BMLA), Journal of the American Society for Information Science, Journal of the American Medical Association, Annual Review of Information Science and Technology, Bowker Annual of Library and Book Trade Information and Encyclopedia Britannica.

Her major works include "Informal communication among scientists in the psychophysiological study of sleep," which remains one of the most frequently cited papers on communication networks. In addition, she has published a series of monographs and papers that established baseline data for demographic,

organizational, educational and resource variables of health sciences libraries.

Crawford also has served on the editorial boards of 10 journals, and for seven years, she was editor-in-chief of BMLA, the most prestigious international journal among health sciences libraries.

During her 11-year tenure at Washington University, she conceptualized, planned and helped raise \$16.4 million to build the medical school's new library and biomedical communications center. The state-of-the-art center has pioneered in library technology and houses one of the most distinguished medical collections in the country. In addition, Crawford was instrumental in acquiring world-renowned rare book collections from the St. Louis Metropolitan Medical Society and from the School of Dental Medicine.

Crawford has received 19 national honors, including membership in Sigma Xi, fellow of the American Association for the Advancement of Science, Board of Regents of the National Library of Medicine, and both the Distinguished Graduate Award and Medal from the University of Toronto.

Crawford is a Distinguished Member of the Academy of Health Sciences Library Professionals and is listed in Who's Who in America, American Men and Women of Science and Who's Who Among American Women. She also was appointed charter member of the International Committee, Universal Guide for Scientific Publications, Royal College of Physicians and Surgeons.

Hi-tech hearing aids

Valente evaluates latest designs

It used to be that hearing aids were all pretty much the same — they amplified sound so that those with hearing loss could make out the quiet sounds they couldn't hear.

These days the state of the art in hearing aids is determined not only by their ability to amplify, but also by the software they utilize.

Michael Valente, Ph.D., director of adult audiology and an assistant professor of otolaryngology at the School of Medicine, has spent years evaluating new hearing aids on patients. But now he's involved in several projects to provide input into the future design of hearing aid devices as well. With a \$200,000 grant from Starkey Laboratories of Eden Prairie, Minn., Valente has established a Hearing Aid Research Laboratory where the latest designs are being evaluated.

In the past, Valente says patients received the newest hearing aids available on the market. "Now we are evaluating technology that may be months or years away from market availability," he says, adding that many of the research hearing aids are nothing more than an ear piece and a circuit board. "It's a great situation for clinicians, because we can have an impact on the direction the technology takes for years to come."

In the new research laboratory, audiologists can adjust the new generation of digitally programmable hearing aids with personal computers or dedicated desk top programmers. With this advanced technology the hearing aid can be tailored to the patient's individual needs. Once the hearing aid is properly fitted, Valente says customizing it is simply a matter of downloading software from the

computer into the hearing aid's programmable remote control, or onto a computer chip within the hearing aid case. Most programmable hearing aids with a remote control have three or four settings with separate functions, such as to amplify speech for listening in quiet or helping to distinguish one sound source from another in a noisy environment.

Valente says the advantage of programmable hearing aids is that many can be reprogrammed and updated, saving patients the expense of having to purchase an entirely new system.

Valente is currently evaluating technology which he says could eliminate feedback, one of the biggest headaches for hearing aid wearers. One device he's testing contains a feedback notch filter circuit, which when coupled with a special measuring instrument, can identify and eliminate feedback. That technology could be available in the marketplace in just a few months.

The process of moving from new idea to new technology can be very quick with the new laboratory. "We tested [a hearing aid] a couple of weeks ago, and Starkey sent out a software specialist to observe. He watched, we made some suggestions, and we had the new software for the project the next day," Valente says.

The products being tested can help people with varying degrees of hearing loss, from mild to severe. Most patients fit with current and newer computerized hearing aids suffer from "nerve deafness," which in some cases can be helped with computerized hearing aids.

Valente is recruiting patients to test the new devices. Those interested should call Lisa Potts, research audiologist at 362-6215.



Award winner: National Kidney Foundation Science Scholar Craig Estes, second from right, receives congratulations from, left to right, Steven Miller, M.D., John Davis, NKF executive director, and Marc Hammerman, M.D.

