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131st Commencement
Washington University will bestow degrees on some 2,300 students

Highly acclaimed scientist and researcher Ira J. Hirsh, Ph.D., will receive the Acoustical Society of America Gold Medal in 1992, recognized for his “very important contributions from Dr. Ira Hirsh,” said CJD Director Richard G. Stecker, Ph.D.

Hirsh receives Acoustical Society's Gold Medal

Inside: MEDICAL RECORD
• Rental 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

The interesting lives of eight graduates are profiled inside... Pages 6-7

President of the class of 1942, celebrating their 50th-year reunion, also have been invited to mark in the procession.

Marrian 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, 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 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. Holchemer, J.D., author and playwright, will receive a doctor of letters; Jacquesine Joynes-Service, 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

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Urban Law Clinic puts textbook theory into practice for students

An expert witnessed recently testified in a federal court that the students at the Moberly (Mo.) Correctional Center caused at least two inmate deaths. The testimony made clear to what readers didn't know was that the inmate exams were carefully contrived to ensure that 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 Law Program. The clinic is designed to give students hands-on lawyering experience by putting textbook theory into practice.

The clinic, directed by law professor Clark Tokarz, J.D., LL.M., professor of law and director of the program, about two-thirds of the school's student body have received scholarship aid from her while Scudamore Gebauer of Baker, Fla., who received scholarship aid from her foresight, wisdom and generosity. The clinic was an invaluable learning tool. By working on the Moberly prison case, said Tokarz, the students could see that the clinic was an invaluable learning tool. By working on the Moberly prison case, they were able to apply the legal skills they learned in their clinical courses to real-world situations.

Dr. Tokarz, a native of Dallas, Texas, has received many scholarship and 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 Druger, a business school junior, an import/ export company dealing with 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 prison case is a federal class action suit that brings a variety of constitutional violations.

"It was real lawyering," said Tokarz. "Moberly was not an easy case at all, but it taught the students much about the legal system and what it means to be a lawyer.

The clinic has been working on various aspects of the Moberly case, including the death of an inmate, the wrongful conviction of a woman who could not afford the $1,000 bond money she had to pay. Once the clinic won a court order to examine the attorney on bond, it discovered that the attorney had been defrauding the court.

Other clinics under the school's Clinical Law Program have the goal of offering students the chance to work on actual cases. Said Karen Tokarz, J.D., assistant professor of law and director of the program, about two-thirds of the school's student body participate in one of the programs.

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" that is tearing apart the country.

But he's confident that his generation will solve these problems. He begins in his thesis, titled "We Are The Ones: Beyond Race, Religion and Politics, Toward Humanity." The problems are enormous, says Staples, especially because of the nation's economic downturn.

"Money is the greatest seed," he says, but "one thing is tearing the country apart. There is no cohesive paradigm for 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, two students, Adrienne Felder and James Goldfarb, now both seniors, established the Washington University Society for the Arts. "WUSA filled a real void on campus," said Tokarz. "I think students were always interested in such a group, but didn't know where to go.

One student, serviceman/Heather Christy, agreed that last semester I really wanted to go to the symphony, but didn't motivate myself to do so until it was time. We were heartily received.

The tickets were much less expensive and so easily accessible that it really motivated me to go所以我们。

So far, WUSA has offered $35 tickets to the musical "Cats" and arranged discount tickets to "City of Angels." The group has purchased season tickets to all major theaters in town and raffled them off to students. WUSA provided transportation to the symphony three times. So far, WUSA has offered $35 tickets to the musical "Cats" and arranged discount tickets to "City of Angels." The group has purchased season tickets to all major theaters 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 dance-choreographer Jan Erker.

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 Cafin, Ph.D., professor of music, came to perform a short recital.

Students don't have to members to attend meetings or arts events that WUSA arranges. The group's goal is simply to make art 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 (Shelby Bobkin and Karen Ho, in addition to Goldfarb and Felder) had ideas to also co-sponsored 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 is active in the particular area and can alert them to the most important upcoming events. Those advisers are Wallace, Michael Beckmann, Ph.D., associate professor of music; Henry Schvey, Ph.D., professor of French literature, 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 955-2060.

