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Record

Sept. 13, 2002

Volume 27 No. 3

Washington University in St. Louis

Reeve's results signify 'super' progress

By Gila Z. Reckess

After severely injuring his spinal cord nearly eight years ago, one quadriplegic has achieved what was thought to be impossible.

Christopher Reeve has regained the ability to feel pinpricks and the light touch of a cotton swab over most of his body and to move some of his joints without any assistance. He also reports improvements in overall health and quality of life.

These slow but progressive results began in 2000. At that point Reeve started undergoing a series of evaluations by School of Medicine researchers. Based on these evaluations, Reeve's therapy was adjusted to promote recovery.

The study, which appears in the September issue of the *Journal of Neurosurgery: Spine*, marks the first documented case of partial recovery more than two years after traumatic spinal cord injury.

The American Spinal Injury Association (ASIA) scale is the standard method for assessing spinal cord damage. After three years of treatment, Reeve's ASIA classification has been upgraded from A to C on a scale that ranges from A to E.

This study is the first documentation of a person improving two ASIA ratings more than two years after being injured.

"In light of science's perception of spinal cord injuries, it's remarkable to recover any sensation or movement whatsoever long after the injury has occurred, particularly in those most injured," said the study's lead author, John W. McDonald, M.D., Ph.D., assistant professor of neurology and neurological surgery and director of the Spinal Cord Injury Program at the medical school.

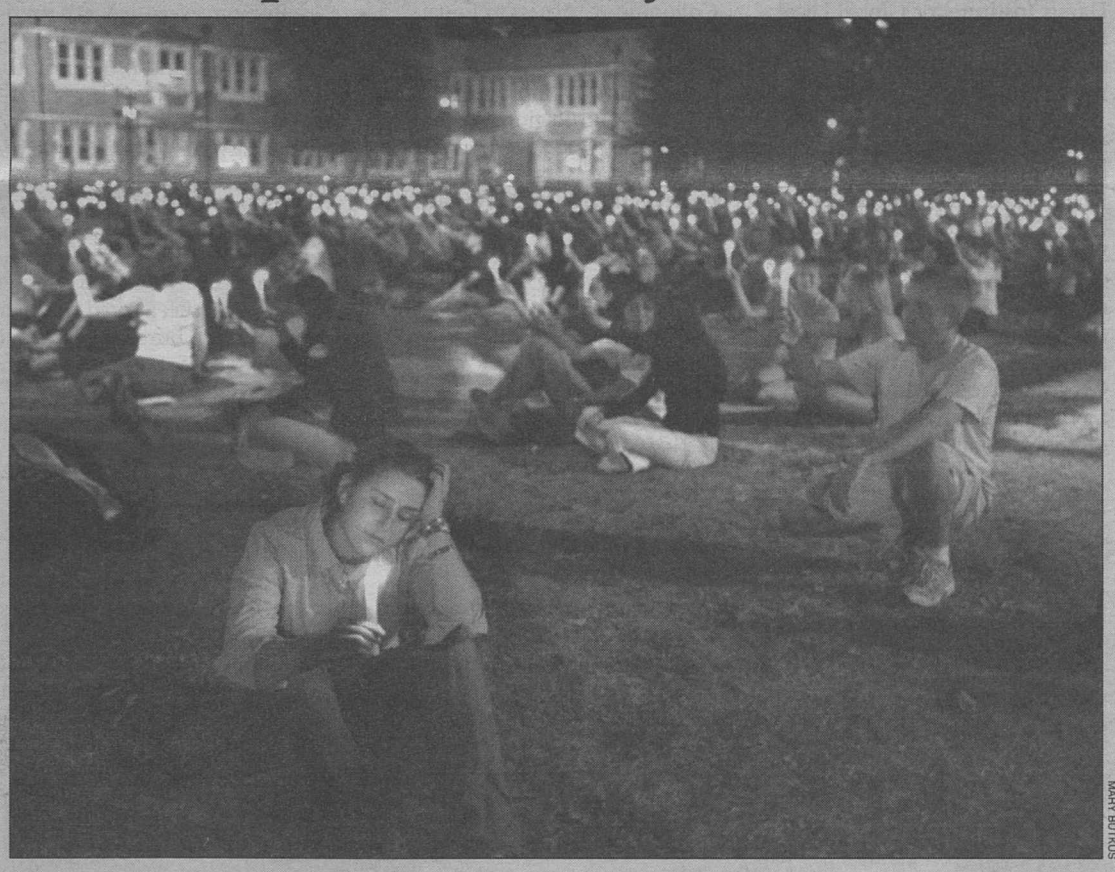
"(Reeve) feels so much better, both physically

See **Spinal cord**, Page 6

BOB BOSTON

Christopher Reeve and John W. McDonald, M.D., Ph.D., discuss Reeve's condition. Over the past three years, Reeve has regained some body sensation and motor function.

Sept. 11 — One year later



MARY BUTKUS

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At top, Becky Lewin (foreground), a first-year student from New York City, was one of more than 1,000 students, faculty and staff who participated in a candlelight vigil in Brookings Quadrangle on the one-year anniversary of the terrorist attacks. Chancellor Mark S. Wrighton (above, left) was among the speakers at the vigil, which also featured dancing (above) by students in the Performing Arts Department in Arts & Sciences.

On Page 7

- **Gerald Early**, Ph.D., the Merle Kling Professor of Modern Letters, comments on national unity and what it means to be an American.
- **Frank K. Flinn**, Ph.D., adjunct professor of religious studies in Arts & Sciences, comments on his hope that love will flourish.
- **More photos**

Students, Fossett present capsule to Smithsonian

Chancellor Mark S. Wrighton and student interns joined balloonist Steve Fossett Sept. 5 in formally installing the *Bud Light Spirit of Freedom* capsule at the National Air and Space Museum in Washington, D.C.

The capsule that carried Fossett on his successful solo circumnavigation of the globe this summer is now a part of the museum's "Milestones of Flight" collection.

Upon entering the museum, which is part of the Smithsonian Institution, visitors now will see the capsule in the main gallery on display alongside Charles Lindbergh's *Spirit of St. Louis* and other notable "firsts" in aviation and space history.

With Mission Control set up in Brookings Hall, Room 300, Fossett launched from Northam, Western Australia, June 19 and landed July 4 near Durham Station in Queensland, Australia.

Eighteen University students from the College of Arts & Sciences, the Olin School of Business and the School of Engineering and Applied Science served as interns on the project, working in Mission Control 24 hours a day, seven days a week, throughout the duration of the flight.

> "For the students of Washington University in St. Louis who handled Mission Control, the *Spirit of Freedom* flight was a once-in-a-lifetime learning experience."
>
> J.R. "Jack" Dailey

The internships were made possible by a grant from Barron Hilton, a longtime ballooning enthusiast and admirer of Fossett and his many accomplishments.