Estes named national scholar

High school senior, Craig Estes, who spent last summer honing scientific skills in School of Medicine laboratories, has been named the National Kidney Foundation Science Scholar.

Estes, who will graduate from Saint Louis Priory School, received the award April 28 during special ceremonies at a banquet sponsored by the National Kidney Foundation. The \$40,000 scholarship will be awarded over four years. He is the second St. Louisan to receive the scholarship, which is only in its second year. Both Estes and Brook Beall, last year's recipient, worked in the renal division of the Department of Internal Medicine.

The Science Scholars Award Program is a two-phase national program open to high school students entering their senior year and is aimed to increase student interest in pursuing medical science as a career. Through an oral and written application process, eight students are selected nationwide to work alongside experienced researchers in laboratories at major university medical centers.

In the second phase, one student is selected based on oral and written reports by the student and attending researchers from the university. The scholarship, which is funded by Ford Motor Co., Dearborn, Mich., supports study toward a degree related to science and/or medicine.

Estes spent 10 weeks last summer researching renal growth factors in

the laboratory of Steven B. Miller, M.D., assistant professor of medicine. His assigned project was to look at the expression of epidermal growth factor in the setting of compensatory renal hypertrophy. In addition, he completed an independent project examining the influence of growth hormone and insulin-like growth factor 1 on epidermal growth factor production in the kidney.

"There is a great need to interest bright young people in biomedical science," says Marc Hammerman, M.D., director of the renal division. "It is most commendable that the National Kidney Foundation provided Craig and Brook with the opportunity to work with us. The fact that students working at Washington University received this award in each of its first two years is a great tribute to our faculty, especially Dr. Steve Miller and Dr. James Greenwald, who served as Brook Beall's mentor."

Estes, who describes his experience as "remarkable," says he is grateful to have had the opportunity to do scientific research.

"The experience showed me that to learn, appreciate and enjoy science, there is no real substitute for hands-on laboratory experience," Estes says. "This was my first chance to do scientific research and it has increased and confirmed my desire for a career in science. No class could have taught me what I learned at Washington University."

Volunteers needed for exercise study

Volunteers are needed for a long-term study on the health benefits of exercise in older adults.

Volunteers must be between the ages of 62-75, non-smokers, healthy but sedentary, and free from medication for hypertension or heart problems. They must be willing to commit themselves to vigorous exercise one hour each day, five days a week, for periods ranging from six weeks to one year. Some participants will exercise in medical center facilities Monday-Friday at any time between 2:30-5:30 p.m., while others will serve as a non-exercising control group.

Volunteers will undergo an examination and tests to determine current fitness levels, glucose

tolerance, cholesterol levels and body composition. In addition, all women will have their bone density measured. Participants will receive copies of test results.

Volunteers will be assigned to one of four studies in which researchers will monitor the effects of exercise on either cholesterol metabolism, heart function, bone mass or muscle strength. Each participant will receive an individually prescribed, supervised exercise program, which may include walking, biking, rowing, jogging and weight lifting. Upon completion of training, each volunteer will be prescribed a home maintenance program.

For more information, call 362-2397.

PERSONNEL NEWS

Global account takes advantage of growth in foreign markets

On July 1, the CREF Global Equities Account will open for business. Like all of CREF's offerings, the newest account has been carefully designed to meet the special challenges of retirement investing. Like the bond market and social choice accounts launched two years ago, the Global Equities Account is an institutional option. Washington University has decided to include it in the TIAA-CREF Retirement Annuity currently in effect. Also as before, the new account will be available automatically for employees who have Supplemental Retirement Accounts (SRAs), because these plans involve personal savings only.

Many foreign markets have experienced rapid growth in the past two decades, with Japan, the Pacific Rim, and a number of European countries leading the way. More recently, with the economic unification of Europe, the restructuring of the former Soviet Union, and the renaissance of several Latin American economies, the global market appears poised for strong long-term growth. At the same time, because foreign market cycles often run counter to domestic ones, international holdings can be especially helpful for tempering volatility in a diversified portfolio of retirement investments.

