

2004

## Washington University Magazine, Fall 2004

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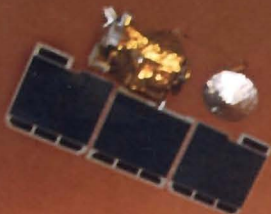
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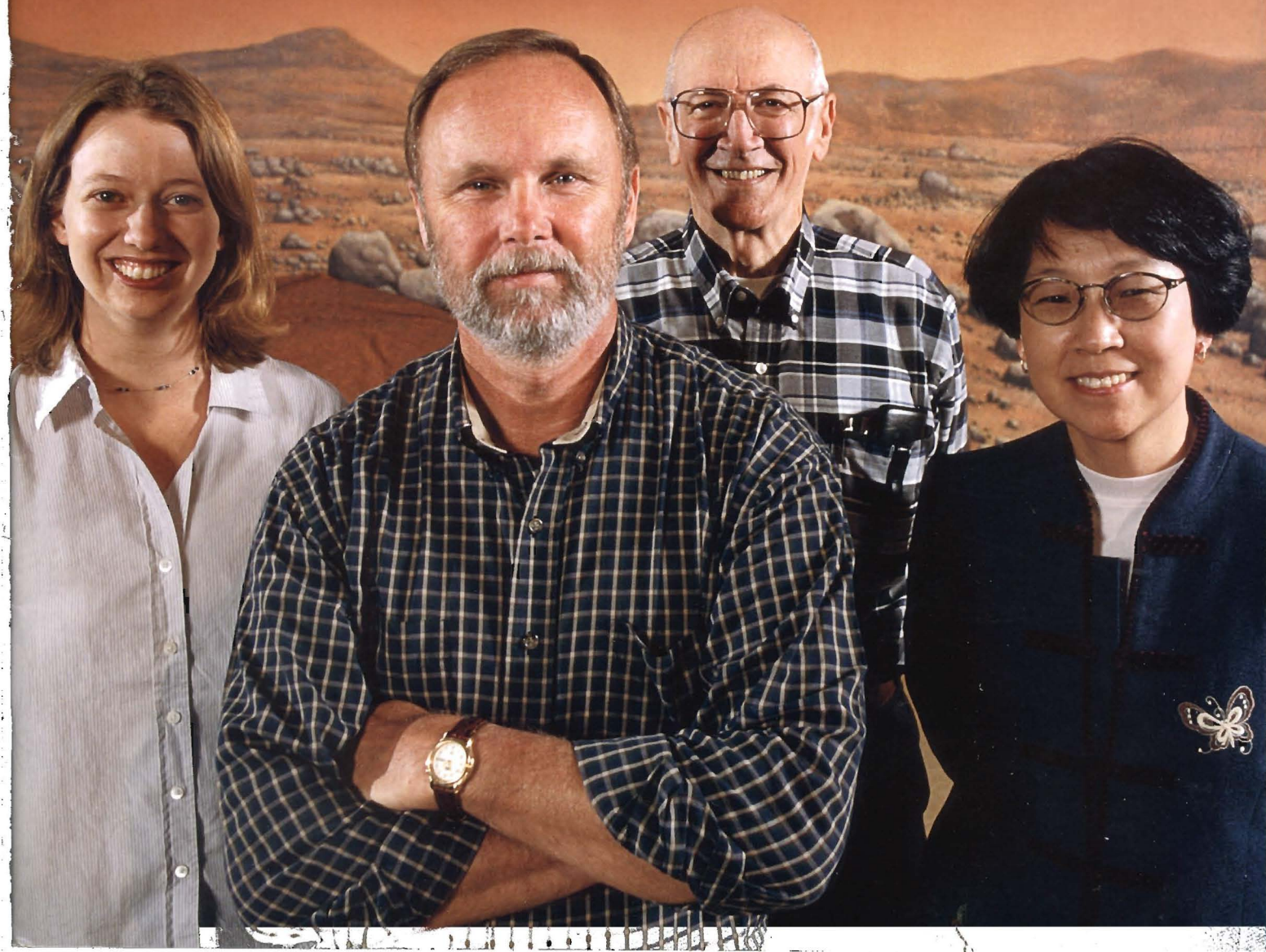
# Washington University in St. Louis

FALL 2004 MAGAZINE



## On a Mission

Washington University scientists are key players on NASA's Mars Exploration Rover Mission.





# The Campaign for Washington University in St. Louis



Bill Stover, inset: Joe Angello

**Exceeding the Goal** With the help of more than 95,000 alumni, parents, and friends who contributed, the *Campaign for Washington University* topped \$1.5 billion at its conclusion on June 30, 2004. Chancellor Mark S. Wrighton (second from left in top photo) spoke to the Campaign's success: "This extraordinary generosity ensures that Washington University can do even better what it already does so very, very well—teaching, learning, and discovery. Our students and society will be the beneficiaries." Joining Chancellor Wrighton at a staff appreciation day on July 1 were (from left) David Kemper, new chairman of the Board of Trustees; Lee Liberman, Ph.D. '04, life trustee and past chair of the Board of Trustees Development Committee; and David Blasingame, executive vice chancellor for alumni and development programs and executive director of the Campaign, who unveiled the final Campaign total. **(Inset)** Although Sam Fox (left), B.S.B.A. '51, who headed the Campaign's public phase, and John F. McDonnell, G.B. '67, who chaired the silent phase, were unable to attend, their strong leadership throughout the Campaign propelled the University to surpass its goal of \$1.3 billion.

# celebrate





As medical director of a consortium of infection control specialists at BJC HealthCare, Professor Victoria Fraser researches ways to prevent hospital infections (page 16).



Associate Professor Jackson Nickerson is collaborating on an FDA study analyzing manufacturing processes in the pharmaceutical industry (page 24).

Alumnus William Gilly spent nearly two months retracing the voyage of John Steinbeck and Ed Ricketts, researching marine invertebrates in the Gulf of California (page 27).

**Cover:** Among the Washington University investigators working at NASA's Jet Propulsion Laboratory in Pasadena, California, are Professor Ray Arvidson (front); Bethany Ehlmann (left), A.B. '04; Professor Larry Haskin, and Alan Wang, senior research scientist. (Photo by Joe Angeles)

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**Staff**

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Mary Ellen Benson

**Editor**  
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**Student Interns**  
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**Magazine Web site:**  
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**Address changes:**  
Development Services,  
Washington University in  
St. Louis, Campus Box 1082,  
7425 Forsyth Boulevard,  
St. Louis, MO 63105-2103  
or by e-mail: [addresschange@aimail.wustl.edu](mailto:addresschange@aimail.wustl.edu)

**Other correspondence:**  
Magazine Editor,  
Washington University in  
St. Louis, Campus Box 1086,  
One Brookings Drive, St. Louis,  
MO 63130-4899 or by e-mail:  
[magazine\\_editor@aimail.wustl.edu](mailto:magazine_editor@aimail.wustl.edu)

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A series spotlighting key faculty and staff who help make this great University run.

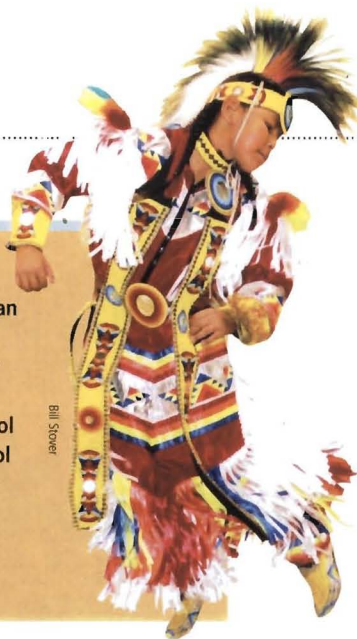




## Powwow Promotes Cultural Awareness

Xavier "Sonny" Littlehead performs during the junior dancer competition at the 14th Annual Powwow on April 10 in the Field House. The powwow attracted more than 1,500 persons, including American Indians from tribes

throughout the nation. It was the final event of American Indian Awareness Week, co-sponsored by the Kathryn M. Buder Center for American Indian Studies in the George Warren Brown School of Social Work and by the School of Law. The theme of this year's festival was "Bringing Nations Together Through Education, Community, and Culture."



Bill Stover

## Olin Library, You're Looking Great!

At the age of 42, the John M. Olin Library has received a major face-lift. To celebrate the completion of this three-year, \$38 million project, the University held a rededication ceremony on May 7, 2004. Keynote speaker was Neil Rudenstine, head of ARTstor and former president of Harvard University in Cambridge, Massachusetts.

The event celebrated the addition of 17,000 square feet to the ground level, including Whispers Café, a cyber café and 24-hour study space; the Arc, a technology center where students and faculty can digitize and edit text, photographs, video, and sound to create multimedia presentations and interactive course materials; and the Gingko Reading Room, where

the library can host exhibits, lectures, and receptions, and where students can study when the room is not being used for special events.

Other improvements have made the library more high-tech and user-friendly. The interior was reconfigured for greater visibility and convenience; the HVAC and electrical systems were updated; the building's furniture was replaced; and the library's entrance was moved to the south side of the building.

The ceremony also dedicated a bronze-cast statue of President George Washington, the University's namesake, installed near the library's entrance. The statue, created by renowned sculptor Jean-Antoine Houdon during 1785-88, is a reproduction of the one that stands in the rotunda of the Virginia State Capitol, in Richmond.



Joe Angiles

Two students talk in Whispers Café at the rededication of Olin Library. The cyber café and 24-hour study space is a new feature of the renovated library.

## Pre-Paid Tuition Plan Offers Savings

Despite undergraduate tuition costs of \$29,700 per year in 2004-05, Washington University is committed to making its educational opportunities affordable for as many students as possible. That's why the University now participates in the Independent 529 Plan.

Named for a section of the U.S. tax code that permits tax-free savings to be set aside for qualified higher-education expenses, the plan offers the opportunity to pre-pay tuition at a guaranteed rate. At any of the plan's participating independent colleges and universities (234 and growing), families can use the plan to buy tuition for any future year at a favorable rate.

For example, in its simplest form, a family deposits \$20,000 with the plan. This deposit purchases 100 percent of future tuition at a participating college whose current tuition is \$20,000, 80 percent at a college whose current tuition is \$25,000, etc. Additionally, each participating school offers a bonus that makes this percentage even higher.

University administrators believe the plan will be an attractive savings vehicle for families who want to lock in current tuition rates for future use. For more information, call (888) 718-7878, or visit [www.independent-529plan.org](http://www.independent-529plan.org).

## Students Design Debate Logos

Jessica Sonkin, Victoria Caldwell, and Ilana Breziner, each of whom earned a B.F.A. degree in May, are among the many volunteers who have helped or will help to stage the presidential debate in the University's Field House on October 8, 2004. The three students, who majored in graphic communications, designed the two logos (below) for the event.

The students were chosen by Create Studio faculty advisers, who had been asked by the University's Debate Committee to form a team to design a logo. The committee approved the designs from several submitted.



The stars motif (above), in a square shape, will be used for buttons, pins, and T-shirts.

The horizontal stripes design (below) will be used for banners and signs.

"This (project) illustrates the University's commitment to involve students in as many aspects of the debate as possible," says Steven J. Givens, assistant to the chancellor and chair of the Debate Committee.

This is the fourth consecutive time Washington University has been selected to host a debate. For more information, visit [debate.wustl.edu](http://debate.wustl.edu).





## Second Opinions Given at No Charge

Having to undergo surgery can be a daunting prospect, especially when it's for a major operation on the heart, lung, or esophagus. In these serious cases, having the second opinion of an additional physician can help put some of the worry aside.

Not all patients, however, can afford such a service. That's why the University's cardiothoracic surgeons at Barnes-Jewish Hospital have introduced a free second-opinion service for patients diagnosed with any heart, lung, or esophageal condition for which surgery is recommended.

After receipt of the patient's medical records, the surgeons will provide a second opinion within 48 hours, thereby reducing the usual wait time and anxiety accompanying it.

"If we confirm the original opinion a patient received, it helps give them peace of mind," says Joel D. Cooper, the Everts A. Graham Professor of Surgery and head of the Division of Cardiothoracic Surgery. "In cases where there are legitimate differences in opinion, it gives patients an opportunity to hear varied approaches to treating their conditions."

For more information on the program, call toll-free (866) TOP-DOCS.



David Kliger

From left, Harold Blumenfeld, John MacIvor Perkins, and Robert Wykes, professors emeriti of music, were commissioned by the University to compose original works celebrating its Sesquicentennial.

## Chancellor's Concert Celebrates Sesquicentennial

This year's Chancellor's Concert, presented by the University Symphony Orchestra and the University Chamber Chorus on April 25 in Graham Chapel, featured the world premiere of several works commissioned for the University's Sesquicentennial.

Harold Blumenfeld, John MacIvor Perkins, and Robert Wykes, all professors emeriti of music, each composed a work for the concert. Their previous works, for diverse ensembles, have been performed by groups in varied U.S. locations.

Wykes' *Celebration Fanfare*, which opened the program, features 13 brass instruments and percussion. Its rhythmic content is based loosely on the speech rhythms of the University's

motto, "Per Veritatem Vis" (Strength Through Truth). Wykes began serving as a faculty member in 1955.

*After and Before*, a work Perkins wrote for the University Symphony Orchestra, contrasts nostalgic remembrance with active engagement of the present and suggests views of the future. Perkins began serving as a faculty member in 1970.

Blumenfeld, who joined the faculty in 1950, composed *For Sion! Oh Thee: Choral Cycle in Five Parts After Byron*. The work—for soprano, tenor, clarinet, and cello—is a setting of five Lord Byron poems.

The program concluded with Antonin Dvorák's *Symphony No. 9 in E minor (From the New World)*. Conductors for the orchestra and chorus are, respectively, Dan Presgrave, instrumental music coordinator, and John Stewart, director of vocal activities.

## Students Train as First Responders

They still have three years of school ahead of them, but first-year medical students already are learning to put their skills to use in emergency situations.

The First Responders Program teaches them how to assist other medical professionals responding to everything from burns, to car accidents, to bioterrorism attacks. During the one-day course, students rotate through four learning stations, spending about 25 minutes at each.

At the patient contact/immobilization station,



Robert Boston

First-year medical students join Mark D. Levine (far right), assistant professor of emergency medicine, to load Katherine Fleming, fellow first-year student and "victim," into an ambulance.

students treat a mock-accident "victim"; at the disaster medicine concepts station, students hear a brief lecture on accident-scene safety, discuss who the scene commander is and how to move patients to safety; at the environmental emergencies station, they learn the proper way to treat burns, cold injuries, electrical injuries, and bite wounds; and, at the stabilization station, they get hands-on experience in treating a "patient" with controlled or uncontrolled hemorrhage and/or long-bone fracture.

The program has grown in popularity since the attacks of September 11, 2001.



Courtesy/Photo

## Seeing the Law Through Art

*Justice Brandeis* (1980), at left, a limited-edition screen print by Andy Warhol, is part of a diverse, impressive collection of law-related art adorning the walls of the School of Law's Anheuser-Busch Hall. This print of the late Justice Louis Brandeis of the U.S. Supreme Court, acquired for the Law Library area, is part of Warhol's *Ten Portraits of Jews of the 20th Century*. The law school's 35-piece collection includes works from Warhol to Werner Gephart to Nepalese folk art to black-and-white photographs of courthouse scenes—all illustrating direct and interpretive aspects of the legal system.





Randall S. Jotte, associate professor of emergency medicine at the School of Medicine and emergency medicine physician at Barnes-Jewish Hospital, interacts with Tondra Holman and her 1-year-old daughter, Kenisha.

## Program Provides Free Safety Seats

Randall S. Jotte, associate professor of emergency medicine at the School of Medicine and emergency medicine physician at Barnes-Jewish Hospital in St. Louis, is deeply affected by and concerned with the aftermaths of car accidents involving children not properly restrained in safety seats.

That's why Jotte and his colleagues have started the Safe and Secure program. Funded by a \$100,000 grant from Washington University and the Missouri Foundation

for Health, the program provides free child safety seats to low-income families. "Car crashes are the leading cause of death of children, according to the U.S. Centers for Disease Control and Prevention," says Jotte. "Proper use of car seats can reduce the risk of death by as much as 71 percent."

The program offers free car and booster seats to low-income families in the 63104 zip code in St. Louis and in counties of Carter, Reynolds, and New Madrid in southeast Missouri—areas with very high pediatric mortality rates from car accidents.

## Eating Less Can Mean Longer Life

Restricting your caloric intake can dramatically reduce your risk of diabetes or clogged arteries, precursors to a heart attack or stroke.

This according to a study led by John O. Holloszy, M.D. '67, professor of medicine, which was published in *Proceedings of the National Academy of Sciences*. The study's first author is Luigi Fontana, Ph.D. '91, research instructor at the School of Medicine and investigator at the Instituto Superiore di Sanita, Rome.

Similar studies have been done on mice, but Holloszy and Fontana's study is the first to examine human subjects who have been on long-term calorie-restriction diets.

The subjects consumed approximately 1,100 to 1,950 calories a day—10 to 25 percent fewer than the average American. This diet lowered participants' blood pressure, cholesterol levels, and body fat mass, thereby reducing the risk of heart attack, stroke, and diabetes.

The study's authors concluded that such a diet could enhance or prolong one's life, but that the regimen can be dangerous if proper nutrition is not maintained.

## Students' Art Brightens Clinic

Katy Scoggin (right), now B.F.A. '04, sits on the stuffed vinyl seating she created to brighten the waiting room at the Souldard Neighborhood Health Center in St. Louis. The seating, inspired by the shape of the stomach and pancreas, was among site-specific works created by eight art students—all majors in ceramics or sculpture.

The students designed, proposed, constructed, and installed their original art in the clinic, part of Grace Hill Neighborhood Health Centers. The centers provide primary and preventive health care to low-income and uninsured residents.

The works of art, ranging from stained-glass windows and ceramic mosaics to custom furniture and Braille signage, were

## Center to Be Beacon of Ethics

The University recently established a Center for the Study of Ethics and Human Values. Many universities have ethics centers that address only one topic or are located within one particular school. However, Washington University's center spans all eight University schools—tackling diverse issues ranging from corporate corruption to ethical issues related to biotechnology, patient care, and health insurance.

Guiding the center are Ira J. Kodner, A.B. '63, M.D. '67, center director and the Solon and Bettie Gershman Professor in the Department of Surgery in the School of Medicine, and a 15-member executive committee, chaired by Robert Wiltenburg, dean of University College in Arts & Sciences.

The center will host lectures and will provide student and faculty grants. Grants to date have supported a workshop about the play

## Students Discover University's Architecture Program

Adrian Luchini (left in photo), the Raymond E. Maritz Professor of Architecture, shows one of his designs to a group of rising high-school seniors in the Architecture Discovery Program, held each summer at the University. The intensive, two-week program allows 50 such students from across the nation to experience life as a student in the School of Architecture. By

practicing sketching and doing other studio work; by attending lectures, seminars, and films presented by faculty and visiting professionals; and by taking field trips to construction sites, participants become acquainted with the field of architecture, University faculty, the Hilltop Campus, and the St. Louis region.

"The program helps students decide if the School of Architecture is for them," says

Gia Daskalakis, associate professor, who oversees the program. "Each year, about 80 percent say, 'Yes,' and go on to enroll at the University."

David Kilper





## People Around Campus



Kevin Lowder

installed during the spring semester and dedicated May 7, 2004.

"These are major projects, major pieces," says Ron Fondaw, professor of art and head of the ceramics area. "The challenge was to create something that functions aesthetically while remaining sensitive to the variety of people who use the space. This project is a

strong testament to the School of Art's ongoing commitment to public practice."

Other undergraduates participating were Laura Fry, Margaret Harris, Lauren Nagle, Erik Peterson, Melissa Scott, and Victoria Sher—all now B.F.A. '04.

Also participating was Connie Williams, candidate for a Master of Fine Arts degree.

*Shooting Magda*, which addresses the Israeli/Palestinian conflict, and a one-day symposium on the participation of children in clinical trials. The center also hosted a two-part series on "Professionalism in Business, Law, and Medicine," which explored the incorporation of

ethics into the educational process, as well as ethical dilemmas frequently confronting professionals.

Initial funding for the center was provided by the Chancellor's Office, the School of Medicine, the Barnes-Jewish Hospital Foundation, and the Medical Staff Council.

### Discovery Illuminates Solar System

Researchers have discovered organic material that predates the birth of our solar system.

Christine Floss (right), Ph.D. '91, senior researcher in earth and planetary sciences and in physics, both in Arts & Sciences, made the discovery along with her colleagues. Their research will help scientists better understand the solar system's formation.

The material, found in interplanetary dust particles, was identified based on its carbon isotopic composition,

which is different from the carbon found on Earth. Isotopes are variations of elements that differ from each other in the number of neutrons they have.

Floss' discovery was reported in a recent issue of *Science*.



David Kliper

Elected to the American Academy of Arts and Sciences were **Carl Frieden**, the Wittcoff Professor of Biochemistry and Molecular Biophysics; **Jeffrey I. Gordon**, the Dr. Robert J. Glaser Distinguished University Professor in the School of Medicine; **John F. McDonnell**, then chairman and now vice chairman of the Board of Trustees; and **Carl Phillips**, professor of English and of African and Afro-American Studies, both in Arts & Sciences.

**M. Carolyn Baum**, Ph.D. '93, the Elias Michael Director of the Program in Occupational Therapy and professor of occupational therapy and neurology at the School of Medicine, was elected president of the American Occupational Therapy Association.

**Ramanath Cowsik**, professor of physics in Arts & Sciences, has been named to the National Academy of Sciences.

**Ralph G. Dacey, Jr.**, the Henry G. and Edith R. Schwartz Professor and chairman of the Department of Neurological Surgery for the School of Medicine and neurosurgeon-in-chief at Barnes-Jewish Hospital, is chairman of the American Board of Neurological Surgery.

**Mark Johnston**, professor and interim chair of the Department of Genetics in the School of Medicine, is president of the Genetics Society of America.

**G. Alexander Patterson**, the Joseph C. Bancroft Professor of Surgery, is president of the International Society for Heart and Lung Transplantation.

**Peter H. Raven**, the Engelmann Professor of Botany in Arts & Sciences and director of the Missouri Botanical Garden, was named by President George W. Bush to the President's Committee on the National Medal of Science. Raven also received the 2004 Veitch Memorial Medal from the Royal Horticultural Society, United Kingdom.

**Barbara A. Schaal**, the Spencer T. Olin Professor in the biology department in

Arts & Sciences and a professor in the medical school's Division of Biology and Biomedical Sciences, received the Wilbur Lucius Cross Medal, the highest award from the Graduate School of Yale University, her alma mater.

Seven faculty have been named to endowed professorships: **William P. Bottom**, as the first Joyce and Howard Wood Distinguished Professor in Business; **Shirley J. Dyke**, as the Edward C. Dicke Professor of Engineering; **Victoria J. Fraser**, as the first J. William Campbell Professor of Medicine; **Alison M. Goate**, as the Samuel and Mae S. Ludwig Chair in Psychiatry; **Mahendra Gupta**, as the first holder of the Geraldine J. and Robert L. Virgil Professorship in Accounting and Management, which friends and colleagues established to honor the couple; **Barton H. Hamilton**, as the first Robert Brookings Smith Distinguished Professor in Entrepreneurship; and **Leila N. Sadat**, as the Henry H. Oberschelp Professor of Law.

The National Chemical Society has recognized the former laboratory of deceased School of Medicine faculty members **Carl and Gerty Cori** as a National Historic Chemical Landmark. They, along with Argentine scientist Bernardo Houssay, shared the Nobel Prize for physiology or medicine in 1947. A commemorative plaque has been installed in the Medical Campus' South Building, which housed the lab.

Chancellor **Mark S. Wrighton** will chair the Business-Higher Education Forum from 2004-06.

**John E. Klein**, previously chairman and former president and CEO of Bunge North America, based in St. Louis, was named to the new position executive vice chancellor for administration.

At age 82, life trustee **Lee M. Liberman**, M.A. '94, chairman emeritus of Laclede Gas Company in St. Louis, earned a Ph.D. degree in American history in Arts & Sciences in May 2004.



## Gaining Mobility and Independence

David B. Gray, associate professor of neurology and of occupational therapy at the School of Medicine, is helping those confined to a wheelchair regain unparalleled mobility. Gray helped develop the INDEPENDENCE iBOT 3000 Mobility System, which can power over curbs; shuttle across sand, gravel,

and grass; and even go up and down stairs.

Not only did he help develop the new mobility system, but Gray, who himself is confined to a wheelchair, became one of the first owners of an INDEPENDENCE iBOT after completing training on the system in April 2004. The training took place at the Enabling Mobility Center in University City, a collaborative research project between Paraquad and the medical school's occupational therapy program—a project funded by the National Institute on Disability Research and Rehabilitation.

"This chair offers a truly exciting opportunity for me to gain great independence and accessibility in my daily life," says Gray. "It's like driving a Porsche instead of a Pinto."

## AIDS Strikes MTV Generation

Members of the MTV generation—those individuals 25 and younger—are contracting HIV, the precursor to AIDS, at an alarming rate. Nationally, half of all new HIV infections are among this age group. About one-quarter of the new infections are among those under 22.