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 will be a 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.

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. Shelby Bobkin is not pictured.
Ben Abella, a senior biochemistry major, will study at Churchill College at Cambridge University 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 independent work, and the quality and originality of the applicant's short statement, personal statement and a research essay on 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's program in philosophy.

Joe Castelloe, a senior majoring in biology, is the recipient of the Marion Smith Spectrum 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., assistant professor of biology. The second paper, titled "A Study of New Applications of Coalescent Theory in Cancer Research," was supervised under the direction of Alan Templeton, Ph.D., professor of biology.

Marcel Muller, Ph.D., professor of electrical engineering, and Konrad Indeck, Ph.D., assistant professor of electrical engineering, are members of an executive committee for Brown Group Inc., St. Louis, and a Washington University Life Trustee, has received the "Search" Award for original or creative work, character, leadership, and excellence in science and breadth of interests. Serlin entered the college in the School of 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 assistant professor of neurological surgery. Serlin's research paper was titled "Morphological Indications of Neural Organization in the Multi-Tended Extrinsic Finger Muscles of the Monkey Forearm." Serlin plans to enter the Washington School of Medicine this fall.

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 "Search" Award for original or creative work, character, leadership, and excellence in science and breadth of interests. Griffin was appointed as the chairman of the Commission on the Future of Washington University in 1977 and chairman in 1979. He served as chairman of the Arts and Sciences Task Force, and as the chair of the Arts and Sciences Task Force, and as the chair of the Friends Council. Griffin has served on the executive committee of the Membership Committee, the Law School Development Society, the Arts and Sciences Task Force, and as chairman of the Arts and Sciences Task Force, and as the chair of the Friends Council.

Debbie Aronson, Jim Kleila Carlson, and Katherine Martin will assist in general marketing and general administration of CHIRI, a Czech business in Eastern and Central Europe. 85 MBAs will be placed in 1992. 50 of 100 MBAs could be placed in 1992. "Our 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-Flagler School of Business and the Foundation for International Development (AID), and other private organizations.

Karen Ho, a senior biochemistry major, has been named the second place winner in a national ethics contest. Three awards were given nationally. The Ethics Prize in Ethics Essay Contest is administered by The Ethel Siews Foundation for Humanity. The foundation was established by Ethel Siews, a human rights activist, author, survivor of the Holocaust and recipient of the 1992 Nobel Peace Prize. Ho is also 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 she received the news. "We could be placed in 1992. As many as 100 MBAs could be placed in 1992. "Our 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-Flagler School of Business and the Foundation for International Development (AID), and other private organizations.

The three-year grant will allow the center to help businesses there manage the transition to free market reforms. Olm is one of 20 leading U.S. business schools that have formed a consortium to help transition to free market reforms. The corps was established in 1990 to help businesses there manage the transition to free market reforms. The corps was established in 1990 to help businesses there manage the transition to free market reforms. The corps was established in 1990 to help businesses there manage the transition to free market reforms. Olm is one of 20 leading U.S. business schools that have formed a consortium to help transition to free market reforms. The corps was established in 1990 to help businesses there manage the transition to free market reforms. Olm is one of 20 leading U.S. business schools that have formed a consortium to help transition to free market reforms. The corps was established in 1990 to help businesses there manage the transition to free market reforms.
Jaeger added. The first night of the program involved parents. They receive literature, see a video their children will see, and have the opportunity to meet the AIDS kids know it’s a virus, and they know it doesn’t knock out your immune system. The parents 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 discussion between their children at home, McGhee said.

Students are taught that the only way to be absolutely safe is to abstain from sex. “But we tell students if they’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 said the time was right for a while of continuing her involvement with the national program. “We were invited to stay on, and even 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 can’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 academic 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, San Francisco are having trouble filling their slots. That’s against the basic principles of medicine.”

McGhee has some 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 any doctor needs.”

Good medicine begins at home: Janet McGhee is preparing the state of her residency in pediatrics to take care of her own baby, Ian. STAT's founder says program will impact her medical career

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 polkas to enter into her business education. Yet ethnic dancers, 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.