During a news conference held in conjunction with the installation ceremony, museum Director J.R. "Jack" Dailey thanked the student interns, whose names are imprinted on the capsule, for their support:

"This achievement would not have been possible without many

See **Fossett**, Page 6

United Way campaign kicks off

By Andy Clendennen

Many people have it pretty good. But some don't, and that's where the United Way comes in — helping people help themselves to become more self-sufficient.

The 2002 campaign for the United Way of Greater St. Louis is now under way, and University faculty and staff members should have already received pledge cards in the mail.

"I ask that you join me and many others in the University community to support this important effort," Chancellor Mark S. Wrighton said in an accompanying letter. "Washington University's United Way campaign is key to the success of the campaign in the entire St. Louis region, and I hope we can continue our tradition of being strong supporters of this important community effort."

Last year, the University far exceeded its goal and raised more than a half-million dollars. The hope is that this year's campaign will be as successful.

The money goes to a good cause. But it's not just "some" of the contribution or a "portion" of the donation. It's the majority.

Fully 90 percent of contributions to the Greater St. Louis United Way goes directly to pro-

See **United Way**, Page 5

Kornfeld, Schaal to speak for Assembly Series

BY MARY KASTENS

Stuart Kornfeld, M.D., a prominent molecular biophysicist and biochemist, and Barbara Schaal, Ph.D., an authority on plant biology and life sciences, will receive the University's 2002 Faculty Achievement Awards and summarize their scholarly work at an awards ceremony as part of the Assembly Series.

The event, which is free and open to the public, will be held at 4:30 p.m. Sept. 18 in Room 300 of the new Laboratory Science Building, located just north of Graham Chapel.

Kornfeld, the David C. and Betty Farrell Distinguished Professor of Medicine and professor of biochemistry and molecular biophysics in the School of Medicine, is this year's recipient of the Carl and Gerty Cori Faculty Achievement Award.

Schaal, the Spencer T. Olin Professor of Biology in Arts & Sciences and professor of genetics in the medical school, is this year's recipient of the Arthur Holly Compton Faculty Achievement Award.

Kornfeld and Schaal were selected by members of the faculty, based on the following criteria: outstanding achievement in research and scholarship; recognized prominence within the community of scholars; service and dedication to the betterment of the University; and commitment to teaching.

Kornfeld, who co-directs the Division of Hematology, has made groundbreaking discoveries about how sugar chains direct protein movements within cells. This research is the result of earlier inquiries into the structures of many sugar chains.


Kornfeld

Much of his research was conducted in collaboration with his wife, Rosalind H. Kornfeld, Ph.D., professor of medicine and of biochemistry and molecular biophysics.

Stuart Kornfeld is known for discovering how lysosomal enzymes are routed to lysosomes, cellular structures that serve as "garbage disposals." He identified two enzymes that add a specific sugar marker onto lysosomal enzymes and determined how the two recognize the enzymes they need to label.

He has authored or co-authored more than 200 scientific articles. His research has been recognized with membership in the National Academy of Sciences, the Institute of Medicine, the American Academy of Arts and Sciences and the Association of American Physicians.

In 1991, he was awarded the Passano Award, and in 1999 he received the Karl Meyer Award. He also has served on numerous editorial and advisory boards.

Kornfeld earned a bachelor's degree from Dartmouth College in 1958 and a medical degree from Washington University in 1962. He joined the faculty here four years later.

Schaal, who served as chair of the Department of Biology from 1993-97, is known for applying molecular genetic techniques to the study of plant evolution. Her research investigates the evolutionary process within plant populations using a wide variety of techniques, from field observations to quantitative genetics and molecular biology. Schaal has studied hosts of plant species ranging from oak trees to Mead's milkweed, a Midwestern prairie plant.


Schaal

Schaal's recent work is a collaboration with students and peers to research the evolutionary genetics of plants in hopes of enriching crops such a cassava — the sixth-most important food crop in the world — and rice.

Finding cassava's progenitors could potentially increase the genetic diversity — and thus the disease resistance — of cassava crops, especially in Africa, where cassava is a non-native plant and lacks resistance to African diseases.

Schaal's research has led to membership in the National Academy of Sciences and the American Association for the Advancement of Science. She serves on the boards of trustees for the St. Louis Academy of Science and for the Missouri Chapter of the Nature Conservancy.

She has been associate editor of the journals *Molecular Biology and Evolution*, *The American Journal of Botany*, *Molecular Biology* and *Conservation Genetics*.

Schaal also is a past president of the Botanical Society of America. She serves on the National Research Council's (NRC) Board on Life Sciences and chairs the NRC Standing Committee on Agricultural Biotechnology, Health and the Environment.

Schaal earned a bachelor's degree in biology from the University of Illinois at Chicago in 1969 and master's and doctoral degrees in 1971 and 1974, respectively, both in population biology from Yale University.

She joined the Arts & Sciences faculty in 1980 as associate professor of biology and became full professor in 1989.

For more information on the Assembly Series talks, call 935-4620 or visit the series Web site at wupa.wustl.edu/assembly.

Law school presents Public Interest Speaker Series

BY JESSICA N. ROBERTS

The co-founder of the Innocence Project, which has helped exonerate over two dozen prisoners on death row; the vice president and general counsel of the World Bank; and the former chief of staff and counselor to former Vice President Al Gore are part of the fall lineup for the School of Law's fifth annual Public Interest Speakers Series.

This popular series, titled "Access to Justice: The Social Responsibility of Lawyers," was initiated to highlight the excellence of the law school's Clinical Education Program; to expose students to public interest advocates and practitioners; to illuminate the pro bono and public interest responsibility of law students and lawyers; and to engage the wider University community in an interdisciplinary discussion about social justice.

The series is coordinated by Karen Tokarz, J.D., professor of law and director of clinical education, and Susan Appleton, J.D., the Lemma Barkaloo & Phoebe Couzins Professor of Law and associate dean of faculty.

All of the fall lectures are held in Anheuser-Busch Hall and are free and open to the public. They are:

• **11 a.m. Sept. 18** — Ko-Yung Tung, vice president and general counsel of the World Bank, on "The World Bank's Efforts to Promote the Rule of Law." Tung is the secretary general of the International Centre for Settlement of Investment Disputes and a member of the Council on Foreign Relations. Tung's lecture is co-sponsored by the law school's Whitney R. Harris Institute for Global Legal Studies, the Asian American Law Student Association and the International Law Society.

• **11 a.m. Oct. 9** — Barry C. Scheck, professor and director of the Clinical Legal Education and Jacob Burns Center for the Study of Law and Ethics at the Cardozo School of Law at Yeshiva University, on "Wrongful Convictions: Causes and Remedies." Scheck is the co-founder and co-director of the Innocence Project at the Cardozo School of Law and is a member of the Board of Directors of the National Institute of Justice Commission on the Future of DNA Evidence. Scheck is a keynote speaker for Washington University School of Law's Clinical Education Program Third Annual Colloquium, "Access to Equal Justice: Creating Collaborations Between the University and the Community to Improve Access to Justice in Our Region."