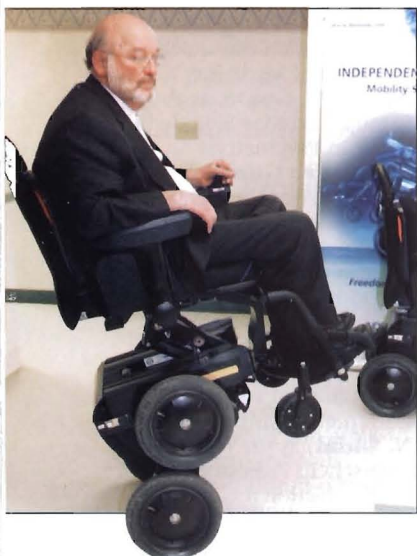
## Plaque Marks University's First Home

On hand at the dedication of a plaque near the site of the University's first campus—in downtown St. Louis—were trustee Robert L. Virgil (left), M.B.A. '60, D.B.A. '67, chair of the University's Sesquicentennial

Commission, former Olin School of Business dean, and former executive vice chancellor for University relations, and Chancellor Mark S. Wrighton. As part of the Sesquicentennial celebration, the plaque was placed on the southwest corner of 17th Street and Washington Avenue. The University moved to the Hilltop Campus in 1905.



Mary Burkus



Robert Boston

Associate Professor David B. Gray helped develop the INDEPENDENCE iBOT 3000 Mobility System.

The St. Louis area is no exception. In 2002, there were 132 new HIV infections in the area. Of those cases, 50 were in persons between the ages of 13 to 29. Young people tend to think that recent advances in drugs used in treating HIV make it easy to live with the virus. They're not familiar with the gaunt images associated with AIDS patients at the beginning of the epidemic.

Professionals agree that providing early education—before someone is sexually active or nearing that point—is crucial.

Diane E. Elze, Ph.D. '99, assistant professor of social

work and an adviser to Growing American Youth, a support/social group for gay, lesbian, bisexual, and transgender teens, says effective programs are available in the United States. "These programs are culturally sensitive and gender-specific, and they can enhance young people's life skills and incorporate comprehensive sexuality education, including information on abstinence and contraception," she explains. "However, we still see resistance to providing young people with school-based comprehensive sexuality education. We have kids dying because we don't give them what they need."

## Men's Tennis Reaches 'Elite Eight'

Tennis standouts Brian Alvo, A.B. '04, and Ari Rosenthal, Arts & Sciences Class of '06, contributed greatly to the men's tennis team, which advanced to the quarterfinals of the NCAA Division III Men's Tennis Tournament before falling to Emory University (Atlanta). The team, which ended the season at 14–10, was ranked No. 14 nationally in the final Intercollegiate Tennis Association (ITA) poll of the 2004 season.

## Women's Track Team Wins UAA Title

The women's track and field team won its fifth consecutive University Athletic Association (UAA) Outdoor Championship in competition at Carnegie Mellon University (Pittsburgh). The women have won the last 10 UAA track and field titles—five indoor and five outdoor—from 2000–04.

Outstanding individual performances have contributed to that achievement. This year, Hallie Hutchens, Engineering Class of '05, won both the 100- and 400-meter hurdles, leading to her being named UAA Female Athlete of the Year. Lindsey Clark-Ryan, now B.F.A. '04, who was a UAA 2004 Spring Sport All-Academic Recognition honoree, took home the triple-jump title. Kamaria "Kammie" Holt (right), now A.B. '04, won the long-jump competition. And Dalaina Martin, Arts & Sciences Class of '07, who won the discus competition, was named UAA Female Rookie of the Year.

The men's track and field team finished just behind first-place Emory University (Atlanta) in the UAA championship meet.



David Kipper

Mary Burkus



## Siteman Cancer Center Expands Pioneering Research

As one of only 61 National Cancer Institute-designated cancer centers in the nation, the Alvin J. Siteman Cancer Center at Washington University School of Medicine and Barnes-Jewish Hospital has more than 300 University researchers and physicians working to develop ways to prevent, detect, and treat cancer. Last year, physicians affiliated with the Siteman Cancer Center treated nearly 6,000 new cancer patients and provided follow-up care for more than 28,000 patients at Barnes-Jewish Hospital and the Center for Advanced

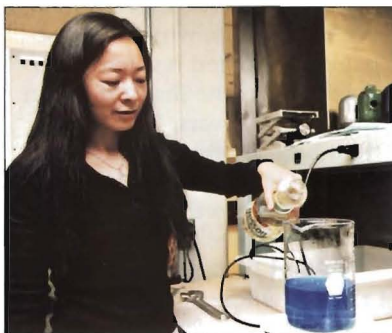
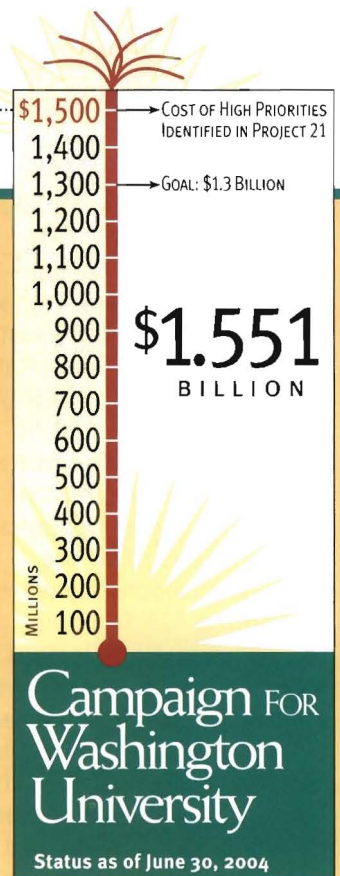
Medicine, which houses many of Siteman's outpatient services.

Early this year, to help ensure that the Siteman Cancer Center will have the support needed to expand its pioneering research and vital patient programs, the foundations of two St. Louis corporate giants, Emerson and Anheuser-Busch, pledged \$6 million and \$4 million, respectively, as a challenge to generate \$20 million in matching support from other individual and corporate alumni and friends.

First to respond were the leaders of two other major firms headquartered in St. Louis;

each said his company would commit \$1 million. Eugene S. Kahn, chairman of the board and chief executive officer of The May Department Stores Company, was the first, and Douglas E. Hill, managing partner of the financial services firm Edward Jones, was the second.

The first priority for funding from the Emerson/Anheuser-Busch challenge grant is the expansion of cancer research space to house the stem-cell biology program and the bone-marrow transplantation program, which is considered to be among the top four of its kind in the country.



David Kilger

Amy Shen, assistant professor of mechanical engineering, uses a magnetic spin bar to force oil and water to mix. The resulting interaction was recorded in a movie, which won the American Physical Society's Gallery of Fluid Motion Award.

## Oil and Water Do Mix

A team of two mechanical engineers and an art student created an award-winning movie that captures, for the first time, the fluid-mechanics phenomenon of two things that classically don't mix, doing just that.

The team—Amy Shen (above), assistant professor of mechanical engineering, and teammates William Alexander, now B.S. '04, M.S. '04 (mechanical engineering), and Sarah Roland, now B.F.A. '04 (photography)—filmed each of three different oils atop a layer of water and the consequence of what

happens when water and oil are forced to react via the spin of a magnetic stir bar. A torنادic vortex resulted.

The three-minute video, set to the rock music of Soundgarden and showing the mixing of water with canola oil, with a fuel treatment, and with an oil treatment, was so attractive that it won the Gallery of Fluid Motion Award at the American Physical Society's annual meeting. The team was one of 11 winners among 88 entrants in the national competition.

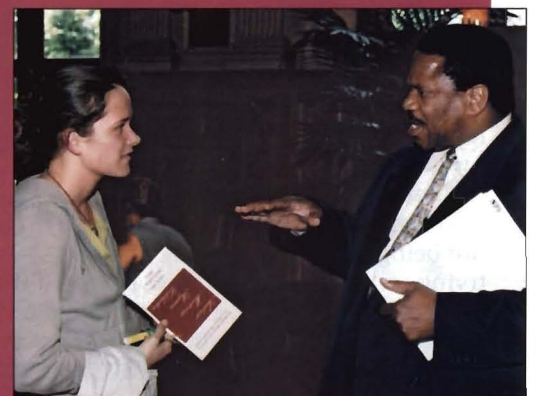
Shen, who also won the 2003 Ralph E. Powe Junior Faculty Achievement Award, says the results of the competition will be published later this year in the journal *Physics of Fluids*.

## Honoring Student Mentors

Brooke Lane (left), A.B. '03—being congratulated by Harvey Fields, Jr., M.A. '97, Ph.D. '04, assistant director of Cornerstone, the Center for Advanced Learning—was among the 255 undergraduate students and recent alumni honored for mentoring undergraduates in a variety of academic subjects. The center's director, Robert Koff, states that mentors at the center lead study groups and provide one-on-one tutoring in fields ranging from chemistry, calculus, biology, and physics to economics, foreign

languages, political science, business, writing, and engineering. All services are provided free of charge.

Mentors, who are screened and trained, must have a cumulative GPA of at least 3.0, must have received a minimum of an A- in any course for which they provide mentoring, and must have the support of at least two faculty members.



Mary Burkus



## University Touched by Olympic Flame

**O**n June 17, St. Louis, site of the 1904 Olympic Games—the first Games in the Western Hemisphere—hosted the 2004 Olympic Torch Relay. St. Louis was one of four U.S. stops in the flame's round-the-world journey en route to Athens, Greece, host of the 2004 Summer Olympics. Several members of the University community were among the 125 St. Louis torchbearers. Teri Clemens, a former coach of the volleyball Bears, who elevated her team to seven Division III National Championships, received the flame from alumnus and area philanthropist E. Desmond Lee, B.S.B.A. '40, at the gate to Francis Field—one of the University venues used during the 1904 Games. Her reaction depicts the best of what the flame brings to one, to all:

"Yesterday, I experienced the greatest moment of my life—OK, with the exception of each of our six children arriving. I carried the Olympic torch in St. Louis. I was giddy like a 6-year-old waiting for my mom to put on my new backpack on the first day of school, nervous as if I were singing in front of Carnegie Hall, and proud as if I were competing for America in the Olympics. My bunches of NCAA National Championships went out the door; any USOC or NCAA Coach of the Year awards seemed meager ... Olympic Festivals shriveled ... and my confident demeanor challenged—I was carrying the Olympic flame!

"I wasn't a bit embarrassed by not being able to sleep the night before, by not being able to eat the day of, or by trying on my uniform—twice! I savored the building anticipation among St. Louisans, and didn't even care that I cried during and after some of my interviews the day before and day of—I was emotional.

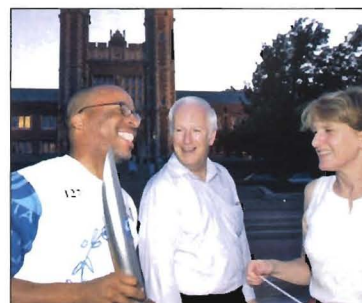
"I've always been an Olympic junkie, but does the USOC even begin to get what this opportunity does to people? Does the USOC even know that I can't even



Former Bears volleyball coach Teri Clemens carried the Olympic torch from the gates of Francis Field to Big Bend.



E. Desmond Lee, B.S.B.A. '40, entered Francis Field from Big Bend and completed his run at the gate of Francis Field.



After carrying the torch up the steps of Brookings Hall, Michael DeBaun (left), associate professor of pediatrics, was greeted by School of Medicine Dean Larry Shapiro and Judy Cook, wife of Alan L. Schwartz, chairman of the Department of Pediatrics.

LIVE with myself now—I'm that overwhelmed!

"I received the torch at Washington University (site of the 1904 Olympics), and my coachin' stompin' grounds—another emotional twist to swell my heart and tears. Even with my weak lungs, which have so painfully invited respirators to help me breathe many times in the past few years, I whipped 'that baby' up in the air and took off with the spirit that the torch brings to the world. It was

as if God sent a breeze that filled my weak lungs, and I felt refreshed and RAN! I ran the whole 600 meters—and I can't do that! And do you know what ached when I finished: my JAWS! From the exaggerated, silly, broad grin that I couldn't wipe off my face for 600 meters.

"My kids ran alongside of me on the sidewalk, yelling 'Go Mom!' and 'You rock, Mom.' They were so proud ... I honestly never knew they were THIS proud.

"OK, so it was live on TV here, and now all of St. Louis knows what a geek I was for a day. But do you know what? I think I'm just going to savor

this and be that geek for a long, long time ... because if I can reach people daily like the torch reached me, then it really does represent the spirit of the world.

"Life is really good." (W1)

—June 18, 2004, letter from Teri Clemens, former coach of the Washington University volleyball Bears, to John Kessel, USA Olympic beach volleyball coach who won the gold medal in 2000 in Sydney





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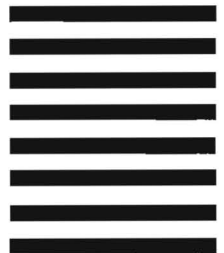
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90	11.3%	85 & 85	7.9%

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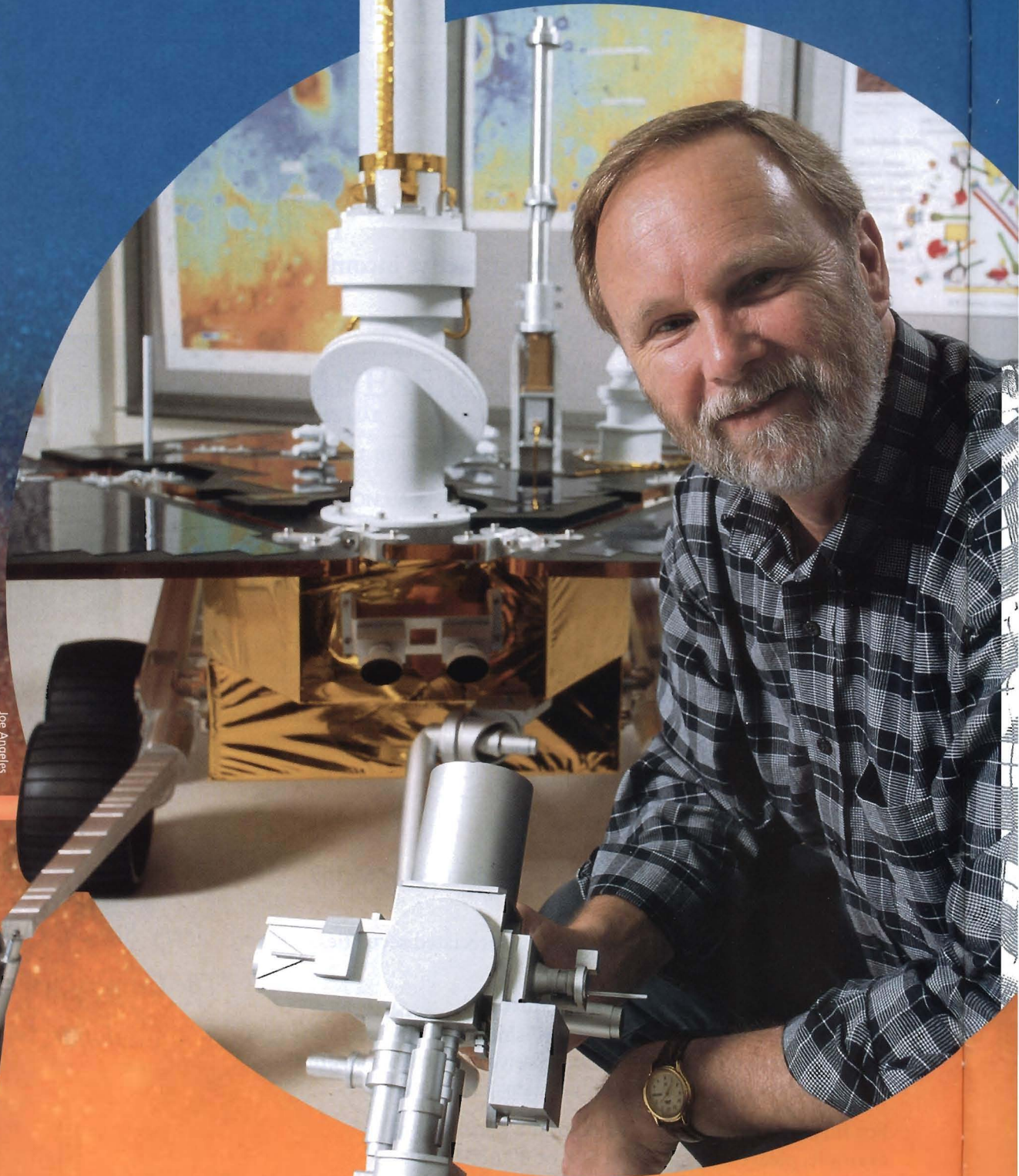
*“The University wins..., and the donors win.”*



**Recognizing the Importance of Planned Gifts  
Washington University in St. Louis**



Joe Angeles





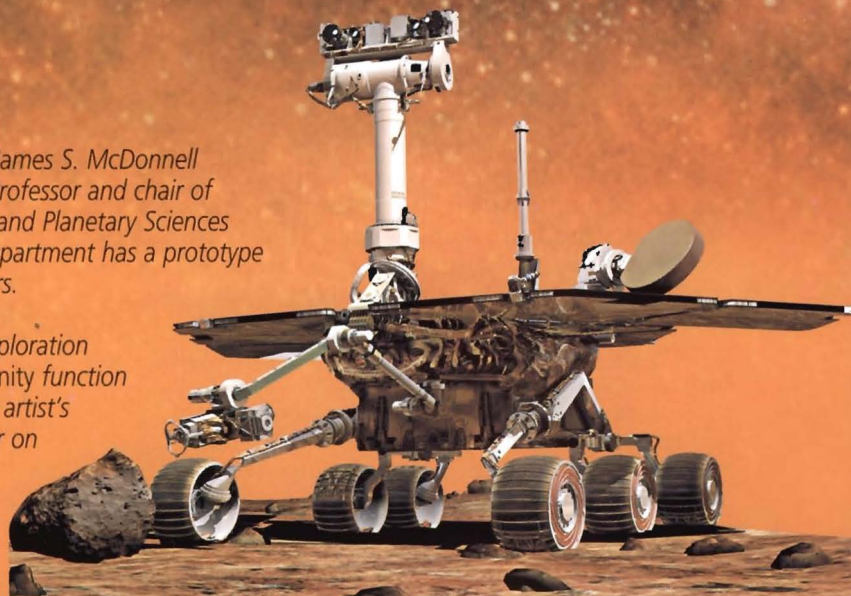
# Overseeing Rover

On the Mars Exploration Rover Mission, Professor Ray Arvidson is the University's lead investigator, analyzing and archiving data sent from rovers *Spirit* and *Opportunity*—investigating fundamental questions of life and survival in the universe.

BY JUDY H. WATTS

*Left: Ray Arvidson is the James S. McDonnell Distinguished University Professor and chair of the Department of Earth and Planetary Sciences in Arts & Sciences; the department has a prototype of the rovers now on Mars.*

*Right: The NASA Mars Exploration rovers Spirit and Opportunity function as robotic geologists—an artist's rendering portrays a rover on the surface of Mars.*







NASA/JPL

On January 3, 2004, Spirit was the first of two rovers to land on Mars. Spirit's landing site was within the 95-mile-wide Gusev Crater, which may have held a lake fed by an ancient river channel. The "postcard from Mars" was taken by Spirit on its fifth day by the panoramic camera; a dust-coated airbag is prominent in the foreground.

**A** man whose name, features, and bearing hint at his Scandinavian heritage, Ray Arvidson is an explorer in the best tradition of Northmen who followed the seas to lands as distant as the South Pole. For Arvidson, chair of the Department of Earth and Planetary Sciences in Arts & Sciences and the James S. McDonnell Distinguished University Professor, the passion for "exploration and discovery" goes hand-in-hand with the practice and teaching of formidable science. And he, too, follows the water—in research treks on Earth, orbiter investigations of Venus, and robotic examinations of Mars that have significantly raised the scientific trajectory of interplanetary missions to come.

"In my Pathfinder Program for undergraduates, we study Earth's environmental sustainability, which depends on water," Arvidson explains. "And our Mars research involves a huge question of sustainability: What happened to the environment? Did life get started? Did it hang on? We're trying to understand past climate, the role of life, the planet's evolution. And in a future mission to Venus—which is like Earth gone wild—an orbiter will search for active volcanism to learn how that planet works. All three planets are natural laboratories for studying global climate and climate change. Everything in my research and teaching fits together, and the sustainability of life is a central theme."

Director of the Earth and Planetary Remote Sensing Laboratory in the McDonnell Center for the Space Sciences at Washington University, Arvidson has worked for more than 30 years with the National Aeronautics and Space Administration (NASA). His research focuses on planets' surfaces, which he characterizes through imaging and other observations. His remote sensing focuses on visible- to infrared-wavelength regions; from his measurements he infers textural and mineralogical information.

With superb graduate students and the "brilliant and enthusiastic" undergraduates in the Pathfinder Program in Environmental Sustainability—which he

helped develop and leads—Arvidson invariably heads for places where few have gone before. Fieldwork on environmental change in the Mojave Desert, Death Valley, northern Canada and Greenland, Antarctica, and Mauna Kea in Hawaii, help us understand planetary surface processes. At the same time, the research experiences inspire stellar young scientists to continue the journey.

"Ray Arvidson is one of the most dedicated of faculty members," says Chancellor Mark S. Wrighton. "He spends a great deal of high-quality time with his students, engages them in science, and encourages them to stay involved. He has made the Department of Earth and Planetary Sciences one of the best in the country, and his contributions to science are enormous. He is a University treasure."

### The 300-million-mile-high field trip

Of Arvidson's interplanetary science adventures, the most dramatic—to date—is the phenomenally successful Mars Exploration Rover (MER) Mission, under way on two frontiers. (NASA has extended funding for the original 90-day mission through at least September 2004.)

The prime frontier, the focus, is Mars' alien-looking, starkly beautiful craters, plains, and hills. It is a severe, rusty-hued world, with an exceedingly thin and dusty carbon-dioxide-laden atmosphere; winds that reach 80 miles an hour; raging dust storms; nighttime temperatures far below zero—and as Arvidson and his colleagues have confirmed, a watery past.

For spectators back home, the adventure began in two stages, on January 3 and 25, 2004, when NASA engineers and an interdisciplinary team of scientists successfully landed mobile robots, *Spirit* and *Opportunity*, on opposite sides of the Red Planet. "The mission is exciting for all of us," says Edward S. Macias, executive vice chancellor, dean of Arts & Sciences, and the Barbara and David Thomas Distinguished Professor in Arts & Sciences. "It is helping to show us where we are in the universe."



We're grateful to Ray and his colleagues—and proud to be part of these remarkable times."

While the machines were rocketing through space, Arvidson and mission colleagues selected final landing sites based on safety and scientific promise. The choice for *Spirit* was within the 95-mile-wide Gusev Crater, which may have held a lake fed by an ancient river channel. *Opportunity's* site was Meridiani Planum, a basalt plain rich in hematite, an iron oxide that typically forms in the presence of water. The determinations—faultless on all counts—relied on data from the *Mars Global Surveyor* and the *Odyssey* orbiters, NASA projects on which Arvidson is a team scientist. (He was also a member of NASA's *Viking* and *Magellan* science groups and science coordinator for the 1998 and 1999 *Solo Spirit* balloon missions of University trustee Steve Fossett, M.B.A. '68.)

As deputy principal investigator for the science on the MER Mission (formally, the Athena Science Payload), Arvidson is also a distinguished visiting scientist at NASA's Jet Propulsion Laboratory (or JPL), in Pasadena, California. His collaborator of nearly 10 years, Steven Squyres, professor of astronomy at Cornell University, is principal investigator. They are responsible for science planning, data acquisition, and analysis during the massive operation, ensuring delivery of the greatest possible amount of the most meaningful science. "We used to compete for grants," says Squyres. "Now we've joined forces!"

Arvidson actually missed *Spirit's* arrival on Mars. "I had been doing fieldwork in Hawaii with my Pathfinder students, and it was important to finish and return with them. I was on the plane when the pilot relayed the news that the rover had safely landed. We arrived in L.A.; my students flew to St. Louis, and I drove up to JPL." He and Squyres have been working 10- to 12-hour days ever since. "We don't mind," Arvidson says. "We're right in the middle of the action!"

### Send rover right over

Roughly the size of golf carts, the non-polluting science utility vehicles are far more robust than the *Pathfinder* (and path-setting) rover that roamed Mars for three months in 1997. The 2004 twins are equipped to search out the history of Martian water and climate, covering as many as 300 feet a day. They have six wheels; solar panels; panoramic cameras; a robotic arm wielding a rock abrasion tool, three spectrometers, and an imaging microscope; plus a Mars-to-Earth antenna that sends and receives data and another that communicates with the orbiters; heaters; magnet arrays, and more.