CREF's Global Equities Account is for employees interested in taking greater advantage of foreign markets for either growth or diversification. The portfolio will be actively managed, and the distribution of assets will vary, based on such factors as CREF's analysis of potential returns and the comparative size of a country's or region's markets. Initially the account will invest largely in countries with well-established capital markets. As opportunities emerge, however, the account may invest increasingly in economically developing nations. Some parts of the portfolio may be managed to track the overall performance of certain markets, while others will be made up of stocks selected for their above-average long-term growth potential.

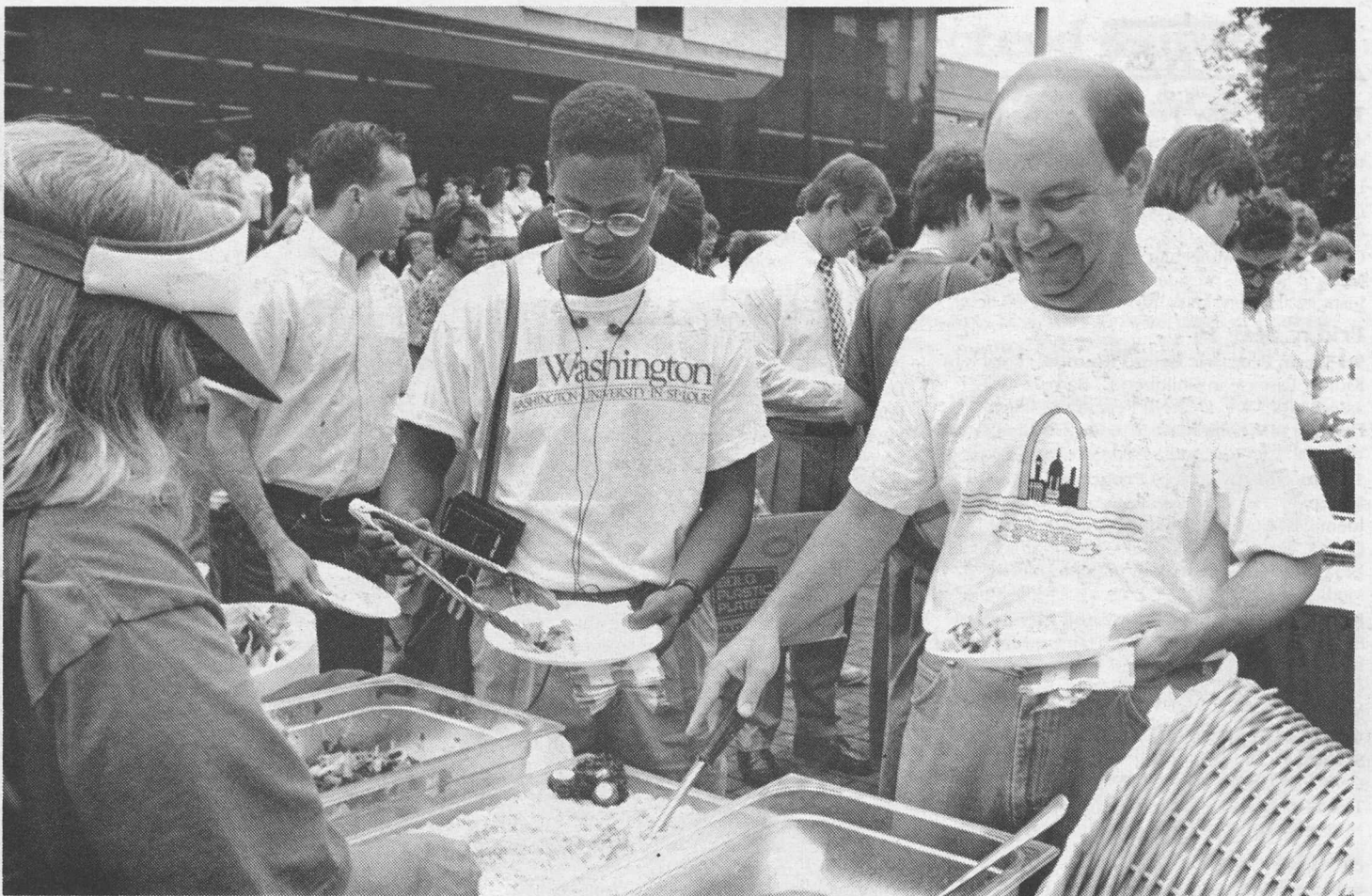
The Global Equities Account will consist mainly of common stocks. Currently CREF expects that at least half the account's holdings will be foreign investments, and at least one quarter will be domestic, with the distribution of the balance depending on current market conditions. Available for both accumulating and income-paying annuities, the new account offers the same professional investment management and long-range perspective that are the hallmarks of the TIAA-CREF retirement system.