• **2 p.m. Oct. 9** — Mary Becker, professor at the DePaul College of Law, on "Law and the Emotions of Battered Women." Becker, co-founder of the Illinois Clemency Project for Battered Women and co-author of "Cases and Materials on Feminist Jurisprudence: Taking Women Seriously," also is a keynote speaker for the "Access to Equal Justice Colloquium."

• **4 p.m. Oct. 28** — E. Norman Veasey, chief justice of the Supreme Court of Delaware, on "Reflections on Key Issues of the Professional Responsibility of Corporate Lawyers in the 21st Century." Veasey is chair of the American Bar Association Ethics 2000 Commission on the Evaluation of the Rules of Professional Conduct and a former chief deputy attorney general of Delaware. He is the law school's 2002 Tyrell Williams Speaker.

• **11 a.m. Nov. 13** — Charles W. Burson, executive vice president, general counsel and secretary of the Monsanto Co., and D. Bruce La Pierre, J.D., professor of law at Washington University, on "Campaign Finance Regulation: Money, Politics, and the First Amendment." Burson, Gore's former chief of staff and counselor and former attorney general of Tennessee, argued the election law case Burson v. Freeman before the U.S. Supreme Court.

La Pierre, former special master for the St. Louis Public School District desegregation case, argued the campaign finance case Nixon v. Shrick Missouri Government PAC before the U.S. Supreme Court. This event is co-sponsored by the law school student chapters of the American Civil Liberties Union and the Federalist Society.

For more information on the series or the speakers, call 935-4958.

PICTURING OUR PAST


HERB WEITMAN

The School of Fine Arts moved from its downtown Locust Street location to what had been the British Pavilion in the 1904 World's Fair. In 1927, the school moved to its current location in Bixby Hall (above). A bachelor's degree in fine art was first offered in 1941, nearly 66 years after the school opened. Seven degrees are offered by what is now known as the School of Art, from ceramics — which these students from the 1960s are studying — to photography.

Washington University will be celebrating its 150th anniversary in 2003-04. Special programs and events will be announced as the yearlong observance approaches.

WASHINGTON UNIVERSITY IN ST. LOUIS 150 years 1853–2003 Treasuring the Past Shaping the Future

Olin Library levels renamed

As a result of renovation, Olin Library's levels have been renamed as shown at right. The main floor (ground level), previously Level 3, is now Level 1.

Level 5	Level 3
Level 4	Level 2
Level 3	Level 1 (ground level)
Level 2	Level A
Level 1	Level B

Record

Washington University community news

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Washington University in St. Louis

School of Medicine Update

Some ties are meant to be broken

Abnormal chemical bonds cause bleeding disorder

BY DARRELL E. WARD

Blood platelets and the protein von Willebrand factor (vWF) normally pass like strangers in the night — until an artery is injured. Then, they recognize one another and latch together to form a blood clot and prevent further bleeding.

But in a few people the two "embrace" prematurely, leading to a bleeding disorder known as type IIb von Willebrand's disease.

Researchers in the School of Medicine have a new explanation for why and how this pair embraces abnormally to cause the disease.

The study, which was published in a recent issue of *Biophysical Journal*, suggests that the disease occurs because a defective form of vWF causes chemical bonds to persist longer than they should, thereby holding vWF and blood platelets together in flowing blood when they shouldn't. The defect in the vWF protein changes the kinetics of the chemical bonds that form between the protein and the platelets.

"This is the first time that a naturally occurring disease has been linked to an alteration in the kinetic properties of a chemical bond," said study leader Thomas G. Diacovo, M.D., assistant professor of pediatrics and of pathology and immunology. "The finding should give us a better understanding of how normal platelets function and of the delicate balance that exists between these blood-clotting elements — disturb that balance, and the whole system falls apart."

For the past 25 years, scientists have attempted to explain why platelets normally adhere to vWF at sites of vascular injury but not in flowing blood. Most of them believe that docking sites on vWF undergo a change in shape after the protein adheres to a site of vessel injury. This change presumably allows passing platelets to attach to vWF.

People with von Willebrand's disease have an altered form of vWF, in which one amino acid in the protein has been replaced by another. Proponents of the conformational-change theory believe that the abnormal amino acid changes the shape of vWF, thereby causing it to bind with platelets when it shouldn't.

"The finding should give us a better understanding of how normal platelets function and of the delicate balance that exists between these blood-clotting elements — disturb that balance, and the whole system falls apart."

THOMAS G. DIACOVO

"It seems like a reasonable mechanism," Diacovo said, "but the evidence isn't there."

Diacovo suspected the answer lay in bond kinetics, which refers to how fast a bond can form and then dissociate. Earlier work on selectins, a family of proteins critical for recruiting circulating white blood to inflamed blood vessel walls, revealed that bond kinetics are responsible for controlling the interaction between these cells and the vessel wall.

Diacovo theorized that the same was true for vWF and platelets.

His research team studied the interaction of vWF and platelets using a variety of experiments, including some that involved mice and others that used flow chambers to duplicate the forces acting on platelets and vWF in circulating blood.

The investigators discovered that a few bonds probably do form between vWF and platelets as they flow along in the bloodstream in healthy individuals.

However, the number of bonds formed at any one time are too few to stabilize the attachment of platelets to vWF because as soon as a bond forms, it rapidly releases.

In a particular form of von Willebrand's disease, however, the bonds last significantly longer than normal. That extra time allows many additional bonds to form, which stabilizes the interaction and locks the proteins and platelets together.