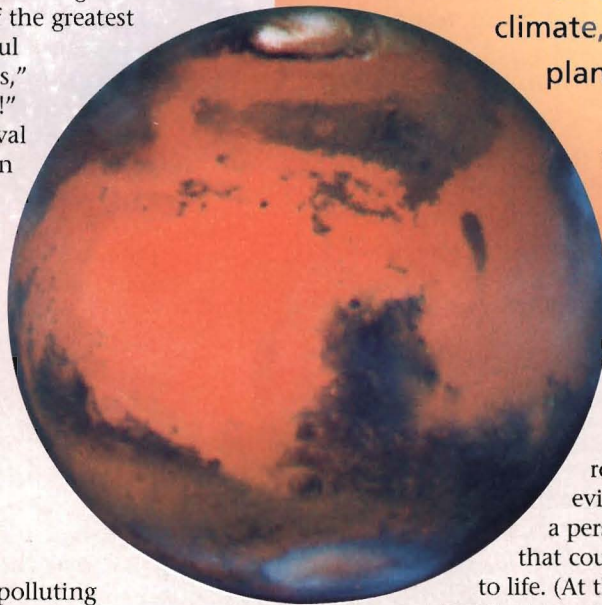
At the end of each Martian day, or "sol," the rovers beam data to Earth and faster-transmitting orbiters such

as the European Space Agency's *Mars Express*—for which Arvidson is a science team member. It is then sent via Internet for archive assembly to NASA's Planetary Data System Geosciences Node, which is part of the Earth and Planetary Remote Sensing Laboratory at Washington University—as the Geosciences Node director, Arvidson is responsible for the data archives.

"Besides doing terrific science, Ray is also the best in the world at creating the mission's legacy," says Squyres. "He will take this incredibly complicated mass of data and documentation and create an archive the scientific community will use for decades!"

**"In my Pathfinder Program for undergraduates, we study Earth's environmental sustainability, which depends on water,"** Arvidson explains. **"And our Mars research involves a huge question of sustainability ... We're trying to understand past climate, the role of life, the planet's evolution. ..."**

This image of Mars was taken from the NASA Hubble Space Telescope on March 10, 1997.



### Discoveries, puzzles, and firsts

Foremost among the rovers' discoveries is evidence *Opportunity* found of a persistently wet environment that could have been hospitable to life. (At the *Spirit* site, chemical, mineralogical, and textural evidence is

building that ice or modest amounts of liquid water once was present on the planet's surface.)

*Opportunity* began to live up to its name the moment it landed in tiny Eagle Crater (an "interplanetary hole in one," as Squyres has said). Planetary geologist Bradley L. Jolliff, Washington University research associate professor and a MER science team member who has conducted extensive research on moon rocks, was elated about what happened next. "We turned on the cameras and saw this beautiful outcrop of rocks [exposed bedrock the size of a street curb on the crater's inner slope] *right in front of us!*"



"The second delightful thing," Jolliff says, "was that instead of being (volcanic) basalt, so common on Mars, these were sedimentary rocks! Eventually, their chemistry and the mineralogy told us that they had to have been formed from some kind of shallow, standing body of water."

On NASA's Web site, Ed Weiler, associate space science administrator, commented, in part: "This dramatic confirmation of standing water in Mars' history ... gives us an impetus to expand our ambitious program of exploring Mars to learn whether microbes have ever lived there, and, ultimately, whether we can."

*Opportunity* has since sent pictures of rock containing cross-layers, indicating its formation in flowing water—and that the robotic photographer probably was parked on the former coastline of a salty sea.)

The rovers' countless finds include intriguing puzzles. One example: First observed near Gusev, very strange soil became detached and folded like a rug on a floor when the lander's airbag scraped it. And one mission "first" was a suite of joint measurements between *Spirit* and the orbiting European Space Agency's *Mars Express*—and the first coordinated, detailed readings of an atmosphere column and surface features.

### At the second frontier, intensity and free ice cream

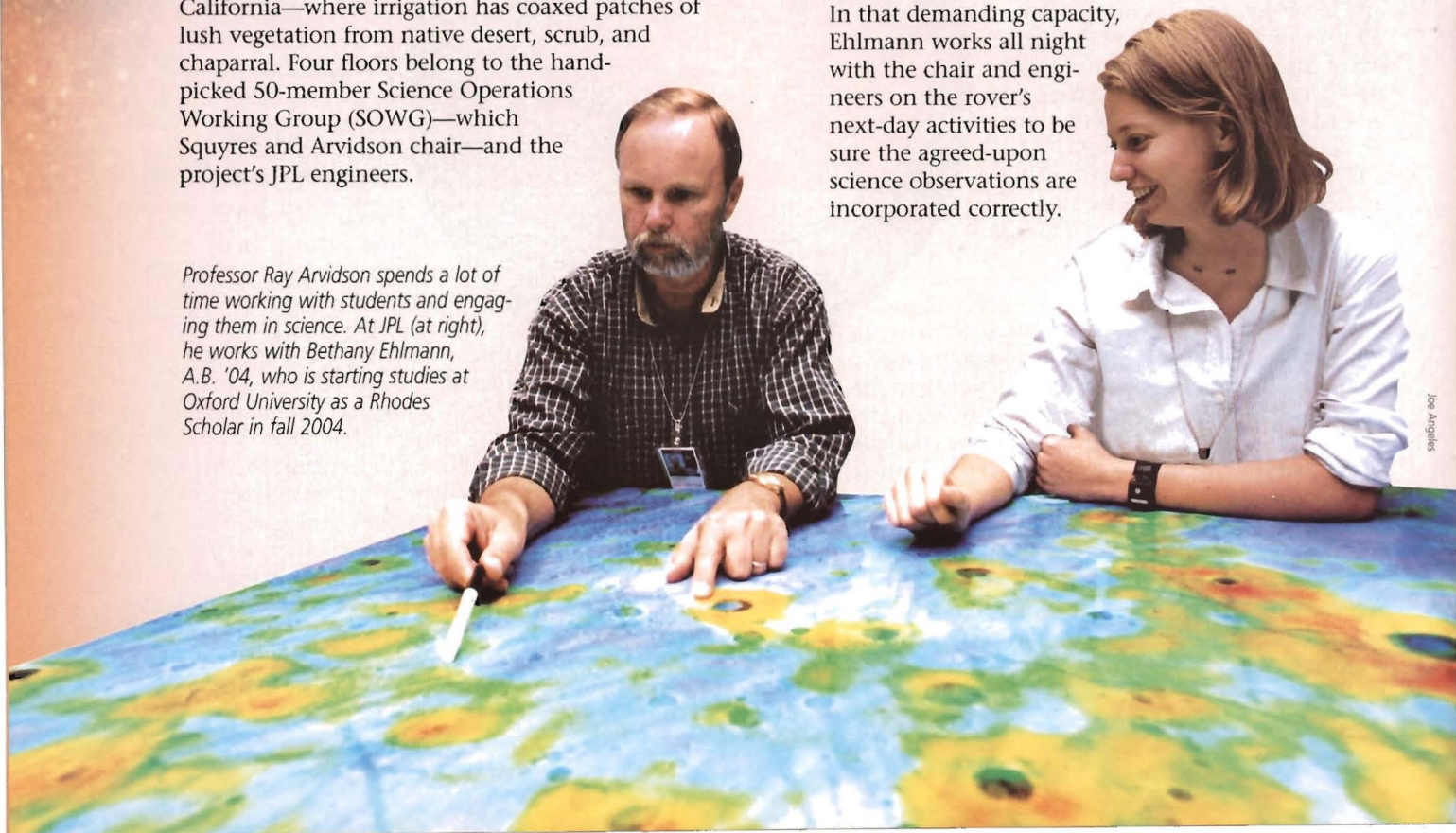
The other frontier is in the Space Flights Operations Facility within JPL's sprawling complex in Southern California—where irrigation has coaxed patches of lush vegetation from native desert, scrub, and chaparral. Four floors belong to the hand-picked 50-member Science Operations Working Group (SOWG)—which Squyres and Arvidson chair—and the project's JPL engineers.

*Professor Ray Arvidson spends a lot of time working with students and engaging them in science. At JPL (at right), he works with Bethany Ehlmann, A.B. '04, who is starting studies at Oxford University as a Rhodes Scholar in fall 2004.*

Everywhere, sedimentologists, geologists, geochemists, atmospheric scientists, geophysicists, and students share a focused intensity. It shifts somewhat when they greet one another, grab a free ice-cream bar from a hallway freezer, or read a board where some wit has asked what music is best on Mars and answered "rock music." But essentially, their minds are on Mars—and in the control room, the operations room, the downlink room, the all-hands meeting room, where they are rewriting planetary history.

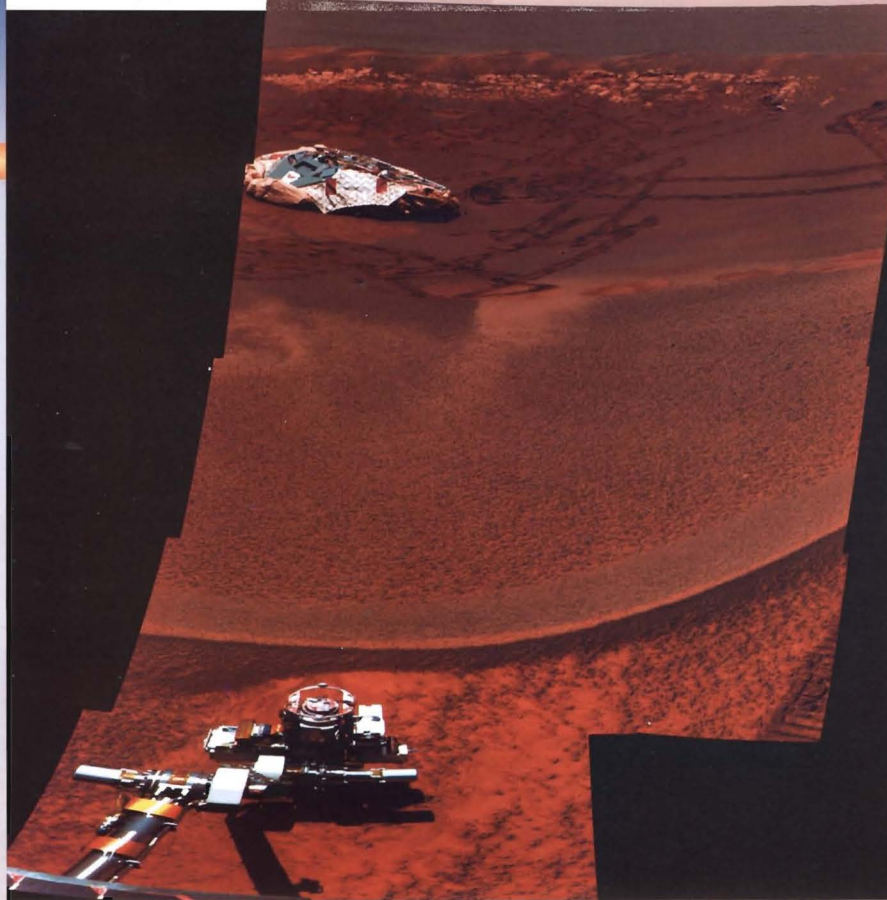
In addition to including outstanding Washington University colleagues (named in this article and accompanying sidebar on page 15) in the mission, says Squyres, "Ray brought an absolutely incredible bunch of graduate and undergraduate students. He always has this swarm of incredibly smart people buzzing around him! He brought that swarm with him, and they've done a fantastic job on the whole mission!"

One of those smart people is recent graduate Bethany Ehlmann, who received a Rhodes Scholarship and is beginning studies at Oxford in September, and is one of several such scholars Arvidson has mentored. "Bethany is so good that she has taken on three different roles in the mission," says Arvidson. She works with the soils and rock physical properties group, helps plan activities for the instrument arm, and often serves as the SOWG documentarian. In that demanding capacity, Ehlmann works all night with the chair and engineers on the rover's next-day activities to be sure the agreed-upon science observations are incorporated correctly.





NASA/JPL



NASA/JPL

Far Left: Opportunity found the rock, dubbed "Bounce," near the rover's landing site, Meridiani Planum. Scientists use the rover's miniature thermal emission spectrometer to take measurements.

Left: Perched at the lip of Eagle Crater, Opportunity looks down into its former home. The rover's panoramic camera shows one octant of a larger image. The full panoramic image, dubbed "Lion King," was taken in eight segments using six filters per segment, for a total of 558 images and more than 75 megabytes of data.

the help of NASA's *Mars Reconnaissance Orbiter*, slated to launch in March 2005, or *Phoenix*, a landed scientific laboratory that will explore Mars' higher latitudes in 2007. (Arvidson will be co-investigator on both.) But whether or not such evidence materializes, data gathered so far have worlds to tell about the kind of geochemical conditions that

"It's an incredible experience to be here working with leaders in the field!" says Ehlmann. "Ray has been such a tremendous, shaping influence on me during my time at Washington U."

Another star is fifth-year doctoral student Frank Seelos, who is writing his dissertation with Arvidson's oversight. Seelos designs scientific activities for the physical properties group, does spectroscopic analysis, and is a downlink lead on the Pancam team where he monitors the operation of the rovers' panoramic camera system. "Participating in this mission is an unbelievable opportunity," Seelos says. "And Ray has been a fantastic boss. He can be tough—but that's a good thing. He generates a constant flow of ideas."

The entire science team is relieved that the robots' human partners no longer live on Mars time. Because sols are 37 minutes longer than days, a workday that initially started at 8 a.m. (or in Arvidson's case, 6 or 7 a.m.) eventually begins at night. As the group became increasingly efficient at uplinking the next sol's operating sequences, Pacific Time was reinstated.

Until accumulating dust, diminishing sunlight, and cold temperatures on Mars shut down the rovers' power supply, the science team's intensity, anticipation, and exhilaration will continue. As Jolliff puts it: "I have to stop and pinch myself and say: 'This isn't the desert in Southern California or out on the range in Utah—this is Mars!'"

And sooner or later, Arvidson and his colleagues may indeed find signs of past life on the planet, perhaps with

may have preceded life on Earth, where rapid, violent climate and tectonic change eradicated the clues.

All of which helps explain why, whenever Ray Arvidson is asked whether he anticipates a letdown when the MER robots finally shut down, he responds: "NO! No, not at all!" (WJ)

Judy H. Watts is a free-lance writer based in Santa Barbara, California, and a former editor of this magazine.

### Planetary Pathfinders

In addition to the Mars mission team members named in the article, the following people in the Department of Earth and Planetary Sciences are part of the pioneering group out West who have contributed mightily to the mission's success.

- Edward A. Guinness**, senior research scientist
- Larry A. Haskin**, professor
- Gabby Izsak**, mission archivist
- Margo Mueller**, assistant to Ray Arvidson
- Susan Slavney**, archive specialist
- Nathan Snider**, systems analyst
- Tom Stein**, computer systems manager
- Alian Wang**, senior research scientist
- Jennifer Ward**, graduate student

Note: **Roger Phillips**, professor and director of the McDonnell Center for the Space Sciences in Arts & Sciences, is working on the mission from St. Louis.

Joe Angeles





# CHAMPION of Infection Control

BY DIANE DUKE WILLIAMS

From controlling hospital-based contagions to treating women and children infected with HIV/AIDS, Professor Victoria Fraser works hard to fight infectious diseases.

**I**n a place where vaccines were delivered on donkeys and medical care was given in an old banana plantation, Victoria J. Fraser found her calling. As a medical resident in Haiti's Artibonite Valley in the mid-1980s, Fraser saw children with salmonella, tuberculosis, and malaria—some had all three. It was common to arrive at 5 a.m. and have a line of 50 people waiting for help. "I couldn't believe the huge impact that preventable, treatable diseases were still having, and in many parts of the world," Fraser says.

After returning to the United States, Fraser had a hard time adjusting to the waste and extreme affluence. She gave away many possessions and couldn't go out to eat or shop without feeling guilty.

Fraser and her husband, Steven B. Miller, then took some time off to backpack through Africa and Southeast Asia before becoming fellows at the School of Medicine in 1988. Her experiences in other countries helped her decide to specialize in infectious disease.

"Infectious disease has a significant impact on global health," says Fraser, now the J. William Campbell Professor of Medicine and clinical chief of the Division of Infectious Diseases. "It's one of the fields within medicine where we truly have been able to make dramatic inroads in terms of survival, both decreasing childhood mortality and improving long-term survival with relatively inexpensive public health measures."





Joe Angiles

*Victoria J. Fraser, the J. William Campbell Professor of Medicine*

Although Fraser had decided to do research in molecular virology, Gerald Medoff, M.D. '62, then head of the Division of Infectious Diseases, convinced her otherwise. He suggested that she focus on health-care epidemiology, which includes the study of hospital-based infections such as surgical site infections, bloodstream infections, and ventilator-associated pneumonia. She had never heard of this specialty.

"Her intellect and people and leadership skills were apparent when she interviewed here," says Medoff, now professor of medicine and of microbiology and immunology. "I thought that her skills were more suited to a career in clinical research and patient care."

Today, Fraser is known as a fearless champion of infection control, a phenomenal teacher, and a tireless researcher and physician. She has studied everything from needle-stick injuries among health-care workers to surgical site infections to medical errors. She also has established a center for women with HIV and treated countless patients with infectious diseases.

David K. Warren, assistant professor of medicine, who first met Fraser when he was a resident in internal medicine and who worked with her during an infectious diseases fellowship, says she has more energy than anyone else he knows. "She's able to juggle many roles with skill," Warren says. "She is an excellent mentor and is always working to identify opportunities for others. She also is great at motivating the people who work with her to realize their potential, and she has created a research team that is very successful."



**I**n the late 1980s, infection control statistics were kept on index cards that were stored in shoeboxes. Fraser worked with Thomas C. Bailey, M.D. '84, H.S. '87, associate professor of medicine, and Michael Kahn to establish an electronic surveillance system for hospital-acquired infections. Huge amounts of information were electronically synthesized.

The system merged microbiology results with pharmacy and clinical information, including the patient's recent surgical procedures, day of admission, and day of culture. Infection types were classified as community-acquired infections or hospital-acquired infections, which could be sorted by floor, surgeon, or organism. This new system allowed complex analysis of trends, rates of infections, and antibiotic-resistant organisms over time in different hospital units.

William C. Dunagan, M.D. '83, H.S. '89, associate professor of medicine and vice president of quality at BJC HealthCare, says Fraser is very courageous and has a penchant for tackling difficult issues that others avoid. "She's shown over and over again her ability to make real and important progress in finding solutions that will work, advancing not only clinical science but also directly improving the quality of care," Dunagan says. "Her leadership has been instrumental in making BJC HealthCare a national leader in infection control, and I can't think of a more productive or harder working person."

**W**hen someone enters a hospital in the United States, he or she has a 1 in 20 chance of getting a hospital-acquired infection. Cancer patients on chemotherapy, people with AIDS, and transplant patients on immunosuppressive drugs face an even greater risk. Infection risks vary greatly from hospital to hospital, Fraser says, and depend on the



Joe Angeles

**Fraser has been medical director of a consortium of infection control specialists at BJC HealthCare for eight years. This group has helped decrease ventilator-associated pneumonia by more than 30 percent and catheter-related bloodstream infections by almost 50 percent in its hospitals.**

patient population, and the severity of the patients' illnesses and underlying diseases. Treatment processes at the hospital also are a factor.

Fraser has been medical director of a consortium of infection control specialists at BJC HealthCare for eight years. This group has helped decrease ventilator-associated pneumonia by more than 30 percent and catheter-related bloodstream infections by almost 50 percent in its hospitals.

"Part of our program has really focused on interventions," she says. "We don't just count and track infections."

Hospitals across the country now are using these procedures to lower infection rates. Training programs on these procedures also are being sold to other health-care-related industries, including insurance companies.

In addition to her research on hospital-acquired infections, Fraser is especially proud of founding a center in 1995 that provides comprehensive care to women with HIV and AIDS.

The Helena Hatch Special Care Center for Children, named after a young local woman who died of AIDS, offers everything from food to childcare to transportation. The staff develops a close, nurturing relationship with patients, taking the time to contact them if they miss appointments.

"When a woman has three kids, a dying husband, no car, and no food at home, it's absurd to just give her a prescription and expect her to do well," Fraser says.

The center currently is funded by the Missouri Foundation for Health as well as a Ryan White Title IV grant and now treats more than 400 area women. Linda M. Mundy, previously assistant professor of medicine at Washington University, played an important role as medical director. And Fraser continues to treat patients at Helena Hatch, as well as at Barnes-Jewish Hospital and the Washington University Infectious Disease practice.

Martie Aboussie, Jr., who went to Fraser for a second opinion about a rare chest tumor last year, says she stands above many other doctors he's encountered. "She's thoughtful, extremely sharp, and really listens to what you have to say," says Aboussie, a 21-year-old student at Saint Louis University.



Robert Boston

*Nationally, when someone enters a hospital, he or she has a 1 in 20 chance of getting a hospital-acquired infection. Victoria Fraser is the medical director of a consortium of infection control specialists at BJC HealthCare working hard to decrease nosocomial infections.*





Joe Angello

Professor Victoria Fraser (center) shows medical students, Jessica Despotovic (left) and Nefertari Daaga, the proper procedures for inserting needles, to avoid exposure to another's blood and possible infection.

His father, Martie Aboussie, Sr., adds: "Her skills as a physician and her knowledge of her particular field are extraordinary. I don't think you could say enough good about her. She's a real credit to Washington University."

Larry J. Shapiro, A.B. '68, M.D. '71, executive vice chancellor for medical affairs, dean of the School of Medicine, and the Spencer T. and Ann W. Olin Distinguished Professor, calls Fraser a tremendously talented physician and leader. "We are fortunate to have her as clinical chief of the Division of Infectious Diseases," he says. "She is brilliant, deeply committed, and works countless hours to the benefit of her patients and colleagues."

**F**raser knew as a high-school student in Webster Groves, Missouri, that she wanted to become a physician. She had wonderful doctors as a child, and some of her family's friends were physicians. "They seemed like very smart, hardworking, noble people," Fraser says. "I thought it would be great to help people feel better, minimize disease, and develop long-lasting relationships with your patients."

Growing up, her family spent almost every weekend at their family farm near Sullivan, Missouri, with a "gaggle" of cousins, aunts, uncles, and grandparents. They slept in a bunkhouse and barbecued, rode horses and fished.

She also was taught that people should use the gifts and energy they are born with to try to help other people and leave the world a better place.

Fraser and Miller, now associate professor of medicine at the School of Medicine and chief medical officer of Barnes-Jewish Hospital, have 14-year-old twins, Becky and Jake, and a 10-year-old, Hallie. The couple spend a lot of time at their children's basketball games and English riding lessons, and the whole family enjoys fishing and snow skiing. They also occasionally visit the family farm in Sullivan.

"I have been very blessed in my life," Fraser says. "Many people are not as fortunate, and I believe we have an obligation to try to improve the quality of life for everyone." <sup>(WU)</sup>

Diane Duke Williams is a free-lance writer based in St. Louis, Missouri.



SUPPORTING STUDENTS'

# Growth AND





# Well-Being

by Nancy Mays

When students need guidance with the demands of academics, relationships, or managing college life in general, the University provides a strong, campus-wide safety net.

**B**y the time students enroll at Washington University, they're already well-versed in the language of stress. After all, these are top achievers; students whose high school "to-do" lists were crowded with big ambitions.

So even though they've landed a spot on the campus of their choice, few allow themselves a sigh of relief. They've moved on to the next set of worries: a new living environment, confusing self-discoveries, and, of course, greater academic demands.

"These students were among the brightest in high school," says Justin Carroll, assistant vice chancellor for student affairs. "But now, though they are smart, all cannot be in the top 10 percent of the class—and that can be a big problem for some students."

College campuses everywhere are struggling to find meaningful ways to manage a surge in student stress. A recent study published by the American Psychological Association showed college students have more complex problems than they did 10 years ago, with cases of depression, anxiety, and sexual assault rising.

"Nationally, students in increasing numbers are utilizing health and wellness services on college campuses, including mental health services. Our mission at Washington University's Student Health and Counseling Service (SHCS) is to provide these services in an accessible, student-focused environment that recognizes the unique needs of the university student community," says Alan Glass, director of SHCS.

SHCS helps students manage the typical problems that emerge in young adulthood—personal identity issues, separation struggles, for example. But all of that is exacerbated by what Tom Brounk, associate director of student health and counseling, calls "perfectionism anxiety."

"Students here are dealing with very high expectations for their performance—maybe their own expectations, maybe their parents'," says Brounk. "But if they don't do as well as they'd hoped, they're stressed. And that can manifest itself in any number of ways."

Alcohol or drug abuse. Debilitating anxiety. Eating disorders. ("They're rampant," says Karen Levin Coburn, assistant vice chancellor for students and associate dean for the freshman transition.) Acquaintance rapes. Depression. Suicidal thoughts. The perception may be that a campus like Washington University—a private school with high-achieving students—is protected by privilege from such concerns, but that's not the case. Last year, nearly 900 students sought help from a campus counselor.

And that figure doesn't reflect the number of students helped by Student Health and Counseling's outreach programs. At Washington University, administrators have taken a bit of a "build-it-and-they-will-come" approach to mental health issues. Raise awareness about the value of tending to emotional and mental health, and students are likely to tap into available resources.

The goal: Teach students that mental health services aren't just about fixing breakdowns. They're about preventing them.

"If we can show students how to manage their stress now, we're teaching them something they can use throughout their adult lives," says Levin Coburn. "These competitive students are going to be tomorrow's high-achieving adults. They need to know how to deal with stress."