TIAA estimates administration and other expenses will be about one half of 1 percent of assets each year. That's somewhat higher than other CREF accounts because of the cost of doing business overseas, but very low compared to similar funds in the industry at large.*

*Source: a comparative study of global mutual fund and variable annuity expense ratios conducted by Lipper Analytical Services Inc.

The Global Equities Account and CREF stock both include domestic and foreign holdings - but since global equities will concentrate much more heavily on foreign stocks, TIAA expects the two accounts to perform differently.

The account should appeal to people willing to assume a certain amount of risk in return for the opportunity for long-term growth that could outpace inflation. For them, the Global Equities Account offers a way to take advantage of the potential of foreign markets, yet maintain the diversification they need for prudent retirement planning.



A job well done: Staff members will be recognized for dedicated service on Staff Day, Monday, May 18. The annual event includes a complimentary lunch and offers a variety of activities on campus, ranging from softball to an historic campus tour. This year's event begins at 11 a.m. with an awards ceremony in Edison Theatre. For more information, call the Office of Human Resources at 935-5990.

TIAA-CREF offers new loan feature

Let's say you have a big bill coming due—tuition for your child, or the down payment on your new home.

Ideally, you'd like to pay cash, but you don't have the funds on hand and will have to borrow to pay that bill. You dread the thought, though, of facing all those reviews, credit checks, and approvals that a bank or finance agency will put you through before giving you a loan.

Does all this sound familiar? If it does, TIAA-CREF is pleased to announce a solution for participants who are putting away money for retirement through a Supplemental Retirement Annuity (SRA). You can borrow up to 45 percent of the combined accumulation in your TIAA-CREF SRA, and you generally won't have to explain what the loan is for (unless you request a term of

more than five years).

There are additional limits, of course. The Internal Revenue Code won't let anyone borrow more than \$50,000 from the plan of a single employer. You must keep in your TIAA certificate a reserve equal to 110 percent of your outstanding loan balance. Money for the loan does not reduce your TIAA SRA accumulation. Your accumulation serves as collateral but remains intact and continues to earn interest. You can transfer money from CREF to TIAA to increase the size of the loan you can take.

Let's say you have a total TIAA-CREF SRA accumulation of \$100,000 under your employer's group plan. If the full \$100,000 is in TIAA, the most you could borrow is \$45,000—provided you keep \$49,500 (110 percent of

the loan in your TIAA accumulation as security). Suppose your accumulation is split—\$20,000 in TIAA and \$80,000 in CREF. You can borrow \$45,000 only if you transfer \$29,500 from CREF to TIAA, creating a \$49,500 balance.

You must repay the loan in quarterly installments over one to five years (or up to 10 years if you've taken the loan to buy a principal residence). You'll pay a variable interest rate keyed to the Moody's Investors Service average of the yields on corporate bonds. Although the rate can be reset each quarter, it won't change for outstanding loans unless the Moody's average changes by .50 percent or more. For more information, call the Participant Information Center at 1-800-842-2776.

Interest rates, risk and the bond market account

How risky is investing in a diversified bond fund?

Most people would probably answer, "Not as risky as investing in a stock fund." And taking a long-term view, they'd probably be right. Over the last 15 years, the standard bond-market benchmark hasn't had a single "down" year, while the standard stockmarket bench-mark posted losses three times.

But bonds, and bond funds, do fluctuate in value. Understanding why is important if you're considering the CREF Bond Market Account for accumulating retirement benefits.

Most people know that stocks represent shares of ownership in a company. And most people realize how the value of stocks fluctuates daily and how these fluctuations are often tied to news about the nation's economy or about the issuing company's performance. Even news about the company's management, or the success or failure of one of its products, can cause its stock to rise or fall.