“Getting there and trying to make a positive impact on this company struck me as a very interesting challenge,” Blaise said. “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.”

MBA’s 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 five months at the university’s branch office of Exxon International, where she began her business career at a firm in Eastern Europe.

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African-Americans are gradually Americans realize the environmental
concerns. "We are not going to allow
defining their own environmental
issues to be dictated to us by main-
stream environmental groups," says
Brown, who will receive a law
degree from Washington University
since 1989. "It has taken me so long and I
had so many things against me," says
Schmeidler. "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."

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

Kevin 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 Environ-
mental Leadership Summit in Washing-
ton. "I want to let African-American people
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— Carolyn Sanford
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 the physical demands he endured for the Washington University Bears. In both cases, you're playing for a crowd. "You want to make the audience feel something," 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 linbacker 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, was a football player until he was a college freshman. He got his first taste of the limelight at Theatre Factory in his freshman year. Hess was the "first-round draft pick" for the leading freshman actor of the skit, titled "The Last Temptation of Mother Goose." The 6-foot-1, 205-pound linbacker was Theta Xi's Big Bad Wolf. That Mummers experience inspired Hess to take Acting I the next semester. The course focuses on improvisation, acting exercises, and beginning monologues. For the final project, each student performs a monologue from a contemporary play. Hess did a scene from "Strange Snow," a comedy by Stephen Metcalfe.

"That was when the acting bug hit. I was five feet tall, thirteen to fourteen and 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. Hess was cast in his first Performing Arts Department mainstage acting role as the Australian James Hopper in "Lady Windermere's Fan." He has appeared in almost every mainstage production since then. He has also had the opportunity to perform with Theatre Factory and currently he can be seen in "Wings," a play being produced by the Outreach Program.

Once he switched his major from business to the arts, Hess had to 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 down to logistics — how to attend class, football practice and play through the night. He often would be in class all day and football practice all afternoon. "I'm a pretty unusual combination of interests," observes Pollack, "but if you're good at something, people respect you."

"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 really excited him. It's a pretty unusual combination of interests," observes Pollack.

"Ben took the role of Cleante, who performs Shakespeare in full costume. Although Cleante is not a large cary, it is believed to be the voice of the playwright, Molière, himself. Hess says his unusual choice of major aimed to please his siblings. "It earned him some good-natured ribbing, particularly from his football friends."

Still, many of his teammates came to watch Hess perform on stage. "It's a rare experience to have at least five of my frat brothers had ever come to a theatre," notes Hess.

"It's a pretty unusual combination of interests," observes Pollack, "but if you're good at both things, people respect you."

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

"Till 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 from selling cattle, he bought a pet cow and started raising his own.

Now a graduating senior at Wash-ington, Minnick's herd has grown to more than 20 cattle. He continues to oversee his herd on his parents' farm in Jamestown, Mo.

He also manages occasional visits home, bringing his college roommates to the farm. "They ran around like little kids when they get there," he said, laughing. "They're both from Chicago." Minnick may have needed his parents' co-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 cattle were made separately (from his father's) keep. I some, sold others. You keep the cows that improve the herd. Decisions about the herd, such as feed and pasture, were made together."

Instead, he made a couple thousand dollars each summer showing and selling cattle. Through 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 price money he won for having quality cows was deposited into a savings account.

"We went to 15 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 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 1998 graduating class. His accomplishments earned him a Loretta A. Becker scholar- ship 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.

"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," said Minnick.

Minnick's 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.

"I offered 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, I did it," said Minnick. "I think his parents often ask why he hasn't become involved in even more activities while at college."

Mark Minnick will attend the University of Arizona to begin work on a master's degree in history. He plans to teach high school. When he moves to Arizona, Minnick will continue his long-distance partnership with his father.
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 authority, compassion, and wisdom. 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 honored both publicly by books and classroom learning. He came to Washington University after working for 16 years a quarter-mile beneath the earth as a heavy equipment mechanic for the General Chemical Corp. His soda ash mine near Green River, Wyo. There, more than a thousand workers such as Smith contributed to the making of a trona, an oil-soluble 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 "bull by the horns" resurfaced in Smith when he would go to learn at Western Wyoming College, a junior college in the area, with an eye toward political science as a major. He pursued this goal in part to avoid a future of being "a faceless, a nameless, a number for any full-time worker. Smith took 15 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 undergraduate 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 catalog and showed me a picture of the University of Washington. He said, 'Well, I'll be at the University of Washington in a year, so you might as well go now.'"