Campus outreach groups include "Black Men/White Men," where students come together for heartfelt discussions and activities.

At left: Staff members of Counseling Services—a division of Student Health and Counseling Service (SHCS), directed by Alan Glass, M.D.—provide an accessible, student-focused environment. Tom Brounk (center), Ph.D., associate director of SHCS, is assisted by (from left) Craig Woodsmall, Psy.D., Peg McMullen, Ph.D., Kalya Coppedge, M.S.W., Emily Knotek, Psy.D., Cathy Vander Pluym, R.N., Lisa Sinden-Gottfried, Ph.D., and Linda Cohn, M.S.W. Members not pictured are Matt Breiding, Ph.D., Jackie Miller, M.S.W., and Sarah Shia, Ph.D.



**W**ashington University's services are diverse and far-reaching, ranging from wellness programs in the residence houses to men-only discussion groups on sexual assault.

At the heart of the University's efforts is the umbrella organization Student Health and Counseling Service. Counseling Services, an integral part of SHCS, offers free to low-cost, one-on-one counseling for up to 15 sessions. Students who need more extensive help are referred to practitioners in the community. Counseling Services helps students define the problem and identify the best resources available. Some students are referred to the University's biofeedback clinic. There, students can see the physical manifestations of their stress, from rising skin temperature to a quickening heart rate.

Staff counselors spend about half their time in one-on-one or group sessions and the other half reaching out to students through student organizations, residence houses, and fraternities and sororities. The counselors raise awareness about a host of issues: race relations, eating disorders, anxiety-related sleep disturbances—as well as effective ways to manage stress.

## Promoting Health

**I**n many ways, our culture teaches children how to be stressed. But do we teach them how to “de-stress”? How to lead healthy lives?

At Washington University, the Health and Wellness Initiative was launched in 2000 to do just that: to ensure that students value and nurture their physical and emotional health.

Melissa Ruwitch, coordinator of health promotion and wellness, brings together stakeholders from across campus for regular meetings of the Health and Wellness Working Group. They discuss campus-wide trends, brainstorm health-enhancing initiatives—and work together to keep the students' safety net strong and growing.

Members include representatives from athletics, residential life, the Office for International Students and Scholars, the Student Health and Counseling Service, Office of Student Activities, as well as students representing a variety of groups.

“We try to tackle the issues that affect college students,” says Ruwitch.

“Most recently we've been discussing the ‘overcommitted student.’ We've been examining what role all of us play in contributing to a culture in which students feel they should have multiple majors and so many activities that it is tough to achieve depth or balance.”

The motto—“Seek balance: live and learn well”—says it all, according to Karen Levin Coburn, assistant vice chancellor for students and associate dean for the freshman transition.

“We want to help students develop lifelong habits of health and well-being,” Levin Coburn says.

Other topics the group works on include high-risk or binge drinking, sleep needs, fitness and nutrition, safety, and sexual health. During finals, the group co-sponsors stress-free zones on campus where students can get free chair massages, watch movies, and unwind by playing games before returning to their studies. The Health and Wellness Web site, [www.wellness.wustl.edu](http://www.wellness.wustl.edu), and e-newsletter are packed with practical, student-centered health tips.

**“If we can show students how to manage their stress now, we're teaching them something they can use throughout their adult lives,” says Karen Levin Coburn.**

Campus outreach and support groups help raise awareness about critical issues for students. “One in Four” is a men's support group devoted to understanding and educating others about the underlying dynamic of sexual assault. The name reflects the number of women (between 1 in 4 and 1 in 5) who (according to Bonnie Fisher, National Institute of Justice, 2000; and Mary Koss, 1987) will be raped during their college career. The figure includes attempted rape, which is part of the legal definition of rape.

“When I work with students, my mission is to address those issues that impede them from reaching their academic, social, and personal goals. In particular, sexual assault can arrest a person's development in a variety of areas, in that the time and energy it takes to deal with the trauma can be overwhelming,” says Sarah Shia, staff psychologist at SHCS. “When time is not devoted to the healing process, difficulties can continue into the period of life when these same women are trying to be partners, mothers, and professionals. As a community issue, the importance of education, prevention, and treatment for sexual assault cannot be emphasized enough.”

Yet another group brings together black and white men for heartfelt discussions on race and privilege. Brounk moderates this group with an eye toward building bonds between diverse groups on campus.

“Our staff members of the Student Counseling Service are really the University's unsung heroes,” says Levin Coburn. “They're doing such important work on a daily basis. They're extraordinarily well-trained and highly skilled psychologists, clinical social workers, and licensed professional counselors. We're lucky to have each one of them.”

**F**or most students, the first time they learn about campus mental health services is in student housing, where residential advisors (RAs) are trained to manage the daily ups and downs—and look for signs that a student may need more serious intervention.





Joe Angeles

Uncle Joe's Peer Counseling is a student-staffed referral service. Student volunteers undergo 80 hours of training to prepare how to best help those seeking assistance. Peer counselors are advised closely by Craig Woodsmall (right), a member of the Counseling Services staff.

"For most of our students, living in a residential college is the first time they have had to share a room—learning to live with someone very different from themselves. This is also likely to be their first experience with living away from home for such an extended period of time," says Carroll. "It's hard."

RAs are required to organize programs each semester on topics including physical, emotional, cultural, and social wellness. The programs not only enlighten students about critical issues, they also help them feel connected to the University. Creating a sense of community, the programs let students know that if life gets overwhelming, there's a strong, campus-wide safety net ready to help them.

When students need that safety net, they have options. For students who are apprehensive about approaching Counseling Services, there is Uncle Joe's Peer Counseling, a student-staffed referral service. Uncle Joe's walk-in and phone-in service links students to counseling services, whether they are on or off campus. Students who volunteer at Uncle Joe's undergo 80 hours of training. They are able to recognize fellow students in need of immediate intervention and those who may benefit from one-on-one counseling.

Again, many problems stem from skewed expectations.

"We have students who've focused long and hard on a particular area of study, only to change their minds," says Levin Coburn.

"Students change their majors. They change their politics. They stretch themselves in unexpected ways."

Levin Coburn, author of *Letting Go: A Parent's Guide to Understanding the College Years*, recognizes that seemingly small shifts in view or focus can be monumental for students at schools like Washington University.

"The stakes are high," she says. "Many students are afraid of disappointing their parents if they change their plan to pursue a particular profession. It can cause incredible stress. Yet it's important for college students to be seen by their parents as the people they are becoming, not the people they used to be."

Counseling Services is spreading the word to administrators, faculty, and staff, too. An informational brochure—"What Can I Do?"—was distributed to help increase awareness of mental health services, and to help others make successful referrals for students in need.

"We want them to know how to intervene, how to spot a student with difficulties," says Brounck.

"Our overall goal is to help students succeed in school, and in life. The more we educate our campus community on the value of providing mental health services, the more we help our students.

"That's really what it's all about for us." (WU)

Nancy Mays is a free-lance writer based in Lenexa, Kansas.







# DRUG MANUFACTURING OVERHAUL

**In a collaborative FDA study of the pharmaceutical industry, Associate Professor Jackson Nickerson is researching innovative ways to improve pharmaceutical manufacturing—to ensure the safety and efficacy of drugs and drive down production costs.**

BY BETSY ROGERS

**If Jackson Nickerson's current research in pharmaceutical manufacturing** bears the fruit he hopes it will, U.S. drug costs will come down, manufacturers will become more profitable, and government regulators will more effectively ensure drug safety and availability. "If we're successful, it's a win-win-win for everyone," says Nickerson, associate professor of organization and strategy at the Olin School of Business. "It will have a real impact on the real world."

Jackson Nickerson and his Georgetown University colleague Jeffrey T. Macher, assistant professor of business, have launched a research project that takes a dramatically new tack in studying the pharmaceuticals industry. "We found that no one in academia was studying pharmaceutical manufacturing from a business and organizational perspective," Nickerson notes.

"We found this to be particularly odd," he says—odd, because the stakes are so high. Pharmaceutical firms with stock registered in the United States spend \$112 billion to manufacture drugs annually, averaging about 35 percent of revenue.

Furthermore, empirical research holds hope of strikingly useful findings. In many conversations with both Food and Drug Administration (FDA) officials and manufacturers, "to a one they all said if we could change the regulatory environment a little bit, if we could change the way manufacturers behave with respect to the regulatory environment, production costs could go down by 15, 25, as much as 50 percent," Nickerson says.

A sharp rise in FDA actions against the industry in 1999 and 2000 first caught Nickerson and Macher's attention. Warning letters and penalties had jumped dramatically. And for the first time, the FDA imposed a penalty of half a billion dollars on the New Jersey firm Schering-Plough. "They shipped a large number of inhalers without any active ingredients—an indication that something was very, very wrong in their manufacturing process," Nickerson observes.

Nickerson and Macher formulated a two-pronged research proposal, targeting both the FDA and the manufacturers for study. Budget constraints have made the FDA's required biannual inspections at every facility impossible, so the researchers proposed finding ways to help the agency target its resources for greatest effect.

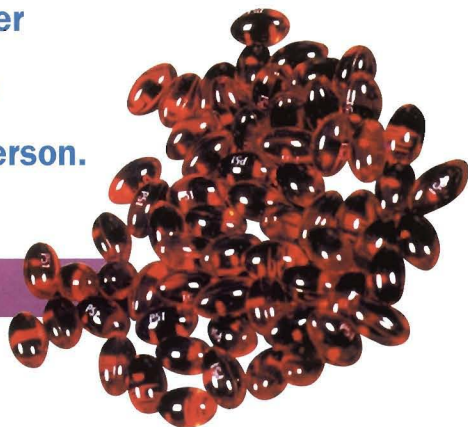
Right now, he says, the FDA views any substantial change in manufacturing processes as high risk, no matter how long the process has been used. "It seems that one possible benefit is to develop a risk-based model in which we can assess the risk based on past experiences across the entire population of firms and drugs," Nickerson proposes. It might be "that there is a broad class of products for which large changes might not be high risk. That should allow the FDA to focus its scarce resources on those changes that are in fact high risk."

At the same time, the pair realized that "to change the equilibrium between the FDA and industry, we also have to study the industry, so we've initiated a benchmarking activity to understand how organizational structures and incentives within manufacturing impact performance," Nickerson continues.

*Jackson Nickerson (left), associate professor of organization and strategy at the Olin School of Business, and his Georgetown University colleague Jeffrey T. Macher, assistant professor of business, are researching the manufacturing of pharmaceuticals from a business and organizational perspective.*



**“We hope to be able to identify those practices that can speed development, so that production costs are lower initially,” says Jackson Nickerson.**



For instance, Nickerson and Macher are investigating technology development and transfer. “We’re studying how manufacturers develop their practices,” Nickerson explains. “We hope to be able to identify those practices that can speed development, so that production costs are lower initially.”

One firm might have a team that develops a new process, goes with it to the laboratory, stays with it and scales it up in a pilot plant, and, finally, takes it to full production. Another firm might have independent teams working with the process at each stage. Is one approach more effective than the other? “We’re trying to study—create some empirical data—to help manufacturers figure out the best way to develop these processes,” Nickerson says.

Nickerson and Macher chose a propitious time to take their proposal to the FDA. The agency had just begun a project called “Good Manufacturing Practices Initiative for the 21st Century,” and the pair’s research has become a key part of that initiative.

“It’s a very important contribution,” says Janet Woodcock, director of the FDA’s Center for Drug Evaluation and Research. “There’s a tremendous opportunity for improvement in pharmaceutical manufacturing, and we think improvement will reduce the costs of producing drugs.

“This is a very important and groundbreaking and timely project,” she adds. “We are very grateful for the opportunity to collaborate with them.”

**W**ith high hopes for the research, the FDA has given Nickerson and Macher “unprecedented access to their internal databases,” Nickerson says.

Nickerson gives the FDA credit for tackling the problem head-on. “Some of these things are already taking place in the FDA,” he says of the agency’s initiative. “We are an important piece of the puzzle to suggest the new trajectory that will guarantee not only the safety and efficacy of drugs, which I think is a very necessary and important

activity, but also the opportunity to innovate, which will drive down costs and increase availability.”

Pharmaceutical firms are also supporting the project, in part because they’re hopeful it will yield a more productive relationship with the FDA and in part because they know they need to improve their manufacturing processes.

Because of regulatory hurdles and uncertainty about approvals, producers tend to delay any manufacturing improvements that might bring down costs until the end of the approvals process. Then, because any future changes require additional approvals, they are loathe to tinker with procedures, even if they could be substantially improved. “They have no incentives to drive those costs down,” explains Nickerson. The attitude becomes: “Once we get that compound out there, we shouldn’t touch anything.”


But this mindset has cost the industry. “Comparing the manufacturing environment in pharmaceutical firms to any other industry, you find that pharmaceutical manufacturers are substantially behind the curve—a laggard compared to the cutting-edge manufacturing technology present in many other industries,” he notes.

Participating pharmaceutical firms will also receive a confidential report comparing the productivity of their plants to those of their competitors, though with the rivals’ names masked. The reports will include suggestions for improving current performance.

Another potential reason why both the government and industry are participating: Nickerson and Macher are accepting no money from either side. “So we’re legitimate as an impartial player,” Nickerson says. Research funding comes from several University sources, including the Olin School, Boeing Center for Technology and Information Management, the Center for Research and Economics and Strategy, and the Center for Health Policy; from Georgetown’s McDonough School of Business; and the National Bureau of Economic Research.

Olin Dean Stuart I. Greenbaum says the promise of Nickerson’s work is clear in “the enthusiasm with which the FDA has embraced the research,” he notes. “The government is trying to find a way to maintain standards without being stifling. It’s a very, very important issue given the incredible cost of health care these days and what it means to the budgets of ordinary people.”

Greenbaum also has high praise for Nickerson as a teacher. Indeed, Nickerson consistently wins teaching awards along with honors for his research and writing. “He’s a superb teacher,” Greenbaum says, noting that Nickerson has taught undergraduates, MBA students, and business leaders in the Executive MBA program and is “consistently outstanding” across the board.

“He is a gifted presenter,” Greenbaum concludes, “and he does extraordinary research as well. He’s been published in the most selective academic journals. His interests are expansive, his work is highly regarded, and he’s as much a star in research as he is in the classroom.” 

Betsy Rogers is a free-lance writer based in Belleville, Illinois.





Nancy Burnett



## RETRACING THE VOYAGE OF STEINBECK AND RICKETTS

Marine biologist William Gilly, Ph.D. '78, and a small crew sailed the Gulf of California for two months researching organisms, much as John Steinbeck and Edward Ricketts did more than 60 years ago.

BY GARY LIBMAN





On a typical day in the Gulf of California this spring, Professor William F. Gilly arose before dawn on a wooden, 73-foot former commercial fishing boat and looked for shelf-like arrangements of rocks emerging from the shallow waters along the shore.

Once he found a site, Gilly, Ph.D. '78, and a small party carefully examined and counted invertebrate organisms in specific spots for four or five hours before returning to the boat. There they bagged and labeled samples and then enjoyed an afternoon beer to recover from the backbreaking work.

Gilly, a Stanford University professor of biology, was observing, counting, and collecting specimens to see how the Gulf of California had changed since a celebrated six-week ecological expedition there conducted by author John Steinbeck and marine biologist Edward F. Ricketts in 1940.

Steinbeck, who had just finished writing *The Grapes of Wrath* and wanted a break, took off with his best friend, Ricketts, from Monterey Bay on March 11, 1940, before returning on April 20.

The pair listed more than 550 species of marine life and used the alternative name of the Gulf of California in publishing *Sea of Cortez: A Leisurely Journal of Travel and Research*, their 1941 account of the expedition.

For more than 60 years, people have dreamed of retracing the voyage. But no one had done so until a five-person crew assembled by Gilly left Monterey on March 26, 2004, and returned in late May after an approximately 4,000-mile voyage.

Gilly says that it's difficult to compare the Gulf today with the waters that Steinbeck and Ricketts explored because many variables—including hurricanes, climate, pollution, and other types of human impact—have caused changes of varying permanence.

Despite the changes, Gilly reached at least one optimistic conclusion: Although he found depleted waters around tourist centers at Cabo San Lucas and Puerto Escondido, the Stanford biologist concluded that marine life in the shallows of the Gulf remains vibrant.

"I think the general feeling is that the population is immense and that the place is still really rich and worth monitoring and worrying about ...," Gilly says by phone from his lab near Stanford in Pacific Grove, California.

"[The Gulf is] rich in diversity and in the number of animals, but primarily diversity is the good sign of health. It's a complicated ecosystem, and a lot of things are living there in balance."

Although Gilly and his crew focused on retracing the Steinbeck-Ricketts voyage along the shore, they added two weeks of stops and may have made a major discovery in deep water regarding a species not mentioned by Ricketts and Steinbeck.

Scholarly literature suggests that the jumbo Humboldt squid breeds around the equator, but Gilly believes he found proof that it also breeds in the Gulf of California. Working in heavy fog near the island of San Pedro Martir in the middle of the Gulf, Gilly's group netted jumbo Humboldt squid that were only two millimeters long and transparent.

"We were trying to find the very smallest jumbo Humboldt squid we could," Gilly says. "If we could find the smallest of them, it would mean they were breeding in that area. And we found some. We're fairly sure these are juveniles of the big squid."



Nancy Burnett

On page 27: Alumnus William Gilly (left in photo, and inset), Stanford University professor of biology, and Chuck Baxter examine and count marine invertebrates to determine how the Gulf of California has changed since Steinbeck and Ricketts' celebrated ecological expedition in 1940. Gilly and his crew spent two months researching various locations. Above: Gilly rides a skiff to a selected shallow spot in the Gulf.



Gilly's hypothesis was to be confirmed or denied in July as his lab started tests comparing the DNA of the babies with the DNA of two adult species in the area.

Also during the voyage, Gilly became convinced that the Gulf's current squid population isn't threatened by commercial fishing.

"I don't believe it will be fished out," he says. "Basically, current Mexican law says that no mechanized fishing for squid is allowed, so only relatively small boats, hand lines, and big lures are used. If they were to go in with mechanized fishing gear, then it might be a different story."

### Like-minded adventurers

Gilly had thought about duplicating the Steinbeck-Ricketts trip for years, but the voyage did not begin to materialize until two years ago when he left his lab to do squid field research in Baja California.

On his way, he stopped in Santa Barbara, California, where thousands of squid had beached themselves and died.

"A friend who works in the California Fish and Game Department there said, 'You've got to meet Frank Donahue.' So I met him. He was this guy with a boat who was tired of commercial fishing and wanted an adventure.

"I was kind of angling to go to the South Pacific, but I thought we could [definitely] go to the Sea of Cortez," Gilly says. "I had a copy of the book *The Log from the Sea of Cortez*, which was the narrative portion of Steinbeck and Ricketts' 1941 book, and I left it with Frank. By the time I came back through, he had read it—and he was all excited. It wasn't as if there was a selection process [to the trip]. It just happened."

Donahue agreed to pilot his commercial shrimp trawler, which resembled the 76-foot sardine boat Steinbeck and Ricketts had used. To accompany Gilly and Donahue on the voyage, Gilly recruited another marine scientist, a writer, and a photographer. Donahue worked for his expenses running the boat, and donations covered trip costs of approximately \$100,000.

By the time the crew departed on Donahue's boat, the *Gus D*, Gilly had been conducting research on squid for 20 years, focusing on electrical communication in the squid's nervous system.

Gilly says he was well prepared for his research career after earning his doctorate in physiology and biophysics at the Washington University School of Medicine.

"I thought the medical school—and the [Hilltop] Campus as well—was a wonderful academic environment, one as good as I've been to," he says, "including additional training I've had at Yale University and the University of Pennsylvania, and my undergraduate training at Princeton."

During years of research, Gilly developed a deep appreciation for the jumbo squid, which he says "is probably equal in stature and strength to a sixth-grade kid. Squid can weigh close to 100 pounds and have



Nancy Burnett

Professor Gilly and his crew sailed on pilot Frank Donahue's 73-foot commercial shrimp trawler, the *Gus D*, which resembled the 76-foot sardine boat Steinbeck and Ricketts had used.

a body that's almost three and a half feet long, with body muscle three inches thick."

While its strength is unusual, the jumbo Humboldt also changes colors from deep red to white, its body flashing three or four times a second during the transition.

"The flashing is almost certainly a communication system because other squid use it between themselves," Gilly says, "but what it means we don't really know."

Gilly says that many people consider the jumbo Humboldt dangerous, but he doesn't, having had approximately 1,000 of them in his arms in a boat, while tagging them for scientific studies, with none being aggressive.

"They seem to be more curious, exploring what some unfamiliar object might be, than aggressive," he says, "although they certainly attack other fish in the water and maybe even each other."

At one point while tagging the squid, Gilly says, "I jumped right into the water with my snorkeling mask, just in shorts and T-shirt. After a few minutes, I saw four or five blinking, flying-saucer-like things coming up. They got about 12 feet below me, and then one of them started coming at me with arms pointed toward me, which is exactly the posture they take when they go to eat something.

"I didn't know what to think. I opened my arms, and the squid reached out—gently touching and pulling my hand—then drifted back to the group. Then another one or two did the same thing. They were probably tasting me. They taste with their arms, so maybe I didn't taste good.

"I think they have an intelligence that we have a hard time comprehending, and they seemed to be interested in what I was and what I felt like or tasted like. That was a remarkable experience. It felt like meeting some extraterrestrial and saying hello." (WU)

Gary Libman is a free-lance writer based in Los Angeles.



# BUILDING

## A Business with Heart

**J**oyce Shufro-Espinosa grew up in Manhattan, the daughter of an investment broker. Her father still manages the firm, Shufro, Rose & Co., LLC, that his father founded, and recently her youngest brother joined the business.

With a similar entrepreneurial spirit, and knowledge gleaned from the family business, Shufro-Espinosa would build a very different career.

Today, she owns and manages Heart Construction Inc., a commercial design-build firm based in St. Petersburg, Florida.

A trailblazer, she was one of the first 100+ women in the state of Florida to hold a Class A General Contractor license, and she is one of only a few such women in the Tampa Bay area. Her company has been honored repeatedly by the *Tampa Bay Business Journal* as one of the "Top 75 Women-Owned Businesses" and as among the "Top 25 Fastest Growing Privately Held Companies" in the area.

Despite a sluggish economy, skyrocketing steel prices, an unprecedented shortage of concrete, continually escalating insurance expenses, and obstacles women encounter in male-dominated industries, Heart Construction grew 39 percent last year, from \$3.6 million in 2002 to \$5 million in 2003.

Shufro-Espinosa is one of those rare individuals who would succeed in any business venture—construction, catering, or telecommunications. Her paternal grandmother, Edna Shufro, now 97 years old, is one of her strongest and most enthusiastic supporters. "My



Tony Fennolo

Joyce Shufro-Espinosa, A.B. '81, is one of the few successful female commercial general contractors in the Tampa Bay area. For the past 12 years, she has been at the helm of the growing firm, Heart Construction.

grandmother has always said that women belong in business. She's my one-woman cheering team," says Shufro-Espinosa.

Shufro-Espinosa definitely belongs in business: She anticipates market trends, targets with precision, takes calculated risks, insists on teamwork, forges long-term relationships, and operates within a framework of honesty and integrity that many find lacking in commerce today.

"One of the guiding principles of this firm is that we tell it like it is, whether you like it or not. We've actually talked people out of doing work that we thought didn't need to be done. Honesty and integrity are very, very, very strong for us," says Shufro-Espinosa.

Shufro-Espinosa displayed leadership skills and a certain business acumen while still in her teens: She worked as student manager of the campus delicatessen while completing a bachelor's degree in history at Washington University. "The jobs I had early in my life helped to foster a strong work ethic and high endurance level, which still helps me to persevere in the running of my business today.

"I graduated from Washington University in 1981, moved to Philadelphia, and worked for several years in retail," she says. "I managed a Radio Shack and a computer department. I absolutely loved retail, but I saw how it worked: You work hard and pay your dues, and you get promoted to a larger store, where you have no control. And then you are promoted again to a whole group of stores, where you have even less control." After



a pause, she adds: "So where did I end up? In construction—where there's hardly anything you can control! It's one of the most annoying things about this business. We have no control over the architects, building inspectors, flooring, drywall, the other trades, and yet we are accountable to our clients for everything that they do or do not do."

Her original career plan certainly didn't include construction. But to see her at a building site in her bright hard hat, poring over a set of construction drawings with carpenters and electricians, you'd think she was born to it.

Shortly after earning a master's degree in business administration at Temple University in 1990, Shufro-Espinosa moved to St. Petersburg, Florida. "I wanted to buy a business, something where I could use my marketing skills. I'd had my real estate license since 1982, and I thought I wanted to do commercial real estate or business brokerage," she says. "Then I was wiped out by a water spout; that's a water tornado that's driven by wind. It skipped across the Gulf, picked up furniture and debris along the way, and completely wrecked the house I was living in at the time," she says. "I watched the company that was hired to do the restoration, and I thought, 'I could do better than this!'" At the same time, a friend with experience in the construction industry moved to the Tampa Bay area, and, together with three other partners, they founded Heart Construction.