When a company issues bonds, it's not selling a share of its ownership, but borrowing money from those who buy the bonds. The bonds carry promises that their buyers will receive specified, scheduled interest payments, as well as the face value of the bonds when they

reach their maturity date (the date when the borrowed money is to be repaid). Here's an example: A 30-year \$1,000 bond might pay \$60 interest once a year (which means its yield is 6 percent) for 30 years, as well as the \$1,000 face value at the end of the 30-year period.

Now, if everyone who bought bonds just kept them until they matured, there wouldn't be a bond market. But bonds are bought and sold daily, and their value changes when interest rates rise or fall.

Why? Because when a bond is issued, the interest rate it promises to pay until it matures reflects the prevailing interest rates in effect at the time. Let's say, for example, that the prevailing interest rate for 30-year bonds is 6 percent. If a company wants to issue bonds today, a \$1,000 bond must promise to pay 6 percent (or \$60 each year) to attract buyers. But a year later, let's say, interest rates jump to 7 percent. The same company must now promise to pay 7 percent on each \$1,000 bond it issues.

But what happens to the market value of the 6 percent bond? Clearly, no one would pay \$1,000 for a bond that pays only \$60 per year when they can obtain a bond that pays \$70 a year. Accordingly, the owners of the 6 percent

bond would have to accept a lower price if they wanted to sell the bond. In this way, the market value falls in response to a rise in interest rates.

Bond prices generally go down when interest rates rise, and bond prices go up when interest rates fall. For CREF participants, this means that the value of holdings in the CREF Bond Market Account will be relatively stable when interest rates are stable, but will fluctuate when interest rates change.

The TIAA-CREF Library Series booklet *Charting TIAA and the CREF Accounts* contains useful illustrations of the growth rates of a hypothetical bond market account. These tables will help you gauge how a hypothetical bond account would have reacted to economic and bond market conditions over the past 10 years. Copies of the booklet can be obtained by calling 1-800-842-2733, extension 5509.

Personnel News

Personnel News appears monthly in the Record and is prepared by Gloria W. White, vice chancellor for human resources and affirmative action officer, and other members of the Office of Human Resources. Personnel News is designed to keep Washington University employees and their families informed of the benefits and opportunities available at the University.

CALENDAR

May 14-June 6

LECTURES

Thursday, May 14

4 p.m. Dept. of Molecular Biology and Pharmacology Presents the Fifteenth Oliver H. Lowry Lecture, "Molecular Studies on the Cyclophilin Class of Peptidyl Prolyl Isomerases," Christopher Walsh, chair, Dept. of Biological Chemistry and Molecular Pharmacology, Harvard Medical School; president, Dana-Farber Cancer Institute, Boston, Mass. Moore Aud., 4580 Scott.

Friday, May 15

9:15 a.m. Pediatric Grand Rounds, "Polycystic Kidney Disease in Childhood," Barbara Cole, assoc. prof., WU Dept. of Pediatrics; director, Division of Nephrology, St. Louis Children's Hospital. Clopton Aud., 4950 Children's Place.

10 a.m. Neurosciences Program Thesis Defense, "Hyperpolarization-Activated Currents in Identified Neurons From Rat Primary Visual Cortex," Joel Solomon, WU Dept. of Molecular Biology and Pharmacology. 928 McDonnell Medical Sciences Bldg.

Noon. Dept. of Cell Biology and Physiology Seminar, "Restoration of K⁺ Transport in Yeast by Suppressor Mutations and Heterologous Genes," Richard Gaber, Northwestern U. 423 McDonnell Bldg.

4 p.m. Dept. of Anatomy and Neurobiology Seminar, "Does Knowing Matter? Studies of Cerebellar Stroke During Rehabilitation," Tom Thach, prof., WU Dept. of Anatomy and Neurobiology. 928 McDonnell Bldg.

Monday, May 18

8:45 a.m. Dept. of Chemistry, ENI and Emerson Electric Company Present a nuclear magnetic resonance symposium in recognition of the 80th birthday of Sam Weissman, WU prof. emeritus of chemistry. 458 Louderman. Free. For reservations, call 935-6405.