Smith was accepted. "My biggest leap was from a community college to an institution that is as big as Harvard. The reading requirements here are staggering. I'm 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.

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 goal in part to avoid a future of being "a faceless, a nameless, a number for any full-time worker. Smith took 15 to 14 hours a semester at the community college, compiling a 4.0 grade point average while planning where he would go to learn at Western Wyoming College, a junior college in the area, with an eye toward political science as a major. He pursued this goal in part to avoid a future of being "a faceless, a nameless, a number for any full-time worker. Smith took 15 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 undergraduate degree.

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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 run." 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 goal in part to avoid a future of being "a faceless, a nameless, a number for any full-time worker. Smith took 15 to 14 hours a semester at the community college, compiling a 4.0 grade point average while planning where he would go to learn at Western Wyoming College, a junior college in the area, with an eye toward political science as a major. He pursued this goal in part to avoid a future of being "a faceless, a nameless, a number for any full-time worker. Smith took 15 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 undergraduate degree.

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"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 influential scholars, the center offers a pan-Indian perspective. She also appreciates my family and tribe fully what it means to be an American Indian.

Goldie Smith, who works as a typesetter. She has a previous degree and 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 kick was from a community college to an institution that is as big as Harvard. The reading requirements here are staggering. I'm 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.

"Six 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 me motivate. I know how to go the extra mile to get the work done. In a way, it's frustrating to watch some of these 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 pass his experience and interests in people, government and economics into a position as a labor arbitrator, mediator or labor representative.
Tuberculosis vaccine may slow progress of deadly leishmaniasis

A modified tuberculosis vaccine could prevent or slow the progress of a disfiguring and potentially deadly parasite disease, called leishmaniasis, that affects 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 can be slowed by a tuberculosis vaccine, BCG (Bacillus Calmette-Guerin), modified to contain a gene from the Leishmania parasite.

Russell and colleagues Barry Bloom, Ph.D., and Nancy Gale, Ph.D., of the Howard Hughes Medical Institute at Albert Einstein College of Medicine in New York, began their work 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 parasite and Bloom hypothesizes 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 attack infected macrophages and could form the basis of a long-term, protective immunity.

It is still too early to know whether the vaccine can prevent leishmaniasis 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 states. "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 option when compared to the cost of pentamidine treatment and hospitalization.

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.

"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

Renal division named O'Brien research center

The renal division has been designated one of six George M. O'Brien Kidney and Urinary 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 urinary 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 on the roles that the products of such genes play in that development.
In both the monkey and in Kaplan's experiment, 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.

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. Whether it is 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 used to eliminate scarring of the underlying Bruch's membrane, which prevents repair and causes scarring.

Ophthalmologists have long been working on ways to transplant the RPE cells to replace damaged cells, but Kaplan's research indicates that many patients with age-related macular degeneration of whom many clinicians already routinely use acyclovir, and then use the excimer laser to go after the scarring in the eye," Pepose says. He suggests acyclovir be considered as a prophylactic treatment in patients with herpetic infections of the cornea that reactive frequently. "Most people have herpetic simplex and know that after the infection they are very young," Pepose explains. "Your aunt has a cold sore, but you do not. You could get infected with the virus." The herpes viruses travel 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 viruses.

In a second study, Pepose and his investigators found that the excimer laser can reactivate the virus in mice. Between 30 and 60 percent of the mice in the study had the herpes virus reactivated, and the reaction rate depended upon how many laser pulses and how deep into the cornea the procedure penetrated.

In humans the excimer laser has been used to treat patients with diseases 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.

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 antiviral, 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 excise mouse and make the same," 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 herpetic 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 herpetic simplex reactivations will be given acyclovir and studied over time to see if the drug lessens the number of reactivations.