"We started the company very undercapitalized. I invested \$12,000 of my own money, and \$3,000 of it went to liability and workers' comp. the first year. I had planned to get the business up and running and then leave—let the other partners take charge and move on to some other business," Shufro-Espinosa recalls. Twelve years later, she remains as the sole owner and a very hands-on, in-the-trenches manager.

She's earned the respect of her colleagues in the industry, but it hasn't been easy. "The old boys' network is alive and well in Florida. Prejudice is around all day, every day. It's taken quite some time to gather steam, and it's taken patience," she says. "The hardest thing is remembering how male-dominated the construction industry is yet not letting it bother you. Sometimes I confront it; sometimes I leave it alone. If necessary, sometimes I let one of my male employees step in," says the seasoned Shufro-Espinosa.

**T**he company name—Heart Construction—says a lot about her management and leadership style. She offers this as context: "I come from a small family business. I grew up with the family-business concept, and I've tried to create that sort of environment here. When I say 'small,' I'm talking about not a lot of

people. We're more like a construction management firm than a general contractor. We have only nine employees."

The small-family-business attitude extends to her subcontractors, as well: "I don't believe in the typically adversarial role between the GC and the trades. I believe in teamwork. I use the same trades all the time, and I usually don't bid them. They have been wonderful to me because they know I don't go to their competitors for pricing. The level of service and volume pricing my trades provide to us for our clients is wonderful."

Heart Construction has cultivated a cadre of reliable subcontractors and a group of loyal clients, as well, in a specialized niche market: tenant improvements. "We're one of the few contractors in the area that does tenant

## "I come from a small family

business. I grew up with the family-business concept, and I've tried to

create that sort of environment here."




finish work. It accounts for about 90 percent of our revenue," she says. "We work directly for the property owners. It's quick work. It turns cash in 30, 60, maybe 90 days."

Last year Heart Construction completed close to 180 jobs. The company has walked away from a few, too, when "it was uncertain as to whether we'd be compensated," she explains. Shufro-Espinosa screens prospects carefully.

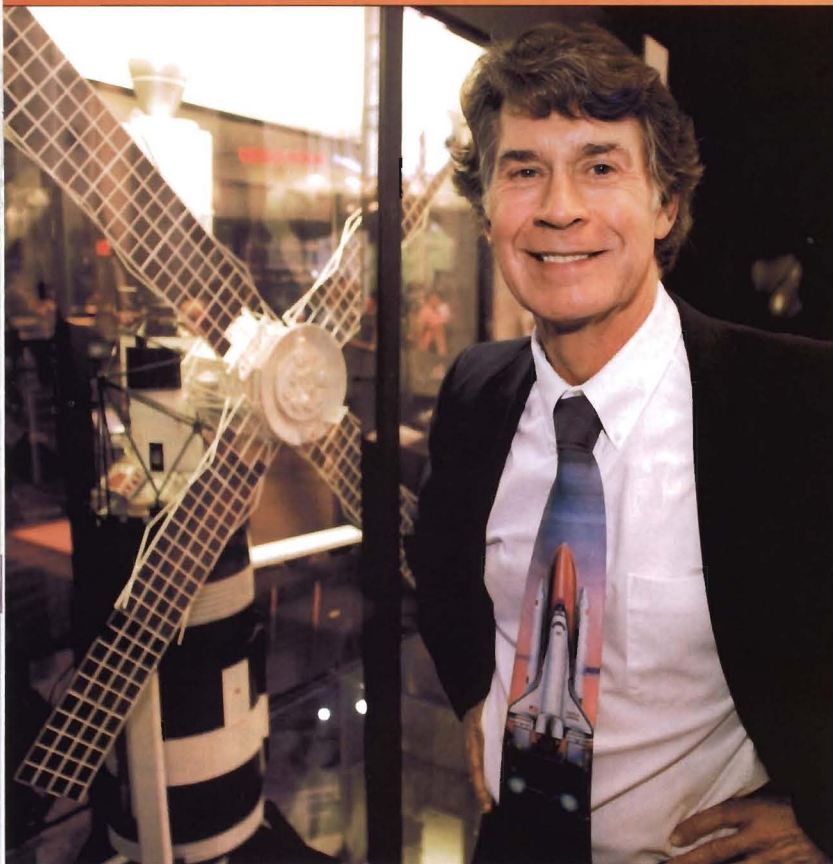
And the future looks promising: "The Tampa Bay area still has growth," she explains. "Sure, we have high vacancy rates, but there's been a lot of activity, too—a lot of new start-ups."

Her strategic business plan involves doing fewer but larger jobs in the years ahead. She also wants more personal time, she says, recalling the year that she worked 50 of 52 weekends.

"We would like to move into bigger projects. We want to develop new business relationships and expand our base and the type of work we do. It would be much easier to bring in \$5 million in five projects, at \$1 million each," she says. Pausing, she adds, "I'll have to work even harder to prove that I and the members of my team are worthy of the larger projects." 

Jan Niehaus, M.S.W. '80, is president of Communication by Design.





Associate Professor Michael Polites stands in front of a model of Skylab, the first U.S. space station. He was one of the team leaders of NASA engineers who successfully controlled the attitude of Skylab during orbit re-entry.

# (AERO) DYNAMIC ENGINEER

BY C.B. ADAMS

**W**hen the Russians successfully launched Sputnik in 1957, the event helped fuel the space race. It also captured the imagination of Michael E. Polites, B.S. '67. Polites was in junior high school in Belleville, Illinois, in '57, and he knew immediately that he wanted to apply his interest in mathematics and science to the space program—and to NASA, in particular. But unlike so many who dreamed of space, Polites did not want to pilot a spacecraft or take “one small step for man.” Rather, he wanted to participate as an engineer.

“I thought it would be fantastic to be able to work in the space program and work for NASA, but I never dreamed of being an astronaut. I wanted to design the vehicles and help develop them,” Polites says.

Polites graduated from Belleville Township High School with straight A's, except for four B's. He was drawn to Washington University initially because of its strong electrical engineering program. In his junior year, he heard about a program called systems and automatic controls.

“The idea of automatic control theory fascinated me, so I switched my major to that program [systems science and mathematics],” Polites says.

## NASA dreams

Polites' zeal for these subjects garnered him an on-campus interview with a recruiter from NASA's Marshall Space Flight Center in Huntsville, Alabama, as well as from other organizations. He received several job offers, but the one

from NASA was too good to turn down—even though the pay was the lowest.

“I was totally fascinated with working for NASA, especially at the Marshall Space Flight Center, because that was where Wernher von Braun and his team of German engineers were developing launch vehicles,” Polites says.

For the next 34 years, Polites lived that dream.

In the process, he became one of the most decorated engineers in the NASA organization. He holds four patents, has earned more than 70 NASA awards, authored more than 70 technical publications, and was named the Marshall Space Flight Center Inventor of the Year in 1995, among other distinguished accomplishments.

Polites began his NASA career in 1967 as an aerospace engineer in the Guidance, Navigation & Control Branch of the Astrionics Laboratory at Marshall. He joined the control analysis group working on Skylab. For the next seven years, he designed and analyzed feedback control systems for space vehicles and for the integration of these control systems with associated systems and components. In addition, he significantly contributed to the design and development of Skylab's attitude control system, which kept the vehicle oriented properly in space.

Polites enjoyed the challenges of working on Skylab. He also had the opportunity to meet with some of the astronauts who would benefit from his engineering.

“One day, I gave a briefing on my work, and Gordon Cooper was at the table. He was one of the first original seven astronauts. That blew my mind,” Polites says.

In 1978, as Skylab's orbit was slowly degrading, Polites returned to the program as one of the team leaders of the NASA engineers who successfully controlled its attitude during re-entry.

“We worked around-the-clock during Skylab's last six months. We controlled the attitude, which controlled the drag, which controlled the prediction of where it would land so that it did not land over cities,” Polites says.

From 1974 to 1986, Polites worked as an electronics engineer in the Systems Division, Systems Analysis &

Jim Bourg



**Michael Polites, B.S. '67, spent more than 30 years at the NASA Marshall Space Flight Center in Huntsville, Alabama, working on such projects as Skylab and the Hubble Space Telescope. He now shares his engineering expertise, from spacecraft dynamics to attitude control and determination, with students at the University of Alabama.**

Integration Laboratory at Marshall. During this time, he planned, organized, and executed mission-related system planning on programs such as the Space Tug, the Space Station, and the Space Shuttle. He also designed and simulated the pointing and tracking system used by the Atmospheric Emissions Photometric Imaging Experiment on the ATLAS Space Shuttle mission—a system that improved tracking accuracy by a factor of 100.

But the highlight of this span in his career was working on the Hubble Space Telescope (HST), which was deployed from the Space Shuttle in 1990. Polites was a key contributor within NASA to the definition, design, and verification of the HST pointing control system. He pioneered the use of magnetic torquers for emergency stabilization and backup control, which eliminated the need for a thruster system for backup attitude control on the HST.

"I believe I made significant contributions to the design of the pointing and attitude control systems on Hubble. There were some problems with Hubble, such as the optics, but the pointing system is still working very well," he says.

### The patent years

From 1986 to 1995, Polites served as an aerospace research engineer in space vehicle guidance, navigation and control systems, and satellite attitude control and fine pointing systems. He invented Rotating Unbalanced-Mass (RUM) devices. The finer aspects of RUMs are probably understood more fully by other engineers, but to the layman, these devices allow crafts—from ground-based to balloon- and space-based—to scan with significantly less power and mass, with more accuracy, and with better reliability and stability than previous methods. For his work with RUMs, Polites received four patents, two NASA Space Act Awards, and a NASA Research and Technology Award. He also was chosen Inventor of the Year at Marshall and was a finalist for NASA Inventor of the Year in 1995.

### After NASA

Polites took on supervisory roles at Marshall from 1986 to 2001, eventually directing and supervising a staff of 350 engineers and scientists engaged in research, development, design, and analysis of space-related electronic systems. In 2001, he opted to retire from NASA and begin the next phase of his career—teaching. Polites received a master's degree in electrical engineering in 1971 from the University of Alabama in Tuscaloosa and his doctorate in electrical engineering in 1986 from Vanderbilt University in Nashville. In 2001, he became an associate professor in the Department of Aerospace Engineering and Mechanics at the University of Alabama, where he teaches graduate and advanced undergraduate courses in spacecraft and aircraft dynamics and control.

"Teaching is another dream come true. It is a way for me to further contribute to my field—both in the classroom and through my ongoing research," he says.

It is no surprise that Polites' research continues in areas such as spacecraft dynamics and control, spacecraft attitude control and determination, and control theory. But he is also changing attitudes about the performance assessment of college football players. For the past two years, he has been working with the strength and conditioning coach at the University of Alabama to determine whether there are better, more accurate metrics, or parameters, for assessing players than the traditional metrics of weight and their time to run 40 yards. Polites is coy about his findings because he wants them to benefit the university, but he will say that his new metrics look promising.

"I'm approaching the metrics from the standpoint of engineering mechanics. I've been collecting data on actual players and determining a correlation between these parameters and their position on the depth charts. The emerging picture is that there are indeed more critical parameters that can predict success on the field, especially for positions such as linemen, cornerbacks, safeties, and so on," Polites says.

Between his past successes at NASA, his teaching, and his research both in the sky and on the gridiron, Polites is pleased about his career's trajectory. "Professionally, I can't ask for anything more in life," he says. (WU)



*Polites did pioneering work in the use of magnetic torquers for spacecraft emergency stabilization and backup attitude control on the Hubble Space Telescope. This eliminated the need for a thruster system.*

C.B. Adams is a free-lance writer based in St. Charles, Missouri.



## Passionate A



David Kiefer

Lawrence E. Thomas, B.S.B.A. '77

**S**erendipity led Larry Thomas to Washington University: "I grew up in Vicksburg, Mississippi. I was a musician in high school, playing a number of instruments including the saxophone. When I was a junior, I competed for a spot in the Elks Band of Mississippi and got to take part in a parade in St. Louis," he says.

"That's when I learned about Washington University, a place I knew nothing about before. We stayed on the campus for four days, and I had a really great experience. Afterward, in the process of thinking about

college, I considered Washington University. I wondered: 'What if I got in there?'"

He applied and was accepted, and he says it was a scholarship that made his attending possible. "The scholarship was certainly important for me, because I wouldn't have been able to attend a private university otherwise. I would have had to go to a state college."

The personal impact of receiving a scholarship has been the impetus behind his support for scholarships for today's students. He began sponsoring an annual scholarship in 1986 and now sponsors two—the Lawrence E. Thomas/Edward D. Jones & Company Scholarship and the Wesley Thomas Scholarship. He is also a member of the University's Endowed Scholarship Committee.

Thomas spent his first two years at the University in Arts & Sciences, working toward further study in pharmacology. Then he decided he was more interested in business and transferred to the Olin School as a finance major at the end of his sophomore year. Two professors had a major influence on him. He studied corporate finance and investments with John Bowyer and banking management with George Hempel. Hempel's contacts helped Thomas take a critical step in his own professional advancement. Hempel had done some work for John Bachmann at Edward Jones Company, and

he talked to Bachmann about Thomas' ability and what he could bring to the company.

"As a result, I got an internship, which was the start of my association with Edward Jones. After graduating with a B.S.B.A. in 1977, I was hired full time in the company's Corporate Bond Trading Department," he says. Five years later, Thomas became a principal, and he has continued his rise in several capacities to his present position as principal, Corporate Bonds.

Living in St. Louis has allowed Thomas to follow Washington University's progress closely and has given him the opportunity to become involved in a number of alumni volunteer roles. He began by serving as chair of his



## te About Scholarships

10th Reunion Class and getting involved in the national Black Alumni Council. He became a member and then president of Olin's Alumni Association Executive Committee, and is now a member of Olin's National Council.

He assumed a broader role in University affairs, first as a member of the Alumni Board of Governors, then as chair in 2000–01. He was elected to a four-year term on the University's Board of Trustees in 1998, and was re-elected to the Board while this article was being prepared. He received a Distinguished Alumni Award at Founders Day in 1998.

As a community leader, he has been involved, often as a board member, with the United Way of Greater St. Louis, St. Louis Children's Hospital, the Herbert Hoover Boys and Girls Clubs, the Saint Louis Zoo Foundation, and Forest Park Forever. Some of his professional distinctions include serving on the board of directors of the Bond Market Association. He also is a member of the St. Louis Securities Traders Association.

"Washington University is important to me, for a multitude of reasons. To start with, it was instrumental to my introduction to Edward Jones," he says. "I think it's provided me with access to people who have been able to help me in my profession.

"The University belongs to all of us, especially those of us who are alums, and the University has done a good job trying to serve its alumni. It's because of the University that many of us have grown up to be contributing citizens, and grown in our professions.

"The University gave us something we could walk away with, other than just a degree, and we should all give as much back as we possibly can.

"The leaders of the University," he continues, giving special credit to Chancellor Emeritus William H. Danforth and Chancellor Mark S. Wrighton, "its alumni, and its friends are very involved, very focused on getting the University to a place where it can serve its students and its alumni with distinction.

"When I was a student, we used to call this a good University; now we call it 'tops.' We have several topnotch programs: The University is on the leadership edge in new areas such as the life sciences initiative, as well as in the more established programs."

Thomas continues to be passionate about scholarships: "When it comes down to it, the University is about serving students, and scholarships are incredibly

important. We must continue to make sure that we enroll students here from all economic levels, because everyone can make a contribution to society. I know that the University is very sensitive to making sure that African Americans and other minorities who don't have the financial means can attend. We also want to continue our efforts to recruit a diverse faculty."

With Louis G. Hutt, B.S.B.A. '77, and Wendell Jones, M.B.A. '78, Thomas co-founded "The Tie That Binds," a scholarship-giving initiative challenging African-American alumni. Thomas says, "By offering a challenge, we wanted to encourage a large population of our black alums to support the University's scholarship efforts."

Thomas has seen a great change in many areas, especially in the stature of the faculty and the quality of the students. "We attract professors now who probably would not have considered coming here a few years ago, and more of our student applicants are making Washington University their first choice over other elite private schools."

**"As an African-American man, I feel the University has been very special to me. ... I want other African-American students and faculty to be able to have that same kind of opportunity and experience."**

He says: "I want us to be able to continue to attract the best students from everywhere. As an African-American man, I feel the University has been very special to me. It means a lot to me, and it is an important resource for my firm. I want other African-American students and faculty to be able to have that same kind of opportunity and experience.

"The University receives a lot of support from the community and its alumni and friends, but it also gives a lot back. Washington University has an important role and responsibility in society, and I think it's living up to that challenge."

And Larry Thomas is living up to his role as a loyal and deeply involved alumnus—a great example for other alums, an effective advocate for the University, and a key supporter of important programs that keep the University on course toward remaining one of the very best universities in the world. (WU)

—John W. Hansford



# ALUMNI ACTIVITIES

## BUILDING RELATIONSHIPS

“Washington University has been a very important part of my life,”

says J.J. (Julia Jane) Stupp, M.B.A. '83 and chair of the Alumni Board of Governors for 2004–05. “Being involved in the University community has enriched my life far beyond anything I could ever contribute in return. That’s why I always say ‘yes’ when the University calls. I’d like to see every alum experience a relationship with the University as rewarding as the one I have been fortunate to have.”

Stupp’s roots at Washington University go deep. She is a native of St. Louis; her father, Robert P. Stupp, graduated from the University in 1952; and her grandparents, Erwin P. and Mildred Phelps Stupp, graduated in 1919. J.J. Stupp began her involvement with the Alumni Board of Governors after chairing the Young Alumni Committee in 1985. Later she served as vice chair of careers and technology, a two-year term, prior to becoming executive vice chair of the board in 2003–04. The chair and executive vice chair of the Alumni Board of Governors serve as the Alumni Association’s representatives to the University’s Board of Trustees.

Stupp is also an active volunteer at the Olin School of Business, where she has been a member of the board



*J.J. Stupp, M.B.A. '83, is the current chair of the Alumni Board of Governors.*

of the Alumni Association since 1993 and served as president in 1999–2000. She is on the School’s Eliot Society Membership Committee and serves on its National Council.

While in the M.B.A. program at the Olin School of Business, Stupp was part of a team that wrote initial state legislation to assist new technology businesses in the St. Louis region and designed and developed the St. Louis Technology Center (now known as the Center for Emerging Technologies). Stupp wrote her master’s thesis on university-based innovation centers, and today she is the co-founder and chief financial officer of Data Search Systems, Inc. (DSSI),

## Alumni Board of Governors

Executive Committee 2004–05

The Alumni Board of Governors oversees events executed by Washington University volunteers around the world. The board advises the University about activities and programs for all alumni.

**Julia Jane Stupp, M.B.A. '83**  
CHAIR

**Melvin F. Brown, A.B. '57, J.D. '61**  
EXECUTIVE VICE CHAIR

**Gordon W. Philpott, M.D. '61**  
IMMEDIATE PAST CHAIR

**F. Gilbert Bickel III, B.S.B.A. '66**  
VICE CHAIR, ANNUAL GIVING

**Jerome F. Brasch, B.S.Ch.E. '44, M.S.Ch.E. '47**  
VICE CHAIR, PLANNED GIVING

**Randall S. Edge, M.B.A. '93**  
VICE CHAIR, CLUB PROGRAMS

**Andrew T. Grossman, A.B. '92**  
VICE CHAIR, ALUMNI AND PARENTS  
ADMISSION PROGRAM

**Jacqueline P. Ullin, A.B. '97, J.D. '01**  
VICE CHAIR, YOUNG ALUMNI

which was formed to develop and market products based on technology invented at the Washington University School of Engineering & Applied Science. She is also the community liaison for Oakwood Medical Investors IV, LLC, a St. Louis-based venture capital firm.


A successful entrepreneur in her own right, in 1992 Stupp founded TableTalk—an award-winning publisher of nationally distributed educational games—and managed the company until it was sold in 2000. She serves on many business and civic boards, including Midwest BankCentre, St. Louis Academy of Science, Capital Committee for the Coalition for Plant & Life Sciences, Center for Emerging Technologies, Junior Achievement of Mississippi Valley, and the Magic House.

Stupp’s leadership in the area of careers and technology on the Alumni Board of Governors came at the right time. As the network of Washington University alumni has become global, electronic communications are essential to keeping alumni connected with the University and each other. To better serve alumni regardless of where they live

or how often they move, the Alumni Board of Governors is working to make its extensive online services even simpler and easier to use.

One of the most important priorities for the Alumni Board of Governors is to strengthen efforts to help students take the first steps in their careers. “Helping graduates launch their careers is essential for the future strength of the University,” Stupp says. “Our alumni are a global resource of expertise, contacts, and information.”

She continues: “A few years ago, we helped create Career Connections, an online networking service for alumni, students, and parents. Today more than 5,000 volunteers from across the University are listed as resources and share information about job opportunities and careers. Both students and alumni can search the database by their field of interest, by geographic location, or by academic major. It’s a great service for students and recent graduates, and it’s a very rewarding way to get involved.”

“Washington University alumni share a strong bond—our mutual appreciation and respect for the University and everything it stands for,” Stupp adds. “Building those relationships benefits us all.” 

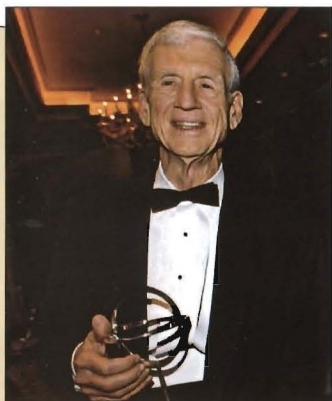
## Alumni stay connected

The Alumni Association sponsors Washington University Clubs in 40 cities worldwide, where graduates gather to network, participate in community service, and enjoy programs featuring visiting faculty. Faculty members also lead tours for the Alumni Travel and Learning Program and present alumni seminars and lectures on campus. Visit the Alumni Association home page, [www.alumni.wustl.edu](http://www.alumni.wustl.edu), for more information.



To take advantage of Career Connections and other online services, including e-mail forwarding, you must first log on to the password-protected Alumni Directory, using the seven-digit number that appears above your name on the back of this magazine.





Joe Angeles

Chancellor Emeritus  
William H. Danforth  
with the 2004 "Search"  
Award.

## DANFORTH RECEIVES "SEARCH" AWARD

In Washington University's Sesquicentennial year, the William Greenleaf Eliot Society presented its 2004 "Search" Award to William H. Danforth, who has a place at the top of the "most admired" list for everyone from students and faculty to alumni, community leaders, and fellow educators. He received the Society's highest honor at the Eliot Society's 37th annual dinner on April 22.

Danforth served as chancellor of Washington University from 1971 to 1995, the longest tenure in University history. Now chancellor emeritus, he continues to serve the region as chairman of the Donald Danforth Plant Science Center. He is a longtime director of the Danforth Foundation, which devotes much of its resources to education and made the lead gift of \$100 million to the Campaign for Washington University.

Danforth joined the faculty of the School of Medicine in 1957, where he served as vice chancellor for medical affairs and as president of the Washington University Medical Center. He chaired the University's Board of Trustees from 1995 to 1999 and served as vice chair from 1999 to 2004.

Under Danforth's wise leadership, the University successfully emerged from a difficult period for higher education to re-establish positive relations with the community while promoting academic excellence, building the endowment, and elevating the University to the top rank of world-class research institutions.

Among many honors during his career, Danforth received the Alexander Meiklejohn Award from the American Association of University Professors for his strong defense of academic freedom. Presenting the "Search" Award, Chancellor Mark S. Wrighton paid tribute to Danforth's kindness, personal commitment, and "great and enduring influence."

The "Search" Award represents the unending pursuit of truth and knowledge. In 1987, the Eliot Society presented the award to Elizabeth "Ibby" Danforth, William Danforth's wife.

## Alumni Association Travel 2005 Travel Program Preview October 26, 2004

Alumni, parents, and friends are invited to attend the "Travel Program Preview" on October 26, 2004, to survey the Alumni Association's 2005 trips. For more information, please call the Alumni Association Travel Office, (866) WUTRIPS or (314) 935-5212; e-mail: [travel@wustl.edu](mailto:travel@wustl.edu); or visit "Alumni Travel" at our Web site, [www.alumni.wustl.edu](http://www.alumni.wustl.edu). Trips are subject to change.

**Panama Canal Cruise**  
January 15-26

**Wings Over the Nile**  
February 25-March 11

**Exotic Morocco**  
March 12-26

**Village Life Along the  
Waterways of Holland  
& Belgium**  
April 8-16

**Alumni College in  
Normandy**  
May 9-17

**Crossroads of Europe -  
Cruise the Vistula River**  
May 15-28

**Alumni College in  
Tuscany**  
May 25-June 2

**The Danube & the  
Habsburg Empire**  
May 25-June 3

**Jewels of the Baltic**  
July 8-18

**The Passage of Peter  
the Great**  
July 18-25

**Ireland - Ennis**  
July 19-27

**Great Rivers &  
Waterways of Europe**  
September 10-26

**Civilizations of the  
Western Mediterranean**  
September 18-28

**Alumni College Along  
the Italian Riviera**  
September 24-October 2

**Crete**  
October 14-23

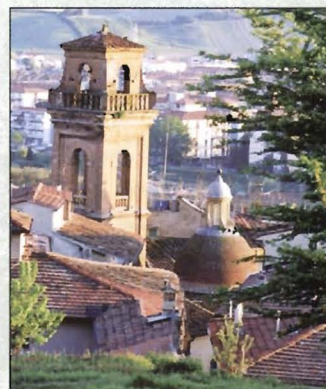
**Ancient Treasures of  
China & the Yangtze  
River**  
October 16-31



*Waterways of Holland & Belgium*  
April 8-16



*The Danube & the Habsburg Empire*  
May 25-June 3



*Alumni College in Tuscany*  
May 25-June 2



# Celebrating Friendships

## Old and New

**A**lumni from every generation renewed ties with classmates and made new friends at Reunion weekend, May 21–23, 2004. A total of 929 alumni attended Reunion this year, with 278 arriving on Thursday, May 20, to take part in Reunion College. The Class of 1954 celebrated its 50th Reunion in great style by winning the trophy for the greatest increase in participation in the Class Gift since their last Reunion, and overall giving by Reunion classes reached nearly \$12 million for the year. The celebration included everything from class parties to softball games, topped off by the Great Bear Parade and the Reunion Gala, making this a wonderful weekend for all.