4 p.m. Graduate Program in Immunology Seminar, "Characteristics and Consequences of the Hepatitis B Virus Specific CTL Response in Man and Transgenic Mice," Francis Chisari, head, Division of Experimental Pathology, Scripps Research Institute, Calif. Third Floor Aud., Children's Hospital.

4 p.m. Dept. of Biology Seminar, "New Ideas About Prehistoric Agriculture in the Lower Mississippi Valley," Gayle Fritz, WU Dept. of Anthropology. Room 322 Rebstock.

Tuesday, May 19

3 p.m. Dept. of Mathematics Probability Seminar, "Markov Processes and Quasi Regular Dirichlet Forms," Ma Zhinang, Institute of Applied Mathematics, Academia Sinica. 199 Cupples I.

Wednesday, May 20

Noon. Marilyn Fixman Clinical Cancer Conference, "Paraneoplastic Endocrine Disorders," William Clutter, assoc. prof. of medicine, WU School of Medicine. Brown Room, Jewish Hospital.

4 p.m. Dept. of Biochemistry and Molecular Biophysics Seminar, "Crystal Structure of cAMP-Dependent Protein Kinase: Prototype for a Family of Enzymes," Susan Taylor, Dept. of Chemistry, U. of California, San Diego. Cori Aud., 660 S. Euclid.

Thursday, May 21

Noon. AIDS Clinical Trial Unit, "The Role of AIDS Activism and AIDS Research," David Barr, asst. director of policy, Gay Men's Health Crisis. Clopton Aud., 4950 Children's Place. Lunch provided at 11:45 a.m. For info., call 362-2418.

Friday, May 22

9:15 a.m. Pediatric Grand Rounds, "Molecular Biology of the Marfan Syndrome," Harry Dietz, asst. prof., Harriet Lane Research Fellow, Division of Pediatric Cardiology and Center for Medical Genetics, Johns Hopkins U. Clopton Aud., 4950 Children's Place.

Wednesday, May 27

4 p.m. Dept. of Biology Seminar, "Non-Receptor Determinants of Transcriptional Regulation by Glucocorticoids," Keith Yamamoto, Dept. of Biochemistry and Biophysics, U. of California, San Francisco. 322 Rebstock.

Thursday, May 28

4 p.m. Dept. of Mathematics Geometry Seminar, "Traveling Waves as Solution to Various Nonlinear Wave Equations," Shimin Tang, Peking U. Room 199 Cupples I.

Calendar Deadline

The deadline to submit items for the June 4-July 4 calendar of the Record is noon May 29. Items must be typed and state **time, date, place, nature of event, sponsor and admission cost**. Incomplete items will not be printed. If available, include **speaker's name and identification and the title of the event**; also include your name and telephone number. Send items to Melissa Kohne, Box 1070, or by electronic mail to p72245MK at WUVMC.

Friday, May 29

9:15 a.m. Pediatric Grand Rounds, "Chronic Sinusitis Update," Rodney Lusk, director, Division of Otolaryngology/Head and Neck Surgery, Children's Hospital. Clopton Aud., 4950 Children's Place.

12:30 p.m. Dept. of Cell Biology and Physiology Seminar, "Calmodulin and the Contractile Vacuole Complex of Dictyostelium discoideum," Margaret Clarke, Oklahoma Medical Research Foundation. Room 423 McDonnell Bldg.

Monday, June 1

4 p.m. Graduate Program in Immunology Seminar, "The SEC Receptor and Control of Proteolysis During the Inflammatory Response," David H. Perlmuter, prof., WU Dept. of Pediatrics; assoc. prof., Dept. of Cell Biology and Physiology. Third Floor Aud., Children's Hospital.

MUSIC

Saturday, May 16

6 p.m. Dept. of Music Presents an Indian Flute Concert with Ramani, flute artist. Steinberg Hall Aud. Cost: \$15 for public; free for WU faculty, staff and students; \$8 for other students and senior citizens. For info., call 434-4804.

EXHIBITIONS

"Bachelor of Fine Arts Exhibit." Through May 17. Gallery of Art, upper gallery, Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends. Free. For more info., call 935-5490.