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," says Pepose. "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 a very long time to get any effect. "Acyclovir is a relatively benign drug," Pepose says. 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.

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. "We have a major need to recruit the best and brightest for our medical school. This is a challenging job," says Mahoney. 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 relations specialist at Bell Atlantic Services Corp., and seven years at Cornell of Illinois, first as a human resources specialist and then as the manager of safety and security.

She received her bachelor's degree in history in 1970 and a master's degree in industrial safety in 1981, both from Northern Illinois University.
Hi-tech hearing aids

Valente evaluates latest designs

It used to be that hearing aids were all plastic and tin, and they made a whirring 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 that you can now get them fitted with microprocessors and even television microprocessors, and some of the most frequently cited papers on communication networks. In addition, they have a computer chip that can do all sorts of things, such as to amplify speech for people who are hard of hearing.

Michael Valente, Ph.D., director of adult audiometry and an assistant professor of otolaryngology at the School of Medicine, has spent years developing new hearing aids for patients. But now he’s involved in several projects to provide input into the future design of hearing aid systems. The main challenge is to get feedback from patients.

In the past, Valente says patients received the newest hearing aids available on the market. “Now we are evaluating technology that will be usable in months or years away from market and availability,” he adds, saying that many of these new hearing aids are nothing more than an ear piece and a circuit board. “It’s more important for clinicians, because we can have an impact on the direction they use it,” he says.

Valente offers that this technology can be quick with the new library and biomedical communication networks. In each of its first two years is a national honors, including membership in the Society for Information Science, Board of Regents of the National Library of Medicine, and both the National Library of Medicine and the Bowker Annual of Library and Book Trade Information and Britannica Encyclopaedia.

Valente’s major works include “Informal communication among the deaf,” which is part of the most frequently cited papers on communication networks. In addition, they have a computer chip that can do all sorts of things, such as to amplify speech for people who are hard of hearing.

Susan Crawford

Crawford wins awards

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

Crawford also has served on the editorial boards of 10 journals, and for several years has been an editorial assistant in the BMLA, the most prestigious international journal among health sciences libraries.

Crawford's work focuses on the role of the library in the future design of hearing aid systems. In addition, she has worked with computerized hearing aids.


Suzanne Crawford, the MLA’s highest honor, recognizes losing and outstanding achievements. She has authored or edited 121 papers and monographs. 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 National Library of Medicine and the Medal from the University of Toronto.

Crawford is a Distinguished Member of the Academy of Health Sciences Libraries Professional 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 Communication Network for Scientific Publications, Royal College of Physicians and Surgeons.

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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 bond market accounts, CREF's equity accounts are designed to be flexible, allowing the two accounts to perform differently. Available for both accumulating and income-paying annuities, the new account offers the same professional investment management and long-term conditions. Unlike bond market accounts, most foreign currency markets often run counter to domestic ones, international holdings can be especially helpful in 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 can be actively managed, and the distribution of the assets will vary, based on such factors as CREF's analysis of potential growth. The specific countries or regions of the portfolio have long been recognized by many investors looking for exposure to foreign markets.

The Global Equities Account will consist mainly of common stocks. CREF's equity experts expect 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 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 1.5 percent.

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 stock-market benchmark 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, 6 percent bond might pay 60 percent 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 cents 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. The market value of the bond will fall, and the bond buyer will lose a portion of what was paid for the bond. Unlike stocks, bond prices don't change daily. Instead, bond prices change with changes in interest rates. And bonds that are held to maturity usually don't lose any money.
Thursday, May 14  
4:30 p.m. Biology and Biophysics Seminar  
Professor David B. Braun,  
California Institute of Technology  
"C/C-Based Analysis of Cytoskeleton Components: Evidence for a New Strain of Cytoskeleton Motor Protein"  
Director, Cytoskeletal Research Program  
California Institute of Technology  
Box 276240, Pasadena, CA 91129  
4:30 p.m. Dept. of Biology and Biophysics Seminar  
"Cytoskeletal Components: Evidence for a New Strain of Cytoskeleton Motor Protein"  
Director, Cytoskeletal Research Program  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