**Class of 1954:** Co-chairs Carolyn Werner Losos, A.B. '54, and Roger Hebrank, B.S.B.A. '54.



**Class of 1974:** Co-chairs Tom Bugnitz (center), B.S. '74, M.B.A. '74, and Rob Meyer (right), B.S. '74, M.S. '76, D.Sc. '78, carried the class banner with Professor Emeritus Seymour Pollack (left), one of the faculty members honored by the 30th Reunion class.



**Class of 1964:** (From left) Nancy Early Wagoner, A.B. '64, Patti Teper, A.B. '64, and Bonnie Segall Rubin, A.B. '64.



**Class of 1999:** (From left) Samantha Friedman, A.B. '99, J.D. '03, Sarah Haynes, A.B. '99, and Christina Nelson, A.B. '99.





**Class of 1939:** Leroy Sachs, A.B. '39, M.S. '41, honorary chair, led the "Motor-men" of the 65th Reunion with the motto, "From Streetcar to First Class."



**Class of 1974:** Olabisi Sobomehin Solar, A.B. '74, M.S.W. '75, marched with her classmates.



**Class of 1994:** Lissa Padnick Silver, B.S. '94, enjoyed Reunion with her family: (from left) Matthew, Jay, and Ilana Silver.



**Class of 1969:** (From left) Jack Chinn II, A.B. '69, D.D.S. '73, Steve Lundeen, A.B. '69, Richard Koblith, A.B. '69, Mark Edwards, A.B. '69 and WU's men's basketball coach, Tom Jones, B.S.B.A. '69, and Chuck Jordan, A.B. '69.



**Class of 1949:** Chancellor Mark S. Wrighton presented the Frank J. Bush Reunion Leadership Award to John R. Barsanti, Jr., B.S. '49, J.D. '52, and Marie Prange Oetting, A.B. '49, who have served as co-chairs for their class at every Reunion. The Bush Award honors individuals whose enthusiasm and dedication inspire others and enrich the Reunion experience for all.

## Mark Your Calendar

### Reunion 2005 — May 19–22

If your class year is 1940, '45, '50, '55, '60, '65, '70, '75, '80, '85, or '95, plan now to attend Reunion for undergraduate alumni of Arts & Sciences, Business, Engineering, Art, and Architecture next May. Are there friends you hope to see? We can make it easy to get involved, get in touch, and make plans. Call (314) 935-7378 or 1-800-867-ALUM (toll free), or e-mail: [alumni\\_relations@wustl.edu](mailto:alumni_relations@wustl.edu).

### 5th Reunion — Class of 2000 Celebrate during Thurtene Weekend April 15–17, 2005

Announcing a Reunion celebration during Thurtene, exclusively for the undergraduate Class of 2000! Watch for details to come.



**Class of 1934:** Elizabeth "Bee" Conrad Robinson (left), A.B. '34, and Virginia "Ginny" Waggoner Bryan, A.B. '34, celebrated their 70th Reunion by serving as grand marshals of the Great Bear Parade, driven by Reunion intern Jacob Choi, Arts & Sciences Class of '06.

Reunion photos taken by Joe Angeles, Mary Butkus, Dan Donovan, David Kilper, and Kevin Lowder.



# CLASSES MATES

**W**e want to hear about recent promotions, honors, appointments, travels, marriages (please report marriages after the fact), and births so we can keep your classmates informed about important changes in your lives.

Entries will appear, as space permits, in the earliest possible issue, based on the order received.

## ALUMNI CODES

AR Architecture	GL Grad. Law	MT Manual Training
BU Business	GM Grad. Medicine	NU Nursing
DE Dentistry	GN Grad. Nursing	OT Occupa. Therapy
EN Engineering	GR Grad. Arts & Sciences	PT Physical Therapy
FA Art	HA Health Care Admin.	SI Sever Institute
GA Grad. Architecture	HS House Staff	SU Sever Inst. Undergrad.
GB Grad. Business	LA Arts & Sciences	SW Social Work
GD Grad. Dentistry	LW Law	TI Tech. & Info. Mgmt.
GF Grad. Art	MD Medicine	UC University College

Please send news to:

**ClassMates**  
Washington University  
in St. Louis  
Campus Box 1086  
One Brookings Drive  
St. Louis, MO 63130-4899

Fax (314) 935-8533  
E-mail [classmates@aismail.wustl.edu](mailto:classmates@aismail.wustl.edu)

If you want your news to appear also in a separate publication your school may provide, please send your news directly to that publication.

20s

**Carl A. Rosenbaum**, MD 27, celebrated his 105th birthday in spring 2004 with family, friends, and community members in Little Rock, Ark., where he retired from private practice at age 70.

30s

**Robert R. Robinson**, MD 38, and his wife, **Eleanor Robinson**, NU 32, have moved to a Living Center in Harker Heights, Texas.

40s

**Peaches Dierl**, LA 41, and **Alwien M.H. Dierl**, EN 41, who reside in Long Beach, Calif., celebrated their 50th wedding anniversary on Nov. 7, 2003, with a dinner party in San Pedro, Calif. (The couple was married Nov. 7, 1953, in the University's Graham Chapel.) Among guests were their only child, Christopher, his wife and daughter, and family friends.

**Charles Heiser**, LA 43, GR 44, Distinguished Professor Emeritus of Botany at Indiana University in Bloomington, won the 2004 Garden Globe Award for Best Talent for his book *Weeds in My Garden: Observations on Some Misunderstood Plants* (Timber Press, 2003). The award is a program of the Garden Writers Association. Heiser, past president of the Botanical Society of America and author of several books on plants, is a member of the National Academy of Sciences.

**Frank B. Norbury**, MD 48, represented Washington University

at the inauguration of Axel D. Steuer as the 13th president of Illinois College in Jacksonville on April 17, 2004.

**Liese (Sallmaier) Rapozo**, LA 48, who, with her husband, resides in Pacifica, Calif., teaches fitness classes, is a storyteller in local elementary schools, and continues ultra-running with her husband. They are the oldest summer biathlon participants in the country.

**Merle L. Silverstein**, EN 48, LW 51, received the 2004 Distinguished Lawyer Award from the Bar Association of Metropolitan St. Louis. Practicing law for more than 50 years, Silverstein received the honor for his contributions to community service, for encouraging other attorneys to get involved in civic activities, and for displaying the positive image of a lawyer as a good citizen. A former St. Louis County assistant prosecuting attorney, he co-founded the law firm Rosenblum, Goldenhersh, Silverstein & Zafft in St. Louis, with which he has practiced since 1956.

50s

**Aaron J. Fadem**, BU 50, who resides in Clayton, Mo., has been appointed vice president emeritus of Commercial Letter in St. Louis, in recognition of his 50 years of service to the company.

**Burton S. "Buddy" Resnic**, LA 50, graduated from Harvard Law School in Cambridge, Mass., and spent two years in the military before beginning to practice law in Holyoke, Mass., where he resides. Now with the law firm Resnic,

Beauregard, Waite and Driscoll in Holyoke, he says that, after 50 years, he still enjoys what he does and enjoys reflecting on his happy days at the University.

**Ruth C. (Greene) Richardson**, SW 50, who resides in Collier, Pa., recently had 65 of her watercolors exhibited in a one-woman show in The Gallery at Pittsburgh Technical Institute in Oakdale, Pa. Richardson, who retired after a long career in social work culminating with 21 years as executive director of Three Rivers Youth, now focuses fully on painting.

**Francis "Frank" T. Guelker**, UC 54 (math and physics), who was a member of the U.S. Signal Corps that broke Germany's Enigma code in World War II, has promised all his materials and memoirs on cryptology to Washington University. Now retired, Guelker and his wife, Bobbie, travel around the St. Louis area, finding log cabins, both those abandoned and in use, and documenting them. He plans to give his research materials to the Missouri Historical Society for use by future generations of historians and preservationists.

**Virgil Marti**, SI 58, was one of 108 artists whose work was exhibited at the Whitney Biennial at the Whitney Museum of American Art in New York City. He resides in Philadelphia.

**Wayne F. Schlosser**, FA 58, who resides in Belleville, Ill., received the Outstanding Citizens Award from the Belleville Jaycees for his 55-plus years of volunteer service. In October 2003, he was inducted into the prestigious Senior Illinoisans Hall of Fame for his dedicated and distinguished service.

60s

**Marilynne G. (Gersten) Bradley**, FA 60, exhibited *Gone But Not Forgotten* at her annual show at Componere Gallery in University City, Mo. It featured buildings from the 1904 St. Louis World's Fair. Bradley, who resides in Webster Groves, Mo., and served as an art teacher with that school district for 28 years, now is a faculty member at Webster University, which is based in Webster Groves, and at the University of Missouri in Columbia.

**John M. Buchholz**, EN 60, retired from IBM in July 2002. Now he enjoys traveling and volunteer work.

**Gloria Becker Marchick**, LA 60, GR 65, has written a memoir of her fourth Fulbright Fellowship to Morocco. Titled *Shalom in My Heart, Salaam on My Lips: A Jewish Woman in Modern Morocco*, it details an Auntie Mame-type experience coupled with experiencing an Intifada in an Arab country. She is

an instructor in English at Diablo Valley College in Pleasant Hill, Calif., and her husband, **Richard Marchick**, MD 61, is an instructor at Contra Costa College, also in Pleasant Hill.

**Stanley C. Kimball, Jr.**, DE 61, GD 64, who retired from the practice of orthodontics in 1997, earned a law degree from Quinnipiac University in Hamden, Conn., in May 2003.

**Hal Daub**, BU 63, is president and CEO of the American Health Care Association and the National Center for Assisted Living. Daub, a partner with the Kansas City-based international law firm of Blackwell Sanders Peper Martin, will continue as chairman of the Social Security Advisory Board. Previously, Daub served as mayor of Omaha and was inducted into the Omaha Business Hall of Fame in April 2004, and he served in the U.S. House of Representatives.

**Jo Ann Schmits**, UC 64, is a public relations volunteer for the Cedar Falls (Ia.) Community Theatre. She and her husband, Donald, have two children—both University alumni. Their son, **Merl**, earned a B.S. degree (computer science) in 1995, and their daughter, **Nell Ann Schmits-Hennon**, earned an A.B. degree (psychology) in 1997.

**Robert "Moe" Croak**, UC 65, after retiring from his career as a golfer, has become a professional golf instructor at Locust Hills Golf Club in Lebanon, Ill. Having competed in many tournaments and earned several trophies, he now prides himself in giving back to the golf community and finds working with golfers of all ages more satisfying than playing competitively.

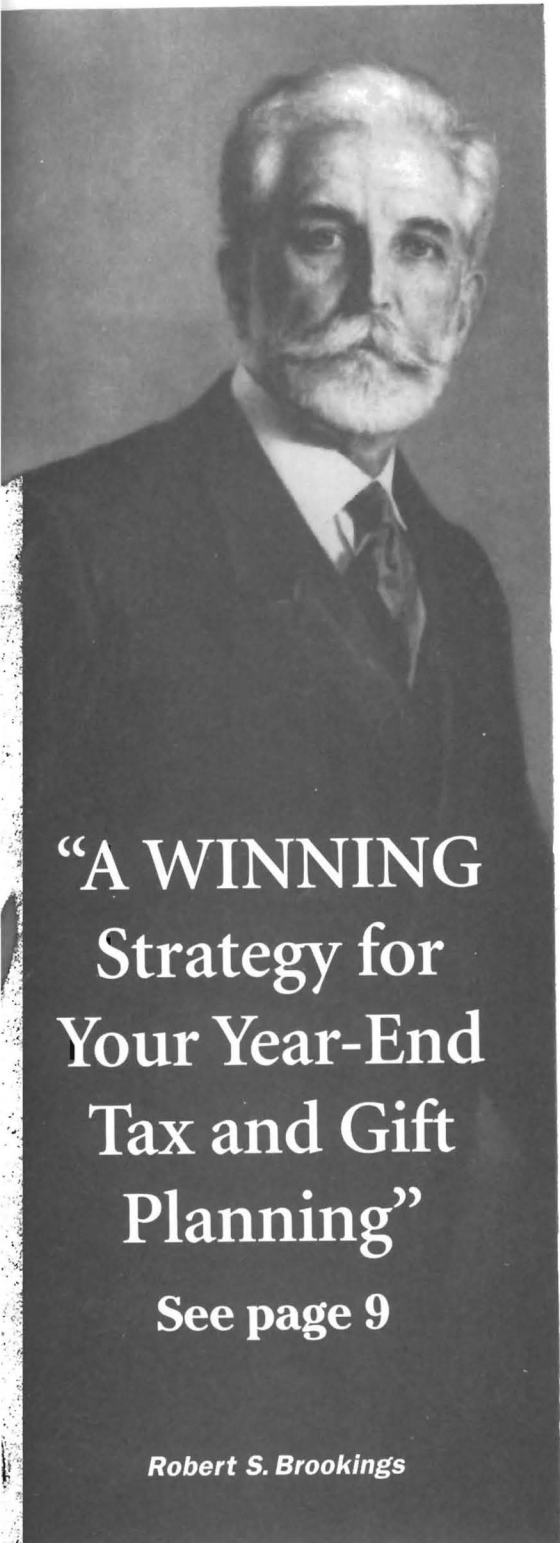
**Susie Gudermuth**, NU 65, GN 68, has rehabbed some 30 two-family and single-family rental units in her St. Louis neighborhood—historic Tower Grove South. She is in the process of rehabbing 10 to 12 other properties there that she and her husband, Howard "Tim" Hays, own.

**Harold A. Ramis**, LA 66, University trustee, moviemaker, and screenwriter, was honored in May 2004 with a bronze plaque and star along the St. Louis Walk of Fame. His latest film, *The Ice Harvest*, is to be released in November 2004.

**Horace Mitchell**, LA 68, GR 69, GR 74, has become president of California State University in Bakersfield. Previously, he was vice chancellor of business and administrative services at the University of California in Berkeley for nine years.

**Jane (Sollogub) Pfeifer**, FA 68, retired from teaching in January 2004 after 34 years as a public school K-12 art teacher. She





**“A WINNING  
Strategy for  
Your Year-End  
Tax and Gift  
Planning”**

**See page 9**

*Robert S. Brookings*



**“A WINNING  
Strategy for  
Your Year-End  
Tax and Gift  
Planning”**

***at Washington University***

***see page 9***



**Recognizing the Importance of Planned Gifts  
Washington University in St. Louis**



and her husband, Peter, planned to spend summer 2004 sailing near Portsmouth, R.I.

70s

**Robert C. Johnson**, GR 70, GR 74, GR 76, has joined the Stolar Partnership in St. Louis as of counsel. He is experienced in representing industrial and major health-care clients. Previously, he owned the Robert C. Johnson Law Firm.

**Paul A. Pohland**, LA 70, relocated to West Paducah, Ky.

**Steven A. LeBlanc**, GR 71, an archeologist, is director of collections at the Peabody Museum of Archeology and Ethnology at Harvard University in Cambridge, Mass. He is working with artist Tony Berlant in Santa Monica, making discoveries in the study of Hopi art.

**Sanford V. Teplitzky**, LA 71, attorney for OberlKaler, based in Baltimore, was listed in *Chambers USA, America's Leading Lawyers for Business 2004: The Client's Guide*, a ranking of the country's most widely recommended lawyers and law firms.

**Peter Adler**, LA 73, professor in the Department of Sociology & Criminology at the University of Denver, and his wife, **Patricia "Patti" Adler**, LA 73, have authored several books. Most recently published is *Paradise Laborers: Hotel Workers in the Global Economy* (Cornell University Press, 2004). In 2005, the fifth edition of their text, *Constructions of Deviance*, is to be published by Wadsworth. The couple, who met as first-year students at Washington University, celebrated 34 years together in May.

**Alphonso Jackson**, LW 73, is secretary of the Department of Housing and Urban Development (H.U.D.). Previously, Jackson was chief operating officer and deputy secretary for H.U.D. Before joining H.U.D., Jackson was president and CEO of the Housing Authority of the City of Dallas, director of the Department of Public and Assisted Housing in Washington, D.C., and executive director for the St. Louis Housing Authority. He and his wife, Marcia, have two adult daughters.

**P. Scott Neville**, LW 73, who resides in Chicago, was tapped by the Illinois Supreme Court to fill a vacancy in the 1st District Appellate Court beginning June 11, 2004.

**Roy C. Postel**, GB 73, who resides in Brentwood, Mo., now is senior vice president of commercial lending at Southwest Bank in Des Peres, Mo. Previously, he was senior credit officer for Fifth Third Bank, and chief credit officer, head of operations, and head of corporate services for Cole Taylor Bank—both in Chicago.

**Clara Rodríguez**, GR 73, who is professor of sociology and anthropology at Fordham University at Lincoln Center in New York City, had her book *Heroes, Lovers, & Others: The Story of Latinos in Hollywood* published by Smithsonian Institution Press in May 2004.

**Martha J. Bloodsaw**, LA 74, is vice president of human resources at Metro, the St. Louis region's transit authority. Before joining Metro, she was director of change management and manager of personnel at Graybar Electric in St. Louis.

**Pamela F. Gallin**, LA 74, EN 74, MD 78, a pediatric ophthalmologist at Children's Hospital of New York—Presbyterian, affiliated with Columbia University in New York City and Cornell University in Ithaca, N.Y., recently appeared on NBC Television's *Today* show. Co-anchor Katie Couric interviewed her about her book, *How to Survive Your Doctor's Care: Get the Right Diagnosis, the Right Treatment and the Right Experts for You* (2003, Lifeline Press). Gallin, who resides in New York City, stressed the value of second opinions.

**James S. Jeffe**, LW 74, who resides in Town and Country, Mo., has joined Union Planters Bank in St. Louis as wealth management group manager, personal trust.

**W.E. Moerner**, LA 75, EN 75, EN 75, was named a fellow of the American Association for the Advancement of Science in 2003. In December 2003, he lectured in Australia as the Geoffrey Frew Fellow of the Australian Academy of Sciences.

**Barbara E.B. Miller**, PT 77, practices physical therapy on Long Island in New York. She and her husband, Joel Behar, have two teenagers. E-mail: bbehar1231@aol.com.

**Lee A. Evans**, SW 78, a member of Christ Church (Episcopal) Cathedral in downtown St. Louis, is a job developer with the city of St. Louis.

**John R. Kotovsky**, BU 78, is president and chief executive officer of Koch Development, based in St. Louis County. Previously, he was its chief financial officer and chief development officer, and he has held positions with Arthur Andersen & Co. and was chief financial officer for the Sansone Group. Kotovsky, who also earned a master's degree in divinity from the Lutheran School of Theology in Chicago, is an ordained Lutheran minister. He resides in Kirkwood, Mo.

**James H. Ross**, HA 78, is executive director of the University of Missouri Health Care System. The system consists of three hospitals, a cancer center, a rehabilitation center, a group of physicians, and three affiliated hospitals. Previously, Ross was president and chief operating officer of University Health Systems of Eastern Carolina.

80s

**Janice E. Hetland**, LW 80, an experienced financial services attorney, has joined the St. Louis office of Kansas City-based Polsinelli Shalton & Welte as an attorney. She will focus her practice on tax-credit-enhanced development, commercial real estate, and finance.

**Lisa C. Langeneckert**, LW 80, has joined the Stolar Partnership of St. Louis as an associate. Langeneckert, who resides in St. Louis, is experienced in

representing industrial and major health-care clients.

**Jan A. Humphrey**, GR 81, who earned a master's degree in education in Arts & Sciences, now is principal of Valley Park (Mo.) Elementary School. Humphrey, a resident of Richmond Heights, Mo., had been assistant principal of the school for four years. Previously, she was an administrative intern in the Parkway School District and an art teacher in that district and at Brentwood (Mo.) High School—all in the St. Louis area.

**Steven B. Leon**, LA 81, now is managing director of Everyman Theatre in Baltimore. He and his wife, artist Sarah Leon, moved to Baltimore from San Francisco, where Steven had worked with the Antenna Theater for six years. He also serves on the board of directors of the Los Angeles-based Ziggurat Theatre Ensemble, whose founder and artistic director is former classmate **Stephen Walter Legawiec**, FA 80.

**Brian A. Rawers**, LW 81, and his wife, Kimberlee, who graduated from the University of San Diego School of Law in 1988, announce the birth of Emma Caroline, on March 1, 2004. She joins her siblings—Bryce, 17; Hayley, 14; Mattie, 11; and Brady. The family resides in San Diego, where Brian is a partner in the medical malpractice group at the law firm Lewis, Brisbois, Bisgaard & Smith and Kimberlee is a partner in the medical malpractice law firm Lotz, Doggett & Rawers.

**Steven L. Daniels**, LW 82, has been named managing partner of the Boca Raton and West Palm Beach offices of the Chicago-based firm Arnstein & Lehr.

## Glorious Olympic Art

Euripides "Rip" Kastaris, B.F.A. '82, poses with *Kyklos—Circle of Glory*, his mural created in St. Louis and installed permanently in the Spyros Louis Olympic Stadium, the pre-eminent stadium for the 2004 Summer Olympics in Athens. The mixed-media, broken-glass fresco, which was five years in the making, is installed in the area used as the international VIP reception center during the Olympics. The Hellenic Cultural Foundation, based in St. Louis, commissioned the work by Kastaris, a dual Greek and American citizen, who was an official artist for the U.S. Olympic Committee for the 2004 Summer Games and for the 2002 Winter Games in Salt Lake City. A professional artist in St. Louis since 1983 and a former lecturer at the University, he works from his studio and company, Petra Fine Art. To view images online, visit [www.petrafineart.com](http://www.petrafineart.com).



Courtesy/Photo



**Charles G. Kim**, BU 82, GB 92, vice president of Commerce Bancshares in St. Louis, was elected to the board of trustees for Logan College of Chiropractic in Chesterfield, Mo., the town in which he resides.

**Raymond J. Tesi II**, MD 82, has joined Cellerant Therapeutics, which focuses on the regulation of and components of the hematopoietic (blood-forming) system, as executive vice president of clinical development and medical affairs. Tesi resides in Palo Alto, Calif., where the company is located. Formerly, he was senior vice president of clinical development and medical affairs for SangStat Medical.

**Brent Jaimes**, LW 83, a resident of St. Ann, Mo., practiced labor law for more than 15 years before he began screenwriting. His script *Romneoville* was successful in this year's Cinemascope, the annual screenplay contest sponsored by Cinema St. Louis, and was a finalist in a screenplay contest in Santa Fe. His latest screenplay, *Death Whores*, is described as a kind of *Petticoat Junction* horror/comedy gone wrong.

**David D. Levine**, LA 83, was one of five finalists for the John W. Campbell Award for Best New Science Fiction Writer presented by the World Science Fiction Society on Sept. 2, 2004. Also, his story, *The Tale of the Golden Eagle*, was one of five nominees for the Hugo Award for Best Short Story.

**Susan Nell Rowe**, LW 83, a partner with the Stolar Partnership, has been elected to serve on the firm's executive committee. This six-person committee determines policies and strategic direction. Rowe also is president of Legal Services of Eastern Missouri and a board member of Interfaith Housing Help. She recently was recognized by the *St. Louis Daily Record* as the 2003 Woman of the Year for her contributions to the legal community.

**Cynthia I. Solocheck**, OT 83, resides in Tucson, where she has worked for the Commission on Accreditation of Rehabilitation Facilities for nine years. She has two sons, Elliott McVeigh, 6, and Quinn McVeigh, 4.

**Raymond W. Gruender**, BU 84, GB 87, LW 87, was confirmed by a vote of 97-1 in the U.S. Senate to sit on the 8th U.S. Circuit Court of Appeals. He had been the U.S. attorney in Missouri's Eastern District since late 2001.

**Kenneth "Ken" S. Shiffman**, LA 84, a senior producer of documentaries at CNN cable television network, has produced a documentary on Afghanistan two years after the fall of the Taliban, as well as a documentary on an investigation revealing Al Qaeda's longtime

entrenchment in Indonesia, the Philippines, and elsewhere in Southeast Asia. Ken resides in Atlanta with his wife, Abby, and their children, Rachel and Aaron.

**Michael D. Burton**, LW 85, a resident of Webster Groves, Mo., was appointed by Missouri Gov. Bob Holden as circuit judge of the 21st Judicial Circuit in February 2004. He had been an associate circuit judge for the St. Louis County Circuit Court.