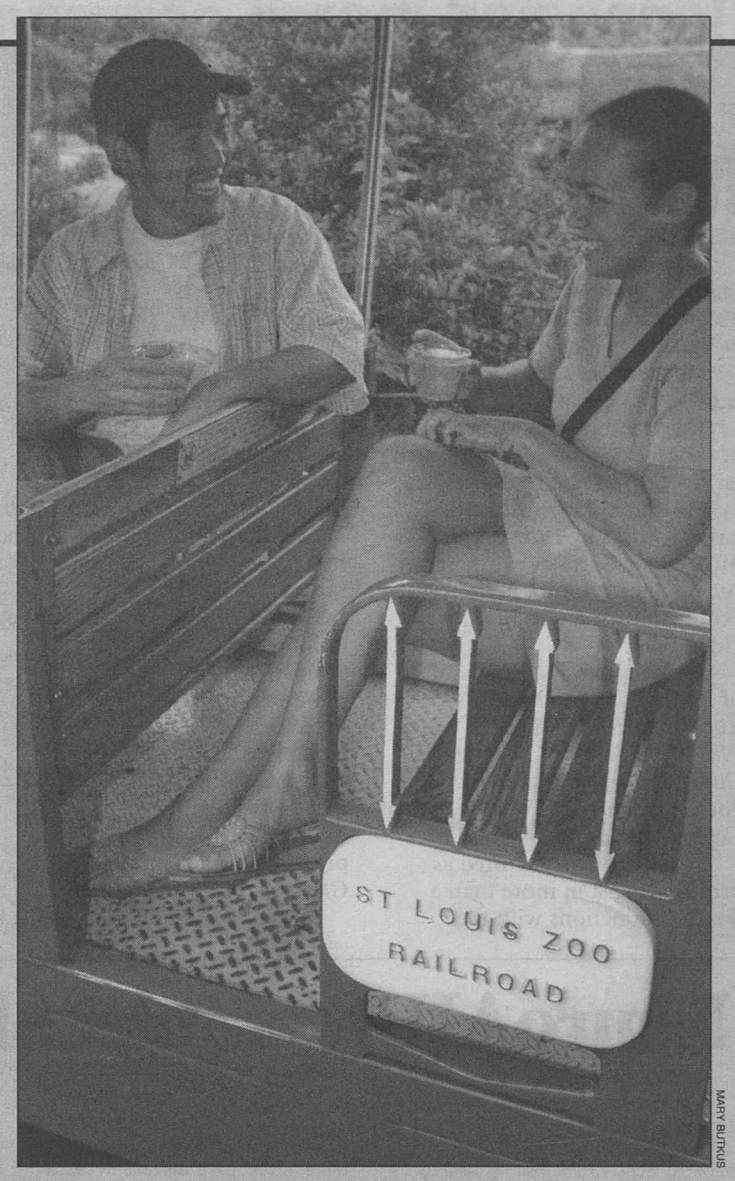
"It's not just a brief touch-and-go," Diacovo said. "Rather, one bond forms and before it breaks, two, three and four more have formed."

As more bonds form, small aggregates of platelets and vWF develop. These aggregates are cleaned from the blood, probably in the spleen, which reduces the amount of vWF and the number of platelets in the blood, Diacovo said.

Consequently, people with von Willebrand's disease have a mild to moderate bleeding disorder. They bruise easily and simple nosebleeds can continue for several hours or days before finally healing.

In addition to providing insight into platelet function in normal individuals and in people with von Willebrand's disease, the findings may also help research-ers develop new kinds of anti-thrombotic drugs. The results also may pose a new way to classify molecules, called adhesion receptors, found on the surface of cells.

Diacovo was recognized for this research with the 2002 Young Investigator's Prize in Throm-bosis from the American Heart Association.



MARY BUTKUS

All aboard Chung Lee and Madeleine Courtney-Brooks enjoy meeting their classmates at the annual Freshmen Welcoming Party given by William A. Peck, M.D., executive vice chancellor for medical affairs and dean of the School of Medicine. This year's party, which welcomed 122 freshmen, was held Sept. 6 at the Saint Louis Zoo.

Physical map of mouse genome now available

BY DARRELL E. WARD

A physical map of the genetic makeup of a mouse — the mouse genome — is 98 percent complete and has been published online by the journal *Nature* (nature.com/nature).

Researchers at the Genome Sequencing Center in the School of Medicine played a major role in the international effort, as they did in the sequencing and mapping of the human genome.

"The mouse plays a vital role in research on human biology and disease," said John D. McPherson, Ph.D., associate professor of genetics and the St. Louis team lead investigator. "This physical map gives us the big picture of the mouse genome."

Comparison of the mouse and human maps, for instance, can highlight regions of DNA that control genes. These regions are crucial to understanding the role of genes in health and disease, but they are difficult to find using current methods.

The physical mouse-genome map is a complementary effort to the draft sequence of the mouse genome, which was released in May. The important difference is one of detail and organization, McPherson said.

McPherson compared the draft sequence to loose pages from an encyclopedia. "Each page may provide many details, like the population and climate of a country," he said. "But until all the pages are assembled correctly, you may not know that you are reading about Zaire."

A physical map places all the "pages" of DNA sequence in their correct order within each volume, with each volume being a chromosome.

Furthermore, the DNA-sequence information used to compile the physical map was gathered differently from the information used to compile the draft sequence. Because the physical map comes from a separate source of genetic information, the researchers are using it to confirm the accuracy of the draft sequence.

The physical map also benefits medical researchers because it was assembled using longer segments of DNA than those used to assemble the draft sequence. The long segments were cloned in bacteria. Now that the mapping is complete, the bacteria containing these bits of mouse genome continue to be grown, stored in freezers and carefully cataloged.

Investigators studying mouse genes or regions of DNA now can locate their particular segment on the map and obtain the actual clone of that region to study, rather than isolating the region themselves.

Keeping faith

Helena Hatch Special Care Center offers 'Faith in Action' program

BY DARRELL E. WARD

The Helena Hatch Special Care Center in the School of Medicine has added a "Faith in Action" program to the services it provides for women with HIV and AIDS.

Faith in Action is a faith-based movement that uses volunteers from community churches to assist women with AIDS with household chores, errands, transportation and other tasks. They also provide support and encouragement through regular visits and telephone calls.

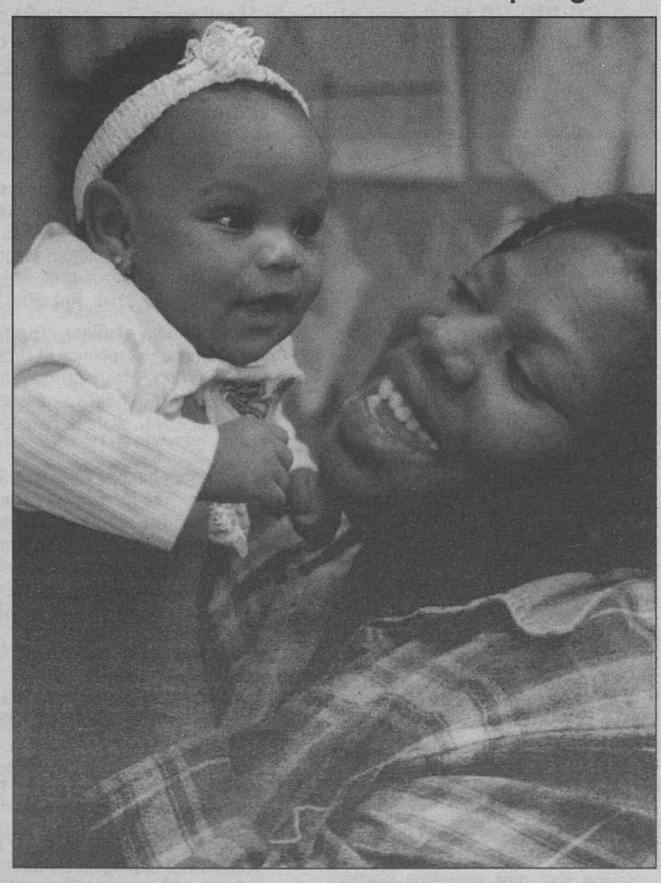
The service's goal is to enable HIV-infected women to remain independent as long as possible.