"Faculty Pieces From the Permanent Collection" Through May 17. Gallery of Art, lower gallery, Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays; 1-5 p.m. weekends. Free.

"Land Ho: Early Exploration of the Americas." Through June 30. Olin Library. Special Collections, Level 5. Hours: 8:30 a.m.-5 p.m. weekdays. Free. For more info., call 935-5495.

"Display of 19th- and 20th-Century American and European Artworks From the Permanent Collection." May 26 through Aug. 31. Gallery of Art Steinberg Hall. Hours: 10 a.m.-5 p.m. weekdays, except Mondays during summer; 1-5 p.m. weekends. Free.

MISCELLANY

Thursday, May 14

12:30 p.m. Society of Professors Emeriti Lunch and St. Louis Art Museum Tour. Museum Dining Room. Cost: \$13.50. For reservations, call 862-0422.

McLeod — continued from p. 1

familiarity with all parts of Washington University, dedication to all aspects of the undergraduate academic experience, and personal qualities that make for excellent relations with students, faculty, staff and external constituencies."

McLeod chaired the committee for the John B. Ervin Scholarship Program, established in 1987 to award scholarships to African-American students at Washington University. Provost Edward S. Macias, Ph.D., said, "Professor McLeod's vision and untiring efforts have been a vital part of the University's progress recruiting and retaining able black students. Diversity is one of our highest priorities, and his contributions to the success of the John B. Ervin Scholarship and other minority constituent programs are tremendous."

McLeod's efforts in the undergraduate program of the Department of Germanic Languages and Literatures have resulted in new courses, a revamped curriculum, and the development of recruitment activities to attract new talent to the department. In 1984, McLeod helped establish the Center for Contemporary Literature in German. This center is a unique resource for students and scholars who deal with contemporary literature of German-speaking countries. Since 1980, he has supported teaching assistants and high school German teachers by organizing a pedagogy workshop for them. In 1982, McLeod was instrumental in founding the St. Louis branch of the Goethe Institute, a German cultural organization.

McLeod succeeds Linda Bradley

Friday, May 15

9 a.m. Computer-Integrated Manufacturing Center Presents "ISO 9000 Seminar," Norm Siefert, division director of quality services, White-Rogers. Cost: \$50 for WU faculty and staff. For info. and location of seminar, call 935-4444.

Monday, May 18

8:30 a.m. Center for the Study of Data Processing Presents a Seminar, "Advanced CICS/VS Command Level," K.O. Barnes Jr., principal, Independent Training Systems. Through May 22. Cost: \$250 for WU faculty and staff. 232 Prince Hall. For info., call 935-5380.

11 a.m. Staff Day Recognition Ceremony.

Edison Theatre. At noon, a complimentary lunch for staff will be held in Bowles Plaza or Mallinckrodt Cafeteria. Starting at 1 p.m., games and activities begin. For info., call 935-5990.

Tuesday, May 19

9 a.m. Computer-Integrated Manufacturing Center Seminar, "Master Production Scheduling," Lee Kneppelt, Cardinal Software. Through May 20. Cost: \$100 for WU faculty and staff. For location, call 935-4444.

Wednesday, May 27

8:30 a.m. Center for the Study of Data Processing Seminar, "Workstations for Development," Curt Hartog, assoc. director, CSDP. Through May 28. 232 Prince Hall. Cost: \$100 for WU faculty and staff. For info., call 935-5380.

8:30 a.m. Center for the Study of Data Processing Seminar, "ReXX for TSO," Harvey Hartman, Delphi Inc. Through May 29. Cost: \$150 for WU faculty and staff. For location, call 935-5380.

Thursday, May 28

9 a.m. Computer-Integrated Manufacturing Center Seminar, "Concurrent Engineering," David Howells, senior manager, Ernst and Young. Cost: \$100 for WU faculty and staff. For public pricing and location, call 935-4444.

Wednesday, June 3

8:30 a.m. Computer-Integrated Manufacturing Center Seminar, "Applied Ergonomics," Sue Rhomberg, supervisor, Work Performance Program, Irene Walter Johnson Institute of Rehabilitation. Room 229 Prince Hall. Cost: \$50 for WU faculty and staff. For info. call 935-4444.