**Timothy "Andy" Cox**, GR 85, has joined Ascent Corp. as senior vice president and chief operating officer. He is responsible for daily operations and is chief of staff for the St. Louis firm, which helps companies build and manage data systems nationwide. Previously, Cox was senior director of call center/sales applications at Express Scripts and was executive vice president of global operations and customer service at Bridge Information Systems.

**Steven E. Ehlmann**, LW 85, director of administration for St. Charles County, Mo., was the keynote speaker for the 16th annual commencement exercises of St. Charles Community College. He is a former teacher, state legislator, and judge.

**David A. Imler**, TI 85, has been appointed chief information officer at Logan College of Chiropractic in Chesterfield, Mo. He oversees Logan's information systems and departments of media production and audiovisual. Imler, who resides in Clayton, Mo., previously was director of information technology at Fontbonne University in Clayton.

**Massoud Amin**, SI 86, SI 90, became professor of electrical and computer engineering, director of the Center for the Development of Technological Leadership, and the holder of the Harold W. Sweatt Chair in Technological Leadership at the University of Minnesota in the Twin Cities in March 2003. Previously at the Electric Power Research Institute (EPRI) in Palo Alto, he led the development and transfer to industry of more than 20 technologies. After 9/11, he directed all security-related research and development at EPRI, and he twice received its highest honor, the Chauncey Award.

**William J. Kuehling**, GB 86, has joined the St. Louis office of Kansas City-based Polsinelli Shalton & Welte as an attorney. Practicing law since 1976, he will focus on law related to municipalities, real estate development, and land use.

**Steven R. Selsberg**, LW 86, has joined the Houston office of Mayer, Brown, Rowe & Maw as a partner in the litigation section.

**Paul Frederick Smith**, GB 86, is chief information officer for

Watlow, a provider of thermal solutions. He oversees global information systems, including technical services, business integration, and application services. Previously, he was supply-chain director for Solutia's integrated nylon business.

**Peter Aranda**, TI 87, GB 87, recently relocated to St. Louis to take the helm of the Consortium for Graduate Study in Management.

**William A. Douthit**, LW 87, an attorney, is executive director for education for the St. Louis Black Leadership Roundtable. A focal point of the not-for-profit organization is education and bridging the academic achievement gap between black students and their white counterparts. Douthit, who resides in Maryland Heights, Mo., will be in charge of opening and directing the Roundtable's Parent Engagement and Empowerment Center.

**Padmaja Manerikar**, FA 87, and Richard Michael Maryanski, who were married in October 2003, reside in the Chicago area. For seven years, Manerikar has owned Saffron, a women's clothing boutique in Chicago's Bucktown neighborhood.

**Ntokozi S. Mthembu**, EN 87, is fund manager for innovation and technology programs at Industrial Development Corporation in Ranburg, Republic of South Africa. After graduation from the University, he earned a master's degree in mechanical engineering from the University of Glasgow in Glasgow, Scotland, United Kingdom.

**Nikolaos "Nick" B. Botonis**, EN 88, is president of School Information Systems, a south St. Louis County company that provides computer software that keeps records of students' attendance in hundreds of Missouri school districts. Among his recent inventions is a program that e-mails parents when their child is absent all or part of the school day. Botonis resides in the St. Louis area.

**James G. Nowogrocki**, LW 88, is co-founder and member of the law firm Reeg, Nowogrocki & Yeckel in Clayton, Mo., which provides personal and corporate legal services. Nowogrocki, who serves as Ford Motor Co.'s trainer for its national sexual harassment training program, is experienced in employment, insurance, and alternative dispute resolution for trial and appellate practices.

**Mark D. Vaughan**, GR 88, GR 93, has been promoted to assistant vice president of the Federal Reserve Bank of St. Louis. He will oversee its Supervisory Analysis Unit, providing support and education for the bank's examination staff and research on emerging supervisory policy issues.

**Michael W. Joo**, FA 89, adjunct professor of art at Cooper Union

School of Art in New York City, had 50 to 60 of his works exhibited at the Palm Beach Institute of Contemporary Art in Lake Worth, Fla., as a survey of his work during the past 10 years. Joo, who experiments with materials as diverse as crystals, chia plants, MSG, and bronze, is among a new breed of artists who combine nature and science in ways that are sometimes disturbing and almost always provocative.

**Jennifer "Jenny" L. Oberschelp**, BU 89, GB 93, and her sister, **Christine "Chris" D. (Oberschelp) Krone**, GB 87, have started the MadeByMe Craft Studio in Des Peres, Mo. The store offers more than 200 projects enjoyed especially by pre-teen girls. Projects include making tie-dyed items and creating collage purses or cigar-box purses. Craft parties also are offered.



**Rabbi Aaron B. Bisno**, LA 90 (political science), earned an M.S. degree in organizational dynamics from the University of Pennsylvania in Philadelphia in May 2004. Bisno is senior rabbi of Rodef Shalom Temple in Pittsburgh, which, with 1,260 families, is one of Pennsylvania's largest Reform congregations. He and his wife, Michelle, reside in Pittsburgh.

**Elizabeth Goodwin**, LA 90, resides in the Netherlands, where she is director of investor relations and corporate communications for Crucell N.V., a NASDAQ-listed biotech firm based there. Goodwin recently celebrated the first birthday of her daughter, Helen Hermine Bultman.

**Jennifer Gordon-Norby**, PT 90, celebrated the first anniversary of opening her own clinic in Fort Upton, Colo. She enjoys spending time with her husband, Troy, and their children, Kira, Mikayla, and Gabrielle.

**Mitchell Balish**, LA 91, and his wife, Rebecca, announce the birth of Ian Daniel on July 15, 2003. He joins his sister, Annika. The family has moved from Athens, Ga., to Oxford, Ohio, where Mitchell began as assistant professor of microbiology at Miami University in fall 2004.

**Adrienne G. (Schwartz) Becker**, LA 91, who resides in New York City, now is senior vice president of development and communications at Nielsen Entertainment, a company providing research and data for the entertainment industry. Previously, she was CEO of DailyCandy, an information, lifestyle, and culture guide, and senior vice president of operations and communications at USA Entertainment.



**Karen (Eisenberg) Goldstein**, LA 91, OT 92, and her husband, Ken, announce the birth of Celia Tikva on March 15, 2004. She joins her brother, Aaron, 3.

**Mary Clausen Hooker**, LA 91, GR 92, and her husband, Dan, have moved from St. Louis to Bellingham, Wash., an hour from Seattle and Vancouver. She says living there is "like being on a permanent vacation." The couple's two children—Maddy, 5, and Liam, 3—are "fiery redheads." E-mail: maryhooker68@msn.com.

**Anne R. Morand**, GR 91, has become associate director of the Charles M. Russell Museum in Great Falls, Mont., with responsibility for the institution's curatorial, education, and operations departments. Previously, she worked as chief curator of the Gilcrease Museum in Tulsa. Morand and

her 20-year-old son, David, reside in Great Falls.

**Marc D. Shapiro**, LA 91, has joined the international programs division of the American Institute for Research in Washington, D.C. He is helping conduct a program evaluation and is in charge of the evaluation of secondary-education projects for the U.S. Agency for International Development in Macedonia. While working in the Republic of Georgia, he provided consulting services for the minister of environment and natural resources, and, in Costa Rica, he led an eco-tour. Shapiro is president of the Foundation for Sustainable Development, which provides internships and technical assistant grants to university students and alumni nationwide for projects in Africa and Latin America. E-mail: mshapiro@alum.wustl.edu.

**Benjamin Abella**, LA 92, recently spoke at Grand Rounds at the University of Chicago's Department of Medicine on the topic "Keep Your Cool: Updates in Cardiac Arrest Therapy."

**Julie L. Frerichs**, PT 92, and her husband, **Clint W. Frerichs**, EN 93, SI 93, announce the birth of Grant William on Jan. 16, 2004. He joins his sister Lela, 1.

**Gregory D. Phillipy**, GF 92, says he has "finally found his dream job" as a park ranger at Sycamore Shoals State Park in Elizabethtown, Tenn.

**Gary Rosenblum**, LA 92, was promoted to vice president of the Leverage Group, a marketing consultancy based in Manhattan in New York City. He resides in Greenwich Village. E-mail: grboarder@hotmail.com.

**Staci (Schatzman) Solomon**,

LA 92, and her husband, Steven, announce the birth of Daniel Eli on Aug. 11, 2003. He joins his brother, Matthew Yale, 4.

**M. Carolyn Baum**, SW 93 (Ph.D.), the Elias Michael Director of the Program in Occupational Therapy and professor of occupational therapy and neurology at the School of Medicine, was elected president of the American Occupational Therapy Association.

**Michelle (Brodsky) Goldstein**, LA 93, and her husband, Peter, announce the birth of their first child, Zachary Sol, on March 5, 2004. The family resides in Dallas, where Michelle started her own fee-only financial planning firm, Goldstein Financial Future, in summer 2002. E-mail: mgoldstein@wirecrossing.net.

## WASHINGTON PROFILE

Lauren Faulkenberry, B.F.A. '00

# Writer, Illustrator, Handmade Book-maker

Lauren Faulkenberry found her first muse at a book-making class during her junior year in the School of Art. It was an elective course, something she thought might be fun and interesting to explore. She felt the same way about printmaking.

"Serendipity stepped in," she says now. "I found my loves at the University.

"If I hadn't taken those courses, then I never would have started making wood engravings. I still would have become an artist, but I would not be creating handmade books. And that's the one thing that I would do every day if I could."

Her senior thesis project was a handmade children's alphabet book, which she wrote and illustrated with linoleum block prints. In 2000, it received Washington University's Nancy Kranzberg Book of the Year Award, and a copy now resides in Olin

Library's Special Collections. The book, *What Do Animals Do on the Weekend? Adventures from A to Z*, was published in 2002 by Novello Festival Press (the country's only publisher funded by a public library), as its first foray into the children's book market.

After graduation, Faulkenberry found her second muse at a creative writing workshop. The result was a sublime marriage of talents. A gifted writer as well as an accomplished artist, she has since written a number of short stories.

"They're contemporary," she says. "They'd probably be considered romantic comedies I'm also working on a novel that's sort of in the same vein. It has a Southern flavor. It's set in South Carolina, where I'm from, in a small town."

She also writes "short-short stories" that she illustrates and turns into limited edition letterpress books. She sells her books and prints via her Web site, [insculpo.com](http://insculpo.com).

"I really like the look and feel of old-fashioned wood engravings," she says. "Lately I've been doing two- and three-color prints, cutting separate

wood blocks for each color. But whenever I get a more colorful idea, like the children's book, I go with watercolors. I'm not quite ambitious enough to cut 20 blocks for a print!"

Infused with humor, her work ranges from the whimsical to the satirical.

Playful, but not without her dark side, she cites German Expressionist artist Max Beckmann and graphic-novel writer Neil Gaiman as inspirations.

A recent letterpress book, with a limited edition of 23, is called *When Muses Moved In*. This story of a writer seeking inspiration features wood block illustrations of pesky muses and a scruffy Cupid who smokes in bed and reads in the bathtub. "These quick-tempered, foul-mouthed catalysts of creative genius steal the covers at night and drink all the gourmet coffee in the morning," she writes, "leaving me nothing but cold feet and parched grounds."

For the past couple years, Faulkenberry has been working as a free-lance illustrator and as an adjunct teacher of creative writing at Asheville-Buncombe



Jacks love to jitterbug in *What Do Animals Do on the Weekend? Adventures from A to Z*.

Technical Community College in Asheville, North Carolina, which has published some of her short story work. Her original prints for the children's story, meanwhile, are featured in an exhibit traveling throughout North Carolina. And this fall, she'll begin working on her Master of Fine Arts degree in creative writing.

"I never thought I'd want to teach, but I love it," she says. "And I'm really jazzed about this novel I'm writing. After I finish my degree, I want to teach full time until I can afford to have a studio and spend my days making letterpress books."

She adds in her soft Southern accent: "I'm fortunate. I've found the things I love."  
—Terri McClain



Lauren Faulkenberry



**Sandi L. Phillips**, LA 93, as revenue manager for Dominion Hospitality Group's portfolio of metro St. Louis hotels, is responsible for inventory management and revenue analysis. The company is one of the Mullenix Companies, the largest franchisee of Marriott International in metro St. Louis.

**John Trowbridge**, LA 93, was scheduled to receive a Ph.D. degree in Chinese and comparative philosophy from the University of Hawaii in Manoa in August 2004. His dissertation was titled *Skepticism and Pluralism: Ways of Living a Life of Awareness as Recommended by the Zhuangzi*. John and his wife, **Jill (Eisenberg) Trowbridge**, GB 98, have three children—James, 8; Holly, 5; and Henry, 1.

**Laylah Ali**, GF 94, was one of 108 artists represented in the Whitney Biennial in the Whitney Museum of American Art in New York City. She resides in Buffalo, N.Y.

**Kelley (Field) Farrell**, LW 94, Order of the Coif, has joined St. Louis-based Carmody MacDonald as an associate in its litigation group. Farrell, who resides in St. Charles, Mo., previously was an associate with Bryan Cave law firm in St. Louis.

**Jessica Kazdan**, LA 94, SW 96, and Yoni Novik, who were married on March 10, 2002, announce the birth of Gabriel Misha on April 6, 2004. The family resides in Germantown, Md., near Washington, D.C. E-mail: jkazdan@yahoo.com.

**Robert D. Klahr**, LW 94, has been elected partner in Armstrong Teasdale law firm, based in St. Louis. He concentrates his practice on public law and finance, municipal law and real estate, transportation development districts, neighborhood improvement districts, and community improvement districts.

**Jared M. Minkoff**, BU 94, LW 98, has joined the St. Louis office of Kansas City-based Polsinelli Shalton & Welte as an associate. He will practice in the firm's real estate, finance, and general corporate and partnership law group.

**Josh Schaffzin**, LA 94, and his wife, Jenny, who were married in May 1999, announce the birth of their first child, Fiona Ildit, on Dec. 21, 2003. Having earned an M.D./Ph.D. degree, Josh now is a pediatric resident at the Cincinnati Children's Hospital Medical Center.

**Daniel J. Solove**, LA 94, now is associate professor of law at the George Washington University Law School in Washington, D.C. Previously, he was on the faculty of the law school at Seton Hall University in New York City. Last spring, he published a casebook on information privacy law. His most recent book, *The Digital Person: Technology and Privacy in the Information Age*

(New York University Press), is soon to be released.

**Lisa Alpart**, BU 95, and Michael Firestone were married Feb. 1, 2004. The wedding party and guests included many University alumni. Lisa works in marketing for American Express, and Michael, a CPA, works in finance for Hertz. They reside in Fair Lawn, N.J. E-mail: lisa.alpart.wg00@wharton.upenn.edu.

**Malini Gupta**, LA 95, and Juni S. Ganguli, were married in Memphis on Oct. 4, 2003. Malini graduated from medical school at University College in Cork, Ireland, in June 2003, and Juni has his own criminal defense law practice in Memphis. E-mail: malini26@yahoo.com.

**Candace "Cande" J. Iveson**, SW 95, has been named to the new position of director of strategic initiatives for Citizens for Missouri's Children (CMC). She will be responsible for planning the organization's policy and program development, overseeing government relations and outreach, and managing CMC's office in Jefferson City. Previously, she was senior policy analyst for the organization.

**Beth Oberlander**, LA 95, and her husband, Jeff, announce the birth of Dalia Simone on April 1, 2004. The family resides in Jacksonville, Fla., where Beth is a school-based clinical social worker, and Jeff is assistant principal of curriculum at Stanton College Preparatory School.

**Amy Allison Patrick**, FA 95, earned a D.V.M. degree from the School of Veterinary Medicine at the University of Wisconsin in Madison in May 2004. She received the Kaytee Avian Award for excellence in companion-bird and non-domestic-bird medicine, surgery, and management. She resides in Pitchburg, Wis.

**Alexandra Blum**, GF 96, after a year's sabbatical at the Lower East Side Printshop in New York City, now teaches at Drew School and the Mission Cultural Center in San Francisco. She continues to exhibit her work at galleries across the United States and Mexico. In May 2004, she was family-day artist at the San Francisco Museum of Modern Art, and, in June, she was artist-in-residence at the de Young Art Center at the Legion of Honor. E-mail: aliblum@earthlink.net.

**Danielle (Coe) Carter**, LA 96, OT 98, and **Chad Carter**, EN 97, GB 97, announce the birth of Zoe Rachel on Feb. 26, 2004. Danielle works part time as an occupational therapist in early intervention, and Chad works for Gillette's IT department. They reside in Sharon, Mass.

**Danielle (Goldman) Dorfman**, LA 96, and **Joshua "Josh" Dorfman**, LA 95, announce the birth of their first child, Hayley Erin,

on Feb. 20, 2004. The family resides in Los Angeles, where Josh owns an industrial tool supply company and Danielle works at a public relations firm specializing in the entertainment industry.

**Charles Gorham**, LA 96, is an associate in the Tax and Estate Planning Department of the Stolar Partnership in St. Louis. E-mail: charles\_gorham@hotmail.com.

**Katharine Hawkes**, LA 96, and Enzo Scalora were married on June 21, 2003, in Southington, Conn. Guests included many University alumni. The couple resides in Ashland, Mass. Enzo is a project manager, and Katharine works as a speech-language pathologist near Boston.

**Carrie (Zatcoff) Leavitt**, LA 96, and her husband, Jeffrey Leavitt, announce the birth of their first child, David Hecht Leavitt, on Sept. 11, 2003. The family resides in Atlanta.

**Sean C. Reilly**, EN 96, graduated from medical school at Temple University in Philadelphia in May 2004. He and his wife have two children—D. Clark Reilly, born Dec. 27, 2000, and Mayland L. Reilly, born Dec. 10, 2003.

**Jessica Schutzbank**, LA 96, and Jason Miller were married on March 20, 2004. Guests included many University alumni. Having graduated from a residency in physical medicine and rehabilitation at Harvard Medical School in Cambridge, Mass., Jessica now is assistant professor at Baylor College of Medicine and attending physician at Texas Medical Center—both in Houston. Jason is a resident in plastic and reconstructive surgery at Baylor College of Medicine.

**Janet (Gross) Smith**, LA 96, and her husband, **Todd E. Smith**, GR 96, announce the birth of Rebekah Dory on April 23, 2004. E-mail: tsmith64@yahoo.com.

**Sarah R. Abella**, LA 97, initiated the Chicago Youth Village Academy, a charter school set to open in fall 2004 in Chicago, as part of the Knowledge Is Power Program. She recruited 85 students by visiting South Side housing projects, including Dearborn Homes.

**Jennifer (Cummings) Luallen**, OT 97, and her husband, Brad, announce the birth of their first child, Emma Caroline, on Feb. 4, 2004. They reside in Hendersonville, Tenn., where Jennifer is an occupational therapist for National HealthCare Corp.

**James K. McCall**, BU 97, and Samia A. El-Mahdi were married on Dec. 29, 2003, in Seville, Spain. They reside in Dallas, where James is an associate in the business reorganization and bankruptcy section of Haynes and Boone.

**Joseph F. Yeckel**, LW 97, is co-founder and partner of the law

firm Reeg, Nowogrocki & Yeckel in Clayton, Mo. Yeckel, who, as a student, served as editor-in-chief of the University law school's *Journal of Urban & Contemporary Law*, will practice in the area of general civil litigation with a focus on insurance coverage, product liability, and toxic tort defense.

**Jeffery E. Atkinson**, LW 98, who resides in Webster Groves, Mo., has joined Carmody MacDonald law firm in St. Louis as an associate. He will work with the firm's commercial real estate, civil litigation, and professional negligence defense groups.

**Anne Eidelman**, LA 98, and Eric Slaim were married on May 9, 2004, in Ponte Vedra Beach, Fla. They reside in Washington, D.C., where Anne manages a literacy program for low-income youth.

**Sara (Sperling) Mintz**, LA 98, and **Todd Mintz**, EN 98, announce the birth of Lily Felice, on Nov. 19, 2003. The family resides in Rockville, Md., where Sara is a full-time mom and Todd, who earned a Ph.D. degree in material science engineering from the University of California in Berkeley in December 2003, works at the U.S. Nuclear Regulatory Commission.

**Melissa Ruth Myers**, LA 98, and Lee Korland were married in May 2003 in Cleveland. Melissa earned a Ph.D. degree in clinical psychology in fall 2003 and now is a postdoctoral child psychology clinical fellow at Columbus (Ohio) Children's Hospital, in affiliation with The Ohio State University.

**Jonathan S. Talbot**, PT 98, and his wife announce the birth of Allyson Elizabeth, their fourth child, on March 18, 2004. Jonathan, who works in home health, resides with his family in Texas.

**Elianna Joy Bodner**, LA 99, who earned a master's degree in broadcast journalism from Northwestern University in Evanston, Ill., now is a CBS Television news producer in West Palm Beach, Fla.

**Lea Ann DeRigne**, SW 99, a doctoral student at the University, has joined Citizens for Missouri's Children as health policy analyst. Previously, she worked at the Workforce Alliance in Washington, D.C., and as manager of policy and program development for the St. Louis Regional Jobs Initiative.

**Natalie Schulz**, PT 99, and her husband, Eric, announce the birth of their second child, Annabelle Emma, on March 29, 2004.



**Lise E. Byars**, LA 00, LW 03, who resides in Clayton, Mo., has joined Palank and Associates in St. Louis as a staff attorney. She will practice



corporate, employment, and estate-planning law.

**John R. Kindschuh**, LA 00, earned a law degree from the University of Minnesota at the Twin Cities in May 2004. He was to begin work as an associate at Bryan Cave law firm in St. Louis in September 2004.

**Elizabeth Padgett**, LW 00, along with her husband, Miles, and their daughter, Esmé, born Feb. 28, 2003, reside on Capitol Hill in Washington, D.C. Elizabeth, a trial attorney for the Commodity Futures Trading Commission, mainly prosecutes civil-fraud cases, and Miles recently left the practice of law to become an investment manager at Lydian Wealth Management. In April 2004, Esmé participated in her first pro-choice rally, the March for Women's

Lives held on the National Mall.

**Doug Swain**, SI 00, SI 01, left Boeing Company last year, after being employed there 12 years, to co-found Bugeye Technologies, a spinoff company of Boeing Ventures group. Because of his success, the *St. Louis Business Journal* included him in its "Top 40 Under 40" list of up-and-coming business leaders. He and his wife have five children.

**Gabrielle (Barnes) Finger**, LA 01, and her husband, **Bradley J. Finger**, BU 01, who were married in 2002, announce the birth of Sophia Sage Finger on April 5, 2004. The family resides in Woodlands, Texas. Gabrielle and Bradley are fourth-generation alumni of Washington University.

**Danica (Rodemich) Mathes**, LW 01, who practices in the Entertainment and

Intellectual Property Law Group of Blumenfeld, Kaplan & Sandweiss in St. Louis, is adjunct professor of entertainment law at the University. Recently selected as one of the *St. Louis Business Journal's* "30 Under 30," she represents and counsels clients in diverse arts, including the likes of Nelly and the St. Lunatics, St. Louis jazz label MAXJAZZ, and **Buzz Hirsch**, A.B. '66, producer of *Silkwood*. She also is a board member for several professional and community organizations.

**Marc B. O'Neal**, LA 01 (biology), PT 04, was in the University's first class of graduates receiving the D.P.T. (doctor of physical therapy) degree, in May 2004. O'Neal was the speaker representing his class at its Commencement ceremony.

**Peter Hanrahan**, LA 02, debuted his play *False Start* in March 2004 at the Arena Stage in Washing-

ton, D.C. The play, about a troubled Alaskan doctor trying to save his marriage, was chosen for the Arena's new play-reading series, along with plays by Sarah Ruhl, Lee Blessing, and recent Pulitzer Prize-winner Nilo Cruz.

**William David Morillo**, UC 02, earned an M.B.A. degree in international business from Lindenwood University in St. Charles, Mo., in 2003. In March 2004, he received an honorary Ph.D. degree in international law from the International Academy of Arts & Sciences. Morillo now is pursuing a Ph.D. degree in financial management and health-care administration from North Central University in Prescott, Ariz.

**Eric H. Schultz**, LA 02, who resides in Washington, D.C., is deputy communications director for presidential candidate John

## WASHINGTON PROFILE Jayne Morgan, B.S.B.A. '00

# Enterprising Alum Works for Social Change

Jayne Morgan graduated just four years ago, but already she has a world of experience.

After earning her degree in accounting and passing the Certified Public Accountant (CPA) exam, the St. Louis native went to work for PricewaterhouseCoopers.

Morgan worked in the firm's auditing and litigation services divisions in Chicago, and a year later, she transferred to the company's Santiago, Chile, office. There she worked in the auditing division.

Morgan, who also majored in international business and Spanish, requested the transfer because she wanted to return to the country where she had studied abroad while a junior at Washington University.

She had planned to stay with PricewaterhouseCoopers, but when Morgan returned to Chile, she began to feel a different calling.

"While studying abroad, I learned a lot about Chile's history of a brutal dictatorship and human rights abuses. I saw how these issues impacted Chile, and I knew I wanted to be involved in working for social justice,"

says Morgan. "Then when I returned to Chile, I had that feeling come back—and knew I had to do something."