"We are extremely pleased to be part of the Faith in Action network and to be able to offer this help to women at Helena Hatch," said Linda M. Mundy, M.D., assistant professor of medicine and director of the Helena Hatch Special Care Center. "We have a number of area churches ready to participate, and we will soon begin training volunteers."

The program was made possible by a grant from the Robert Wood Johnson Foundation.

The Helena Hatch Special Care Center provides comprehensive care to women living with HIV infection and their families. The center operates in partnership with the Spiritual Care Program and Resource Services Program, both at Barnes-Jewish Hospital, along with several local AIDS organizations and churches.

For more information or to volunteer, call 747-1024.



FILE PHOTO

Paris Collins and her baby girl, Kyanna, are one of the many families who benefit from the services offered by the Helena Hatch Special Care Center. The new "Faith in Action" program enables HIV-infected women to remain independent as long as possible.

Asthma study needs volunteers

Are you a non-smoker with asthma who is between 18 and 60 years old? If you also use inhaled steroids and are not pregnant, you may be eligible for a study that evaluates the effects of inflammation from this disease. Participants will be paid for their time, receive free screening tests and medications and undergo two free procedures at Barnes-Jewish Hospital. For more information, call Steve DeMartino at 362-3845.

University Events

Renowned mezzo-soprano Castle to present intimate *Liederabend*

BY LIAM OTTEN

Mezzo-soprano Joyce Castle, who spent more than 15 years with the Metropolitan Opera and the New York City Opera, will perform an intimate *Liederabend* at 3 p.m. Sept. 22 in Steinberg Auditorium in Steinberg Hall for the Department of Music in Arts & Sciences.

Literally translated as "evening of song," *Liederabend* is a German term referring to a recital given by a singer and pianist, particularly of works by 19th-century Austrian or German composers such as Franz Schubert, Robert Schumann, Johannes Brahms or Hugo Wolf.

The program includes songs of Brahms; Gustav Mahler's *Rückert Lieder*; music from Kurt Weill's *The Rise and Fall of the City of Mahagonny* and *One Touch of Venus*; and Wolf's *Cophtisches Lied*.

Castle has been featured as principal artist in more than a dozen productions with the Metropolitan Opera and in major roles with Lyric Opera of Chicago, Central City Opera and New Israeli Opera, as well as with companies in Dallas, Houston, San Francisco, Santa Fe, N.M., Seattle, Washington, D.C., Belgium, France, Germany and Italy.

Her diverse repertoire ranges from the role of Orlofsky in Johann Strauss' *Die Fledermaus* to the Witch in *Hansel and Gretel* and Elizabeth I of England in the American stage premiere of Benjamin Britten's *Gloriana*.

Castle has sung extensively from the 20th-century German repertoire, notably the role of Claire Zakanassian in the New York premiere of Gottfried von Einem's *The Visit of The Old Lady* and in numerous works by Richard Strauss.

She performed as Herodias in Sir Peter Hall's acclaimed production of *Salome* for the Washington Opera — a role she's reprised for the Calgary Opera, Manitoba Opera, Opera Columbus, the Austin Lyric Opera and the Seattle Opera, among others. She also has appeared in *Elektra* at the Florentine Opera in Milwaukee; in *Der Rosenkavalier* (Annina) at the Metropolitan Opera; and in *Die Schweigsame Frau* (The Housekeeper) at the Santa Fe Opera.

Major roles in American opera include Mrs. Lovett in Hal Prince's critically acclaimed production of Stephen Sondheim's *Sweeney Todd*; Madame d'Urfe in the New York premiere of Dominick Argento's *Casanova's Homecoming*; and Alla Nazimova in Argento's *The Dream of Valentino*.

Her Augusta Tabor in Douglas Moore's *The Ballad of Baby Doe* — a role she has performed in seven productions across the country — is considered definitive and led *Opera* magazine to label her "perhaps our best character mezzo."

As a concert artist, Castle has performed as a soloist with the Baltimore Symphony; with the American Symphony Orchestra and the New York Philharmonic (both at Lincoln Center); with the contemporary ensemble Parnassus; for Radio France; and at the Academia de Santa Cecilia in Rome. She sang the first performance of Leonard Bernstein's *Arias and Barcarolles*, with Bernstein himself at the piano.

Castle has appeared on PBS in Wagner's *Der Ring des Nibelungen* and in numerous Texaco Metropolitan Opera radio broadcasts. Her recordings include the title role in Menotti's *The Medium* (Newport Classics); the role of Mother in Menotti's *The Consul* (Cedille Records); and the role of the Old Lady in New World Records' Grammy Award-winning *Candide*.

She also has been featured on collections of music of Stephen Sondheim, Stefan Wolpe and Joseph Fennimore.

An alumna of the University of Kansas and the Eastman School of Music, Castle joined the KU faculty as an artist in residence in September 2001.

Tickets for the Sept. 22 concert are $15; $10 for University faculty and staff and for seniors; and $5 for students. Tickets are available at the Edison Theatre Box Office, through all MetroTix outlets and at the door.

For more information, call 935-4841.

Concert

Who: Mezzo-soprano Joyce Castle

What: *Liederabend*: Music of Brahms, Mahler, Weill and Wolf

Where: Steinberg Auditorium, Steinberg Hall

When: 3 p.m. Sept. 22

Cost: $15, $10 for University faculty and staff and for seniors, $5 for students; available at the Edison Theatre Box Office, through all MetroTix outlets and at the door

Sponsor: Department of Music in Arts & Sciences

For more information, call 935-4841.

NeuroAIDS • Molecular Chaperones • Mid-career Issues

"University Events" lists a portion of the activities taking place at Washington University Sept. 13-26. Visit the Web for expanded calendars for the Hilltop Campus (www.wustl.edu/calendar) and the School of Medicine (medschool.wustl.edu/calendars.html).

Exhibitions

The Book of Roofs, #0001: Tracajá. Josely Carvalho. Photolitho-and-mixed-media prints. Sept. 13-Oct. 27. Des Lee Gallery, 1627 Washington Ave. 621-8537.

H.W. Janson and the Legacy of Modern Art at Washington University in St. Louis. Exhibition from the University collection. Through Dec. 8. Gallery of Art. 925-4523.

Targets. Christian Jankowski, video artist. Through Dec. 8. Gallery of Art. 935-4523.