Friday, May 29  
1:35 and 3:25 p.m. Dept. of Biology Roundtable  
"Genetic Analysis of the Rate of Aging"  
Peter Bowler,  
Professor, Division of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

May 15  
11:30 a.m. Dept. of Biology Seminar  
"Eminently Garnet: The Development of Garnet"  
Mark S. Gentry,  
Professor, Division of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

May 16  
12:30 p.m. Dept. of Cell Biology and Physiology Seminar  
"Energy Production in Yeast Cells"  
William C. Gorden,  
Professor, Department of Cell Biology and Physiology  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

May 17  
11:30 a.m. Dept. of Biology Seminar  
"The Evolution of the Immune System"  
Robert M. Zuckerman,  
Professor, Department of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

May 24  
11:30 a.m. Dept. of Biology Seminar  
"Regulation of the Cell Cycle"  
Gerald F. Leland,  
Professor, Department of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

May 25  
11:30 a.m. Dept. of Biology Seminar  
"The Role of Mitochondria in Cell Death"  
David G. M. Golstein,  
Professor, Department of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

Friday, May 15  
4:30 p.m. Computer-Integrated Manufacturing Seminar  
President, "Self Defense For Women"  
Weekend Workshop  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Saturday, May 16  
6:30 p.m. Music: "Razzamajazz," includes stretching,  
Givens Hall, Mallinckrodt Center  
For more info., call 355-5010

Sunday, May 17  
8:00 a.m. Music: "Choral Singing,"  
Givens Hall, Mallinckrodt Center  
For more info., call 355-5010

Monday, May 18  
4:30 p.m. Department of Biology Seminar  
"Cyclophilin Class of Peptidyl Prolyl Isomerases,"  
David H. Perlmutter,  
Professor, Department of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

Tuesday, May 19  
1:30 p.m. Center for the Study of Data Processing Seminar,  
"ISO 9000 Seminar," Norm Safert,  
Director, Division of Quality Assurance  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Wednesday, May 20  
10:00 a.m. Staff Day Recognition Ceremony  
Mallinckrodt Center  
Room 102  
For more info., call 355-5010

Thursday, May 21  
8:30 a.m. Center for the Study of Data Processing Seminar  
"Self Defense For Women,"  
Weekend Workshop  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Friday, May 22  
4:30 p.m. Department of Biology Seminar  
"The Role of Mitochondria in Cell Death"  
David G. M. Golstein,  
Professor, Department of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

Saturday, May 23  
8:00 a.m. Music: "Choral Singing,"  
Givens Hall, Mallinckrodt Center  
For more info., call 355-5010

Sunday, May 24  
8:00 a.m. Music: "Choral Singing,"  
Givens Hall, Mallinckrodt Center  
For more info., call 355-5010

Monday, May 25  
4:30 p.m. Department of Biology Seminar  
"Cyclophilin Class of Peptidyl Prolyl Isomerases,"  
David H. Perlmutter,  
Professor, Department of Biology and Biophysics  
California Institute of Technology  
Box 276240, Pasadena, CA 91129

Tuesday, May 26  
8:30 a.m. Center for the Study of Data Processing Seminar  
"Self Defense For Women,"  
Weekend Workshop  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Wednesday, May 27  
8:30 a.m. Center for the Study of Data Processing Seminar  
"Self Defense For Women,"  
Weekend Workshop  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Thursday, May 28  
8:30 a.m. Center for the Study of Data Processing Seminar  
"Self Defense For Women,"  
Weekend Workshop  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Friday, May 29  
4:30 p.m. Computer-Integrated Manufacturing Seminar  
"Self Defense For Women,"  
Weekend Workshop  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Saturday, May 30  
8:30 a.m. Center for the Study of Data Processing Seminar  
"Self Defense For Women,"  
Weekend Workshop  
Mallinckrodt Center  
Room 102  
For registration, call 355-5010

Sunday, May 31  
8:00 a.m. Music: "Choral Singing,"  
Givens Hall, Mallinckrodt Center  
For more info., call 355-5010