Morgan began searching for community service opportunities, which led her to the Nonprofit Enterprise and Self-sustainability Team (NESST), [www.nesst.org](http://www.nesst.org).

NESST, which is an organization that helps other nonprofits develop self-financing enterprises to support their core missions and to make them more independent of limited donations, was looking for a finance and operations manager. Morgan took the position and joined NESST's office in Santiago. (Besides Santiago, Chile, NESST has offices in the United States and Budapest, Hungary.)

After two years with NESST, Morgan can give many examples of how NESST has helped nonprofits become more financially sustainable. For example, NESST is working with La Morada, a Chilean nonprofit that provides counseling and other support services to underprivileged women, to develop services for full-paying clients to subsidize

La Morada's outreach.

Morgan enjoys being a part of NESST's social mission, but what she finds most rewarding about her job is the level of responsibility she has and the diversity of her daily routine. NESST has only nine full-time staff members, thus Morgan's job description covers a lot of ground. She is in charge of NESST's financial accounting, human resources, technology, and regulatory compliance.

"What I love about my job is that in the morning I could be doing the monthly accounting, while later that same day I could be meeting with the directors and discussing the pros and cons of expanding into Croatia or Peru," says Morgan.

At present, NESST's activities are concentrated in emerging market countries in Central Europe and in Chile, but the organization wants to expand into other countries in Europe and South America. Morgan plans to stay at NESST a couple more years to assist with this



Jayne Morgan

expansion. She doesn't have any specific plans beyond that, though she definitely wants to continue working on behalf of marginalized communities.

"Whether that is with a nonprofit, a socially responsible firm, or as a volunteer, I don't know," she says. "NESST has taught me, though, that there can be a lot of overlap and sharing between the nonprofit and for-profit worlds—that there are lots of different opportunities to have a rewarding career, and there are many avenues through which one can work for social change."

—Brendan Watson, A.B. '04



Kerry. Schultz's job is to keep the senator "on message" during the campaign. Schultz, who was president of his freshman and senior classes at the University, had internships with Sen. Charles Schumer, D-N.Y., and Hillary Rodham Clinton's Senate campaign in 2000.

**Phillip "Phil" A. Daniels**, GB 03, has joined AMG Brand/Russell in Chesterfield, Mo., an SEC-registered advisory firm providing fee-only strategic investment counsel exclusively on a discretionary basis, as an investment counselor.

**Carl M. Abramowitz**, LA 04, said he wanted to be "the next Robin Williams of *Dead Poets Society*" as he began teaching high-school students in Spanish, language arts, and a "Life Skills" course, and began coaching the junior varsity soccer team, for the Chinquapin School in Highlands, Texas, in August 2004. He spent the past summer directing land sports and sports productions for Camp Sabra, a Jewish camp for children and teenagers in Rocky Mount, Mo.

**Abigail A. Dumes**, LA 04, received a Fulbright grant to study in France during 2004-05.

**Monique M. Giago**, SW 04, resides and works on the Pine Ridge Indian Reservation in southwest South Dakota, serving as a supervisor for an agency focusing on children's mental health.

**Stephanie P. Hales**, LA 04, will, for the next three years, be attending law school at the University of Pennsylvania in Philadelphia.

**Kathryn I. Henderson**, LA 04, resides in Southboro, Mass.

**Mary Ann (Conroy) Knight**, GB 04, now is vice president of patient care services and is chief nursing executive at St. Joseph Hospital in Kirkwood, Mo.

Previously, she was chief nursing executive at Missouri Baptist Medical Center in west St. Louis County and had held clinical and management positions at Tampa General Healthcare in Tampa, Fla., and St. John's Hospital in Springfield, Ill.

**Kevin W. Mang**, BU 04, is a business analyst for Nestlé USA in Glendale, Calif.

**Andrea N. Mills**, SW 04, served as a consultant for the National Junior Leaders Conference in Washington, D.C., for six weeks.

**Jacob Muniz**, GB 04, has been an energy trader for Ameren Energy for the past six years. He also is a real estate investor and broker. Muniz, his wife, and their two sons reside in the St. Louis area.

**Xinmiao Peng**, GM 04, a research associate with Howard Hughes Medical Institute in Houston, happily reports, "I finally got my driver's license."

**Emily R. Reinhart**, BU 04, began serving as a Peace Corps health/small business volunteer in Ecuador in July 2004. Her assignment ends in September 2006.

**Emily B. Rugaber**, LA 04, is teaching in Taiwan.

**Bridgette C. Thomas**, LA 04, is a Ph.D. degree candidate in the University's history department in Arts & Sciences.

## In Memoriam

### 1920s

Janet (Mayer) Niekamp, LA 24; 2/04

Genevieve (McNellis) Maxwell, LA 28; 7/04

William C. Kopolovitz, LA 29, SW 30; 5/04

Eugene G. Ormond, LA 29; 11/03

### 1930s

Alvin D. Breitenbach, EN 30; 6/04  
Elsa Roever (Niehaus) Graul, LA 33; 6/04

Lucretia H. (Green) Lindsley, LA 33; 6/04

William C. Pratt, LA 33, MD 38; 4/04

Richard Y. Sakimoto, MD 33; 04/04

Henry O. Whiteside, BU 33, GB 34; 6/04

Newell Blair, LW 34; 6/04

Lt. Cmdr. Mary Virginia Harris, LA 34; 4/04

Mabel Irene (Strom) Horne, NU 34; 3/04

Harry A. Baers, LA 35; 2/04

C. Edward Tussey, AR 35; 6/04

Genevieve L. (Penney) Bush, LA 36; 6/04

Pauline E. (Stimson) Christiansen, LA 36; 4/04

Melvin B. Dolginoff, BU 36; 7/04

James M. Foerster, LA 36, MD 40; 2/04

Preston F. Ryan, EN 36; 5/04

Albert E. Pappano, GR 37; 04/04

Nancy Jane (Barnhart) Pienaar, LA 37; 6/04

Tobin C. Carlin, LA 38; 6/04

Janet (Wendt) Christopher, LA 38; 3/04

Dorothy Carolyn (Gerock) Lipke, LA 38; 5/04

Dorothy V. (Witthaus) King, UC 39; 11/03

William R. Witler, BU 39; 5/04

### 1940s

Lester Golub, LA 40; 6/04

Irving S. Levy, DE 40; 2/04

Paul C. Reichle, Jr., BU 40; 5/04

Marie K. Zak, FA 40; 5/04

Charles J. Ziervogel, BU 40; 4/04

Robert B. Dickerson, MD 41; 4/04

Helen Duncan, BU 41; 5/04

Mary E. (Neely) Carson, LA 42; 5/04

Frederick W. Klinge, MD 42; 6/04

Noleta Nance, DE 42; 1/04

Joseph L. Rubel, MD 42; 04/04

Daniel S. Castile, MD 43; 6/03

Robert Goggio, EN 43; 6/04

Robert H. Lewis, Jr., BU 43; 6/04

Sylvia (Frederick) Sollot, BU 43; 7/03

Arthur J. Zimmer, GR 43, GR 46; 5/04

Margaret (Schoenherr) Bloomfield, NU 45; 10/03

Mary Frances (Hulcher) Hulett, NU 45; 4/04

Ruth (Driemayer) Minton, LA 46; 7/04

Elizabeth J. (Daegele) Karleskint, NU 47; 5/04

Col. Nanette Keegan, PT 47; 1/04

Robert E. McNamara, GR 47; 5/04  
Frances R. (Kimura) Rambo, GR 47; 2/04

Henry P. Hanneken, EN 48; 1/04

Paul B. Henderson, Jr., EN 48, EN 48; 3/04

Donald S. Hilleary, EN 48; 4/04

Russell L. Mayhew, EN 48; 5/04

The Hon. Robert E. Brauer, LA 49, LW 51; 6/04

Gilbert Gottschalk, EN 49; 6/04

Victor J. Linnenbom, GR 49; 2/04

Hilda (Alexander) Osborn, UC 49; 4/04

Eugene E. Ullrich, BU 49; 5/04

### 1950s

Fred T. Caldwell, Jr., MD 50; 4/04

Wesley F. Gabrio, MD 50; 8/02

Fred M. Kemp, AR 50; 7/04

Robert L. Maul, BU 50; 4/04

Philip B. Cady, BU 51; 5/04

William Jen Pu Cheng, SI 51; 4/04

John J. Bolen, AR 52; 1/04

Beryl W. Dalrymple, Jr., LA 52; 2/04

Theodore R. Kiburz, EN 52; 06/04

Merrill M. Klearman, BU 52; 5/04

James J. McCabe, BU 52; 5/04

Raymond B. Schankman, BU 52, GB 53; 6/04

Thomas D. Soell, LA 52; 5/04

Joseph E. Wondolowski, Sr., LA 52; 4/04

Pearl B. Kottkamp, UC 53; 5/04

James C. Lowe II, LA 53, MD 56; 5/04

Ronald J. Walker, LA 53; 4/04

Thaddeus A. Wayne, Jr., GR 53; 4/04

Joe Bill Carter, LA 54, LW 60; 6/04

Audrey Ruth (Mathis) Kolker, LA 54, GR 59; 6/04

Stanley S. Roth, BU 54; 5/04

Diane L. (Schlapprizzi) Potthoff, LA 55; 6/04

John M. Wampler, MD 56; 1/04

Helen M. Wohlert, NU 56; 5/04

Erwin A. Ehlers, EN 57; 6/04

Lester A. Schamel, EN 57; 05/04

George T. McClure, UC 58; 5/04

Paul R. Welch, LA 58, LW 62; 6/04

Henry D. Campbell, LA 59; 05/04

Melvin L. Hassel, EN 59; 5/04

David N. Tanner, Jr., EN 59; 7/04

Mary Lou (Shelton) Wolfarth, LA 59, LW 64; 6/04

### 1960s

E. Ruth Braeutigam, GR 60; 11/03

Jack R. Charter, LW 60; 5/04

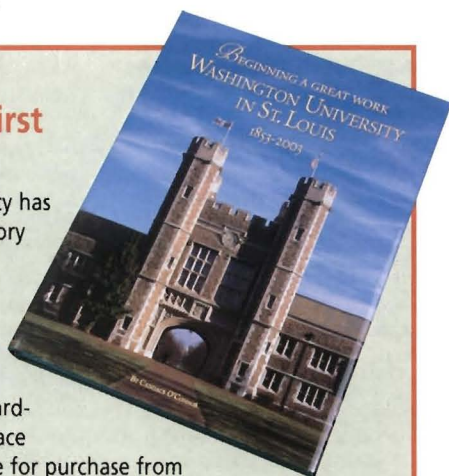
Ralph C. Manning, GB 60; 5/04

Norma N. Maynard, GR 60; 4/04

Irwin H. Harris, BU 61, LW 67; 5/04

## Washington University's First 150 Years

Washington University has published a new history book as part of the Sesquicentennial celebration of the University's founding in 1853. The book, written by award-winning writer Candace O'Connor, is available for purchase from the Campus Bookstore at \$44.95. To order the book online, go to the University's Web site, <http://www.wustl.edu> and click on "WUSTL History Book" under "Of Note."





Dwight T. Lohkamp, EN 61, SI 64; 11/03

Fredrick L. Mercer, EN 61; 6/04

Donald A. Roberts, UC 63; 05/04

Oneta B. French, UC 64; 3/04

Herbert G. Laudel, UC 64; 05/04

Eleanor Leonard, OT 64; 12/03

Jeanette (Johnston) Radford, GR 64; 2/04

*The editors regret mistakenly listing Mrs. Radford's husband, Richard Radford, Jr., LA 59, GR 63, as deceased in the summer 2004 issue.*

Betty J. (Whaley) Cottongim, AR 65; 12/03

William Daniel "Dan" Tedrick, LA 65, LW 67; 04/04

Herman L. Cornstuble, UC 66, UC 73; 6/04

Glennon M. Jost, UC 67; 6/04

Paul B. Lowery, TI 67; 12/03

Mary Elizabeth (Sloas) Ozee, GR 68; 6/04

Robert W. Quine, LW 68; 5/04

#### 1970s

John R. Olson, GR 71; 5/04

James T. Shaw, MD 71; 4/04

Ellsworth R. Shellenberg, UC 71; 2/04

Bruce E. Schneider, GR 72; 5/04

Toby (Radasky) Kornreich, LA 73; 05/04

Cordell Whitmer, DE 73; 12/01

Charles Thomas Himstedt, UC 75; 5/04

Doris Jean (Ginsberg) Diamond, SW 76; 05/04

Marjorie Rosenblum-Case, SW 79; 4/04

#### 1980s

Douglas Alan Boeckelmann, UC 81, TI 87; 5/04

Dennis W. Dallman, TI 85; 5/04

Douglas Randall Givens, GR 86; 6/04

Cynthia Lynn Brown, LW 88; 7/04

#### 1990s

William Keith Taff, AR 90; 4/04

Sharon (Doetzel) Brooks, SW 93; 5/04

#### 2000s

Julia Staten, SW 02; 05/04

## In Remembrance

### Walter W. Barker, Jr.

Walter "Wally" W. Barker, Jr., B.F.A. '48, an artist renowned for his colorful, abstract expressionist works and for his 50-year teaching career, died of pancreatic cancer at his home in Greensboro, North Carolina, on May 13, 2004. He was 82.

Barker, whose paintings, drawings, and sculpture can be found in permanent collections of the Museum of Modern Art, the Hirshhorn Museum, the Corcoran Gallery of Art, the Saint Louis Art Museum, the Philadelphia Museum of Art, and the Museum of Fine Arts in Boston, among others, taught art at Washington University in St. Louis from 1950–62. He also taught at Salem College in Winston-Salem, North Carolina; the Brooklyn Museum School in New York; and at the University of North Carolina in Greensboro, where he was associate professor then professor of art from 1966 to 1992, when he became professor emeritus.

Barker was influenced by Washington University faculty members Philip Guston and German expressionist Max Beckmann. (Before his illness, Barker was writing a book about Beckmann, his mentor.) Barker, after earning a Bachelor of Fine Arts degree in 1948 from Washington University, earned a Master of Fine Arts degree from Indiana University in Bloomington.

Barker's style evolved from Beckmann-influenced works into abstract expressionism in the 1950s and into his Greek, Persian, J Ching, and Leo series of paintings during the 1960s. He then moved through Pop Art, geometric pieces, and into more narrative works. A series from the 1990s focuses on childhood memories. Many admired and collected Barker's art, which author James A. Michener called "visually stirring."

Barker, who was born in 1921 to American parents in Koblenz, Germany, moved to Webster Groves, Missouri, with his family in 1923. His studies in art were interrupted while serving in the Army from 1942–45, fighting in the battles of Britain, Normandy, Northern France, and the Ardennes.

Barker, who was divorced, is survived by his longtime partner and companion, Gretchen Van Loon Williams, and by a daughter and son.

### Sara L. Johnson

Sara L. Johnson, A.B. '78, associate dean and academic coordinator in the College of Arts & Sciences, died of neuroendocrine cancer at her home in University City, Missouri, on May 17, 2004. She was 47.

After graduating *summa cum laude* from Washington University with a bachelor's degree in history and economics in Arts & Sciences, Johnson earned a law degree from the University of Chicago in 1981. After six years as an associate at the Chicago law firm Schiff, Hardin & Waite, she left to teach clinical practice at the University of

Chicago's Mandel Legal Aid Clinic and later served as vice president for public affairs at IIT Chicago-Kent College of Law.

In 1989, Johnson returned to work at Washington University as special assistant to then-Chancellor William H. Danforth. Known as a gifted mediator and conciliator, she dealt with a wide variety of policy issues, as well as community relations, complaint resolution, and special projects. Johnson served with Danforth, now chancellor emeritus, for six years, until his retirement in 1995, and remained in the same capacity for two years under Chancellor Mark S. Wrighton. Named associate dean of Arts & Sciences in 1997, she counseled pre-law students and was a strong advocate for students. A scholarship fund has been established in her honor.

A native of Cedar Rapids, Iowa, she loved outdoor activities and was a talented photographer. She also served on boards of several community organizations.

Survivors include her longtime partner, Kathleen M. Wildman; her mother; a sister; and three nephews.

### Jerome T. Loeb

Jerome T. Loeb, M.A. '64, retired president and chairman of The May Department Stores Company, who resided in St. Louis County, died of leukemia at Barnes-Jewish Hospital in St. Louis on June 10, 2004. He was 63.

After earning a B.S. degree *magna cum laude* in mathematics and physics in 1962 from Tufts University in Boston, the St. Louis native earned a master's degree in pure mathematics in Arts & Sciences from Washington University.

After graduation, he began his 37-year career in retailing by joining Famous-Barr Company's research team in St. Louis. In 1972, he became a divisional vice president for the company, and, in following years, rose through several corporate positions with its parent company, The May Department Stores. He was known as an outstanding businessman, strategist, and leader.

In 1984, he was elected to May Stores' board of directors and, in 1986, was named vice chairman. Five years later, he became chairman of the board, and, in 1993, he also became president. He remained as chairman until retirement in 2001.

In 1989, Loeb and his wife, Carol, established the Loeb Prize, which is given yearly to recognize excellent math and science teachers. This year, the Loebes established the Carol B. and Jerome T. Loeb Teaching Fellows Program in the University's School of Medicine.

After retirement, Loeb taught marketing strategies in the Executive M.B.A. program at the University's Olin School, and, in 2003, he and Robert Lefton co-authored a business management book titled *Why Can't We Get Anything Done Around Here*.

Loeb was a past chairman of the board for both National Junior Achievement and the St. Louis Science Center, and he was a member of the board for Barnes-Jewish Hospital, BJC Health System, the United Way of Greater St. Louis, and The OASIS Institute.

He was named a distinguished alumnus in Arts & Sciences by the University earlier this year.

Survivors include his wife, a brother, son, daughter, and two grandchildren.

### Samuel E. Schechter

Samuel E. Schechter, M.D. '41, assistant professor emeritus of medicine and longtime private physician in Clayton, Missouri, where he resided, died May 24, 2004, at McKnight Place extended care center in University City, Missouri, after a long illness. He was 87.

Schechter's internship was in internal medicine at the former Jewish Hospital (now part of Barnes-Jewish Hospital). Then he served in the Army Air Forces in Britain, France, and Germany.

He held a fellowship in gastroenterology at Michael Reese Hospital in Chicago before coming to Washington University as an assistant in clinical medicine in 1948. He became an instructor at the University in 1953 and assistant professor in 1981. He retired in 1991 and became assistant professor emeritus in 1992.

In retirement, he worked as a volunteer in the archives of the School of Medicine's Bernard Becker Library, as well as at the Missouri Botanical Garden.

In 2001, Schechter endowed the Samuel E. Schechter Professorship in Medicine. He also endowed the Rena Schechter Memorial Lecture-ship in Cancer Research in memory of his wife, who died in 1995; the David Joel Schechter and Leslie Schechter Memorial Fund for Research in Depression in memory of his son, A.B. '78, who died in 1997, and a daughter who died in 1984; two scholarships in Arts & Sciences in honor of his daughters Miriam, A.B. '72, H.S. '78, and Kay, A.B. '77, M.S.W. '80; and another fund in the Department of Performing Arts in Arts & Sciences.

Survivors include his wife, Norma, whom he married in 2002; his daughters Miriam and Kay; a sister; a stepson; two stepdaughters; two grandchildren; and three stepgrandchildren.



# Advancing a Dramatic Initiative

Larry Shapiro is nurturing partnerships to transform medical research, cross-campus collaborations, and, ultimately, patient care.

BY BETSY ROGERS

LARRY J. SHAPIRO, A.B. '68, M.D. '71

- Executive Vice Chancellor for Medical Affairs
- Dean, School of Medicine
- Spencer T. and Ann W. Olin Distinguished Professor of Pediatrics

To talk with Larry J. Shapiro, A.B. '68, M.D. '71, is to glimpse a vision of breathtaking advances in medical science, disease prevention and treatment—and to catch his enthusiasm for the Washington University School of Medicine.

"We're poised at a fantastic time," says Shapiro, executive vice chancellor and medical school dean since July 2003, noting that mapping and sequencing the human genome, an effort in which Washington University played a central role, has brought medical science and the world's top research institutions to a new frontier.

Research on this new frontier promises revolutionary changes in medicine and profound new hope for better health. Personalized medications, for instance, could be tailored to the individual's genetic makeup. "If we really understand exactly which genes are conspiring to produce disease and how they're doing it, and which other genes that you might have inherited are dictating how you respond to particular drugs," Shapiro explains, "we might be able to choose exactly the right pharmaceutical therapy and exactly the right dosage that would be unique to you and give you the best chance of recovering health."

To grasp these unique opportunities, Shapiro, the medical school, and the University have launched BioMed 21, a dramatic initiative aimed at fostering many new interdisciplinary collaborations among University faculty at the most fundamental level of inquiry. "We're proposing on a much larger scale to bring together the biomedical scientists on this campus with other biologists on the Hilltop Campus as well as

chemists, physicists, engineers, psychologists, social scientists, and others, because many of us believe it is at the interface between disciplines that some of the most exciting fundamental advances will occur," says Shapiro, also the Spencer T. and Ann W. Olin Distinguished Professor of Pediatrics.

BioMed 21 will create three new interdisciplinary research centers, one focused on genomics, one on biological imaging, and the third on clinical science, helping speed the transfer of scientific advances from the laboratory to patient care.

Edward S. Macias, executive vice chancellor, dean of Arts & Sciences, and the Barbara and David Thomas Distinguished Professor in Arts & Sciences, is deeply committed to the initiative. "This next advancement of biological science will require close connection between basic scientists of the sort we have on the Hilltop Campus with medical scientists at the medical school," he points out.

Macias appreciates Shapiro's leadership and his embrace of the larger University community. As an alumnus of Arts & Sciences and the medical school and the father of two alums, Shapiro "brings with him a good understanding of how the Hilltop Campus operates," Macias notes. "He is very involved in the University—the medical school and beyond."

Indeed, Shapiro is nurturing partnerships across the Hilltop. He hopes collaborations with social and behavioral scientists, for instance, will help unlock persistent mysteries of behavior, both among physicians and patients. Why, for instance, do doctors fail to prescribe





Joe Angeles

demonstrably effective beta-blockers following heart attacks? And why do so many patients resist life-saving screenings like mammograms and prostate cancer tests, or fail to make needed lifestyle changes?

"We've got to understand this better and find ways to motivate people to do what's in their best interest," Shapiro observes, "and that's the province of social and behavioral science."

He's also pursuing partnerships with the Olin School of Business. One of BioMed 21's primary goals—to take scientific advances into patient care—will depend in part on entrepreneurial ventures to scale up development of new technologies and pharmaceuticals and make them available to clinicians and patients.

One new program, part of a University-wide entrepreneurship initiative funded by the Kauffmann Foundation of Kansas City, will be a new curriculum option for biology and biomedical Ph.D. students, providing a year's very structured study in entrepreneurship—in the steps required and the pitfalls that occur in starting new firms.

Chancellor Mark S. Wrighton has high praise for Shapiro and his contributions as part of the University's leadership

team. Shapiro, Wrighton observes, came to the University from "a distinguished career as an independent medical scientist, clinician, and academic leader" at the University of California, San Francisco. An internationally renowned research geneticist and pediatrician, Shapiro is a member of the National Academy of Sciences' Institute of Medicine and the American Academy of Arts and Sciences, and he is a fellow of the American Association for the Advancement of Science.

Wrighton also appreciates personal attributes that set Shapiro apart. "He brings enormous intellectual strength, passion for his work, and personal sensitivity to his roles as dean of the School of Medicine and executive vice chancellor for medical affairs," Wrighton says.

"Larry already has made key and enduring contributions to Washington University, since his appointment as dean in 2003," Wrighton continues. "He has recommitted the School of Medicine to advancing medical education, enhancing its engagement in research to advance human health, and strengthening its work in clinical medicine.

With a great vision and the ability to implement his plans, Dr. Larry Shapiro is one of our greatest contributors to a brighter future for our University."

James P. Crane, associate vice chancellor for clinical affairs, shares Wrighton's enthusiasm.

"Dean Shapiro has a unique ability to listen to diverse points of view and build consensus in a collegial and constructive fashion," Crane observes. "He has a sound understanding of the challenges facing academic medicine and creative ideas on how to deal effectively with these concerns. Larry is consistently thoughtful in his analysis of complex issues and focuses on crafting principled decisions in guiding the medical school's direction."

Like Wrighton, Crane admires Shapiro as a person. "He has strong interpersonal skills and integrity, a reassuring sense of calm, and heartfelt compassion for the needs of others," Crane says. "He celebrates the success of others without concern for personal recognition, has an extraordinary work ethic, and is deeply committed to Washington University and its mission of academic excellence." (WU)

Betsy Rogers is a free-lance writer based in Belleville, Illinois.



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Mary Butkus

**Strike a Pose** The School of Art presented *The Know Show: The 75th Annual Fashion Design Show*—a fully choreographed, Paris-style extravaganza at the Saint Louis Galleria on Sunday, May 2. The fashion show featured dozens of professional and volunteer models wearing more than 100 outfits created by the Fashion Design Program's 14 junior and nine senior fashion majors.



Washington University in St. Louis