Lectures

Friday, Sept. 13

9:15 a.m. Pediatric Grand Rounds. "NeuroAIDS." David Clifford, Seay Professor of Clinical Neuropharmacology and head of neurology. Clopton Aud., 4950 Children's Place. 454-6006.

10 a.m. Biology and Biomedical Sciences Seminar Series. Doctoral thesis defense. "Evolutionary Markers of Serine Protease Catalysis." Maxwell Masters Krem, program in molecular cell biology. South Bldg., Rm. 2918. 362-4152.

Noon. Cell Biology & Physiology seminar. "Molecular Chaperones and ER Protein Quality Control." Jeffrey L. Brodsky, assoc. prof. of biological sciences, U. of Pittsburgh. McDonnell Medical Sciences Bldg., Rm. 426. 747-4233.

Noon. Association of Women Faculty brown bag lunch. "Negotiating Mid-career Issues: Tips for Faculty in Humanities, Sciences, and Engineering." Sally Goldman, asst. chair and assoc. professor of computer science; Lynn Tatlock, chair, Germanic languages and literatures; Susan Rotroff, Jarvis Thurston and Mona Van Duyn Professor in the Humanities; Patty Jo Watson, Edward Mallinckrodt Distinguished University Professor. Women's Building Formal Lounge conference room. 935-4449.

Monday, Sept. 16

Noon. Molecular Biology & Pharmacology seminar. "Centrosome Regulation at the Nucleolus." Jason D. Weber, asst. prof. of cell biology & physiology. South Bldg., Rm. 3907, The Phillip Needleman Library. 362-0183.

4 p.m. Biology seminar. "Molecular, Biochemical and Genetic Dissection of the Plastid Division Machinery in Plants." Katherine Osteryoung, assoc. professor of plant biology, Mich. State U. Rebstock Hall, Rm. 322. 935-7888.

Tuesday, Sept. 17

Noon. Alzheimer's Disease Research Center Tuesday Conference Seminar Series. "Provision of Dementia Care by Physicians & Nurse Practitioners: Confidence, Attitudes, and Continuing Education Needs." Thomas Meuser, asst. prof. of neurology and neurological surgery. Barnes-Jewish Hosp. Bldg., East Pavilion Aud. 286-2881.

4 p.m. Anesthesiology Research Unit Seminar Series. "Single Vesicle Studies of Exocytosis — Tethering, Storage, Fusion, and Release." Manfred Lindau, assoc. prof. of applied and engineering physics, Cornell U. Clinical Sciences Research Bldg., Rm. 5550. 362-8560.

7 p.m. Architecture Monday Night Lecture Series. Coral Courts Lecture. "^{3}Blending^{2}." Wiel Arets, architect. Steinberg Hall Aud. 935-6200.

Wednesday, Sept. 18

8:15 a.m. Obstetrics & Gynecology Grand Rounds. "Exercise in Pregnancy." Becky A. Lynn, chief resident, obstetrics and gynecology. Clopton Aud., 4950 Children's Place. 362-1016.

3:45 p.m. Physics colloquium. "RHIC and the Quark-Gluon Plasma." Ulrich Heinz, prof of physics, Ohio State U. (Coffee, 3:30, Compton Hall, Rm. 245.) Crow Hall, Rm. 204. 935-6276.

4 p.m. Biochemistry & Molecular Biophysics seminar. "Biochemical and Structural Studies on a Viral Genome Packaging Machine." Carlos E. Catalano, assoc. prof. of pharmaceutical science, U. of Colo. School of Pharmacy, Denver. Cori Aud., 4565 McKinley Ave. 362-0261.

Thursday, Sept. 19

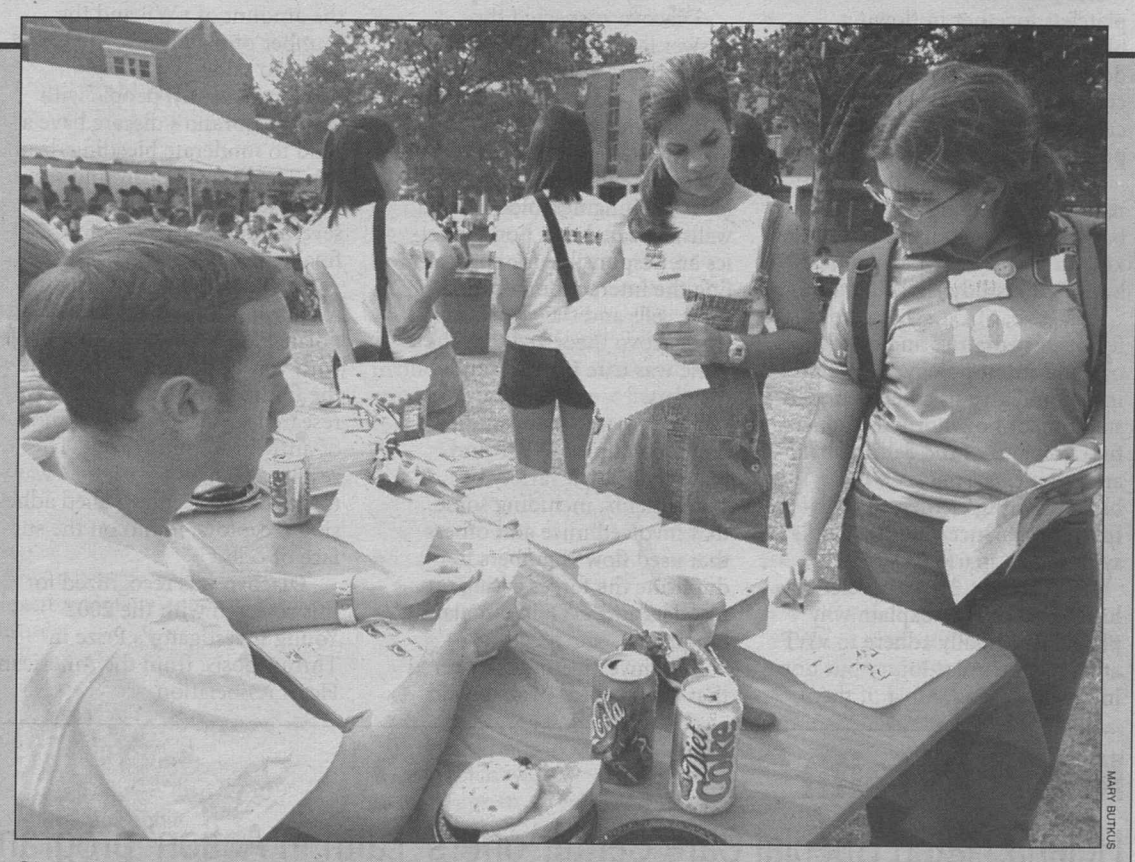
Noon. Genetics Seminar Series. "Yeast Transcriptional Regulatory Mechanisms." Kevin Struhl, prof. of biological chemistry and molecular pharmacology, Harvard U. Medical School. 362-2139.