8:30 a.m. Center for the Study of Data Processing Seminar, "Software Metrics," Martin Herbert and Daniel Mosley, senior associates, CSDP. Through June 4. Cost: \$100 for WU faculty and staff. For info., call 935-5380.

8:30 a.m. Center for the Study of Data Processing Seminar, "Systems Design," Garratt & Associates. (Continues through June 5.) Room 9 Prince Hall. Cost: \$150 for WU faculty and staff. For public pricing and info., call 935-5380.

Commencement week activities

Thursday, May 14

8:30 a.m.-5 p.m. Cap and Gown Pick-up. Lambert Lounge, Mallinckrodt Center.

1 p.m. Eliot Honors Convocation for honor students, their parents and guests. Field House.

2:30 p.m. School of Engineering and Applied Science Recognition Ceremony. Field House.

4:30 p.m. College of Arts and Sciences Recognition Ceremony. Quadrangle. (Rain location: Field House.)

9 p.m. Commencement Reception at the Ritz featuring Bob Kuban Brass. Dancing and hors d'oeuvres for students, faculty, administrators, families and friends. The Ritz-Carlton. Buses depart from Brookings at 8:30 p.m.

Friday, May 15

8:30 a.m. Commencement in Brookings Quadrangle. (Rain location: St. Louis Arena at 10 a.m.) Immediately following the Commencement Exercises, the deans of the various divisions will hold a series of

receptions where diplomas will be individually distributed. Refreshments will be available for members of the graduating class, their families and friends. Reception locations: **College of Arts and Sciences:** north side of Graham Chapel. (Rain location: west side of Olin Library.) **Graduate School of Arts and Sciences:** hooding and recognition ceremony in Edison Theatre; reception in Gallery and Gargoyle, lower level, Mallinckrodt Center. **University College:** Olin Women's Bldg. Lounge. **School of Engineering and Applied Science:** Lopata Gallery and Lopata Plaza between Jolley Hall and Cupples II. **School of Technology and Information Management:** north lawn of Prince Hall. (Rain location: Umrath Lounge.) **John M. Olin School of Business:** diploma ceremony in Field House; reception in John E. Simon Hall.

School of Fine Arts: diploma ceremony in Brown Hall Aud.; reception on Steinberg terrace. **George Warren Brown School of Social Work:** diploma ceremony in Graham Chapel; reception on east lawn of Brown Hall. (Rain location: Brown Hall Lounge.) **School of Law:** diploma ceremony in Brookings Quadrangle; reception in Seeley G. Mudd Law Bldg. **Program in Occupational Therapy:** Sheldon Concert Hall.

Health Administration Program: diploma ceremony in Moore Aud.; reception in King Faculty Center in the School of Medicine Library. **School of Medicine:** St. Louis Marriott Pavilion. **School of Architecture:** diploma ceremony at 4 p.m. at Brookings Approach, north of Givens Hall; reception in Givens Hall.

Campus Y offers summer classes

The Washington University community can enjoy three Campus Y classes this summer.

"Razzamajazz," includes stretching, cardiovascular conditioning and body toning exercises. Certified instructor Anita Thomas Veal will teach the class, which meets from 5:30 to 6:30 p.m. Mondays and Wednesdays in Umrath Hall. Several short sessions are offered. The class also can be taken all summer, from May 18-Aug. 12. Session one, a three-week class, runs from May 18-June 3. Session two, a five-week class, runs from June 8-July 8. Session three, also a five-week class, runs from July 13-Aug. 12. The three-week class costs \$15 for students and \$18 for non-students. The five-week extension classes each cost \$25 for students and \$30 for non-students.

"Basic Auto Care," a seven-week class, meets from 5 to 7 p.m. on Tuesdays from June 16-July 28 in the Campus Y. The class costs \$35 for students and \$43 for non-students.

"Self Defense For Women" meets from noon to 1 p.m. on Wednesdays from June 10-July 15 in Lambert Lounge, Mallinckrodt Center. The class costs \$30 for students and \$36 for non-students. YMCA and YWCA members receive a \$5 discount on each class fee. To register, call 935-5010.