1-5:30 p.m. William H. Danforth Scientific Symposium. "Medicine at the Millennium: Highlighting the Interface Between Immunology and Molecular Medicine." Eric P. Newman Education Center, main auditorium. 362-3365.

3 p.m. Mechanical Engineering lecture. "A Small History of Small Satellites: Some Were for Fun, Some Were for Profit, and Some Didn't Work." Michael Swartwout, asst. prof. of mechanical engineering. Cupples II Hall, Rm. 100. 935-6047.

4 p.m. Biology seminar. "The Nucleolus and Ribosomal Gene Transcription." Brian McStay, senior lecturer in biomedical research, U. of Dundee, Scotland. Rebstock Hall, Rm. 322. 935-7569.

4 p.m. Chemistry lecture. Joseph W. Kennedy Memorial Lecture. "The Effect of Dimensionality on the Properties of Matter." Stuart A. Rice, Frank P. Hixon Distinguished Service Professor in chemistry, U. of Chicago. (Reception, 3:30 p.m.) Lab Sciences Bldg., Rm. 300. 935-6530.



MARY BUTKUS

Sign me up First-year students Marileana Garcia (left) and Isabel Acevedo sign up at the Relay For Life booth, staffed by senior Chris Alvarado, during the recent Community Service Fair in the South 40. More than 50 St. Louis nonprofit agencies and several campus organizations attended the event to help freshmen become more interested and involved in serving the community.

Friday, Sept. 20

9:15 a.m. Pediatric Grand Rounds. "Research Ethics." Ronald Munson, prof. and chair of philosophy. U. of Mo. St. Louis. Clopton Aud., 4950 Children's Place. 454-6006.

11 a.m. Chemistry lecture. Joseph W. Kennedy Memorial Lecture. "Optical Control of Molecular Dynamics: An Overview." Stuart A. Rice, Frank P. Hixon Distinguished Service Professor in chemistry, U. of Chicago. McMillen Lab, Rm. 311. 935-6530.

4 p.m. Russian lecture. "Pushkin: A European Romantic in the Russia of Nicholas I." Boris Gasparov, prof. of Slavic languages, Columbia U. Women's Building Formal Lounge. 935-5177.

6 p.m. WUSTL Libraries lecture. "Celebrating the Henry Hampton Collection." Julian Bond, NAACP chairman. Graham Chapel. 935-6154.

Monday, Sept. 23

Noon. Molecular Biology and Pharmacology seminar. "As Time Glows By: Period Determination in the Mammalian Circadian System." Erik Herzog, asst. prof. of biology. South Building, Phillip Needleman Library. 362-0183.

Noon-1 p.m. Work, Families, and Public Policy Brown Bag Seminar Series. "Economic Evaluation of AIDS Clinical Trials." Barton Hamilton, assoc. prof. of economics, management, and entrepreneurship. Eliot Hall, Rm. 300. 935-4918.

4 p.m. Biology seminar. "Quantitative Evolutionary Genomics of Drosophilia: Eyes, Wings, Hearts, Drugs and Variation." Greg Gibson, assoc. prof. of genetics, N.C. State U. Rebstock Hall, Rm. 322. 935-6719.

4 p.m. Immunology Research Seminar Series. "The Incredible Likeness of Bonding: Leukocytes, Platelets and Disease States." Thomas Diacovo, assoc. prof. of pediatrics and asst. prof. of pathology and immunology. Eric P. Newman Education Center. 362-2763.

Tuesday, Sept. 24

Noon. Alzheimer's Disease Research Center Tuesday Conference Seminar Series. "The Gamma-secretase Cleavage of APP." Silva Hecimovic, dept. of psychiatry. Barnes-Jewish Hosp. Bldg., East Pavilion Aud. 286-2881.

Noon. Molecular Microbiology and Microbial Pathogenesis Seminar Series. "Genes and Signals." Mark Ptashne, head of gene regulation in molecular biology, Sloan-Kettering Inst., New York. Moore Aud., 660 S. Euclid Ave. 362-3692.

4 p.m. Anesthesiology Research Unit Seminar Series. William Craigen, assoc. prof. of molecular and human genetics and asst. prof. of pediatrics, Baylor College of Medicine. Clinical Sciences Research Bldg., Rm. 5550. 362-8560.

5 p.m. Engineering School Connection Series. "A View from Ground Zero — One Year Later." H.G. Schwartz, chairman, Jacobs Civil Inc. Reservations required. Ridgley Hall, Holmes Lounge. 935-5363.

Wednesday, Sept. 25

8:15 a.m. Obstetrics & Gynecology Grand Rounds. "Obstetric Anesthesia: Effects on Labor, Speed and Outcome." Barbara Leighton, prof. and chief of obstetric anesthesiology. Clopton Aud., 4950 Children's Place. 362-1016.

Thursday, Sept. 26

11 a.m. Pulmonary and Critical Care Medicine Grand Rounds. "The Why, When, and How of Cardiopulmonary Exercise Testing." Michael Lippmann, assoc. prof. of medicine, John Cochran VA Medical Center, St. Louis. Barnes-Jewish Hosp. Bldg., East Pavilion Aud. 362-6904.

Noon. Genetics Seminar Series. "Preimplantation Human Embryo

Vo-Du Macbeth symposium at Umrath Lounge Sept. 24

BY LIAM OTTEN

Wayne Fields, Ph.D., the Lynne Cooper Harvey Distinguished Professor in English and co-director of American Culture Studies, both in Arts & Sciences, will moderate a symposium on *Vo-Du Macbeth*, a new Creole-flavored adaptation of the Shakespearean classic.

The event is free and open to the public and takes place from 4:30-6 p.m. Sept. 24 in Umrath Lounge in Umrath Hall.

The symposium is held in conjunction with the Midwest premiere of *Vo-Du Macbeth*, a work-in-progress created and produced by the National Spirit Project, which launches the University's 2002-03 Edison Theatre OVATIONS! Series with a pair of performances Sept. 28 and 29.

Inspired by Orson Welles' famed 1936 adaptation, which set the tale in Haiti amidst African drumming, costumes and dance, *Vo-Du Macbeth* unfolds in New Orleans amongst the Gens de Coulour Libre, or Free People of Color, at the close of the Civil War.

The symposium will address questions pertaining to the creation of *Vo-Du Macbeth*, the history and culture on which the play draws as well as the process of theatrical adaptation. Speakers include:

- **Lenwood Sloan**, playwright and creative director of *Vo-Du Macbeth*. Sloan will speak on "The Making of *Vo-Du Macbeth*: The Play, Its Production and My Creative Process."
- **Peter Kastor**, Ph.D., assistant professor of history and of American Culture Studies, both in Arts & Sciences. Kastor will provide "A Portrait of 19th-Century New Orleans," detailing the cultural background that shapes the world of the play.
- **Rob Henke**, Ph.D., associate professor of drama and comparative literature, both in Arts & Sciences. Henke will speak on "Post-Colonial Adaptation of Shakespeare."
- **Donna Northcott**, founder and artistic director of St. Louis Shakespeare. Northcott will speak on "Adapting Shakespeare for Non-Traditional Audiences," with particular focus on artistic strategies for making the witches and their prophecies palatable to contemporary audiences.
- **Robert Vinson**, Ph.D., assistant professor of history and of African and Afro-American Studies, both in Arts & Sciences. Vinson will discuss "Blacks on Either Side of the Atlantic: The Zulu Social Club of New Orleans," analyzing both the meaning of "Zuluness" as the epitome of black masculinity in African-American nationalist thought and the simultaneous view by Zulus of African-Americans as the most advanced blacks in the world, upon whom they attempted to pattern their own educational, political, economic, cultural and religious advancement.

For more information about the *Vo-Du Macbeth* symposium, call 935-4912. For information about the show itself, call 935-6543.

Vo-Du Macbeth Symposium

Who: Edison Theatre OVATIONS! Series and American Culture Studies in Arts & Sciences

When: 4:30-6 p.m. Sept. 24

Where: Umrath Lounge, Umrath Hall

Cost: Free and open to the public

For more information, call 935-4912.

DAVID KILPER

Lorraine Goffe-Rush, director of employee relations and human resources, addresses guests at the kickoff breakfast marking the start of the 2002 campaign for the United Way of Greater St. Louis.

United Way

Provides assistance to more than 200 organizations

– from Page 1

viding services for people in the community, making it one of the highest assistance rates in the country.

The region is on top in another area, too. Despite being just the 18th-largest metro area in the nation, St. Louis ranks eighth in terms of support for the United Way.

The United Way provides assistance to more than 200 health and human service organizations in Missouri and Illinois, with one in three people in the region being helped by a United Way-assisted organization.

The campaign officially ends Oct. 21, but the Office of Human Resources will accept pledge cards up to the end of the calendar year and beyond.

Diagnostics: Genomic/Cytogenetic." Mark Hughes, prof. and dir., Center for Molecular Medicine and Genetics, Wayne State U., Detroit. McDonnell Medical Sciences Bldg, Rm. 823. 362-2139.

4 p.m. Biology seminar. "Genetics and the State in the 'Cold War' Era." John Beatty, Morse-Alumni Distinguished Teaching Professor and prof. of ecology, evolution and behavior, U. of Minn. Rebstock Hall, Rm. 215. 935-6808.

4 p.m. Chemistry seminar. "Enhanced Sensitivity Magnetic Resonance Techniques for Semiconductors: Optical Pumping, Dynamic Nuclear Polarization, and Electrical Detection." C. Russell Bowers, assoc. prof. of chemistry, U. of Fla. McMillen Lab., Rm. 311. 935-6530.

4 p.m. Ophthalmology and Visual Sciences Seminar Series. "Crystal Structure of PEDF: A Potent Anti-angiogenic and Neurite Growth-promoting Factor." Carl Volz, assoc. prof. of microbiology and immunology, U. of Ill. at Chicago. Barnes-Jewish Hosp. Bldg., East Pavilion Aud. 362-1006.

7 p.m. Architecture Monday Night Lecture Series. Annual Fumihiko Maki Lecture. "Working in India." Charles Correa, architect, Ruth and Norman Moore Visiting Professor of Architecture. Steinberg Hall Aud. 935-6200.

Music

Thursday, Sept. 19

8 p.m. Jazz at Holmes. Pianist Ptah Williams and Trio. Holmes Lounge, Ridgley Hall. 935-4841.

Sunday, Sept. 22

3 p.m. Concert. *Liederabend.* Joyce Castle, mezzo-soprano. Cost: $15, $10 for WUSTL faculty and staff, $5 for WUSTL students. Steinberg Hall Aud. 935-6543.

Sports

Friday, Sept. 13

3:30 p.m. Volleyball vs. Wittenberg U. Athletic Complex. 935-4705.

8 p.m. Volleyball vs. Central College. Athletic Complex. 935-4705.

Saturday, Sept. 14

10:30 a.m. Women's Tennis vs. Cornell College. Tao Tennis Courts. 935-4705.

10:30 a.m. Volleyball vs. Ohio Northern U. Athletic Complex. 935-4705.

3 p.m. Volleyball vs. U. of Puget Sound. Athletic Complex. 935-4705.

7 p.m. Football vs. MacMurray College. Francis Field. 935-4705.

Friday, Sept. 20-Sunday, Sept. 22

All day. Men's & Women's Tennis. WU Invitational. Tao Tennis Courts. 935-4705.

Saturday, Sept. 21

7 p.m. Men's Soccer vs. Principia College. Francis Field. 935-4705.

Wednesday, Sept. 25

7 p.m. Volleyball vs. Fontbonne U. Athletic Complex. 935-4705.

Thursday, Sept. 26

7 p.m. Women's Soccer vs. Fontbonne U. Francis Field. 935-4705.

And more...

Tuesday, Sept. 17

Noon-1 p.m. Toastmasters event. Washington University Toastmasters For Oratorical Readiness (WUTFOR). 4480 Clayton Ave., Rm. 1140A. 935-6001.

Friday, Sept. 20

7:30 a.m-5 p.m. Center for the Application of Information Technology meeting. Annual Innsbrook Golf Outing and Executive Speaker Series. "Does IT Have Responsibility for Corporate Accounting Practices?" Harvey Kelley, partner, PricewaterhouseCoopers. Open to CAIT members only. Innsbrook Estates Executive Conference Center. 935-4792.

Saturday, Sept. 21

8 a.m.-1 p.m. Continuing Medical Education course. "Annual St. Louis Critical Care Update." Cost: $25. St. Louis Science Center, Exploradome Exhibition Gallery. To register: 362-6891.

KFNS to broadcast Bears football

The University and FanSports KFNS Radio (590 AM/100.7 FM) have teamed up to broadcast Bear football games this season. The games will be broadcast live and also can be heard on the KFNS Web site at www.kfns.com.

2002 Washington University football games on KFNS:

Sept. 14 7 p.m.
MacMurray College

Sept. 21 6 p.m.
at Illinois Wesleyan University

Sept. 28 7 p.m.
Rose-Hulman Institute of Technology

Oct. 12 1 p.m.
Trinity University

Oct. 19 Noon
at University of Chicago

Oct. 26 12:30 p.m.
Case Western Reserve University

Nov. 9 Noon
Carnegie Mellon University

Times listed are kickoff; pregame show starts 10 minutes prior to start of game.

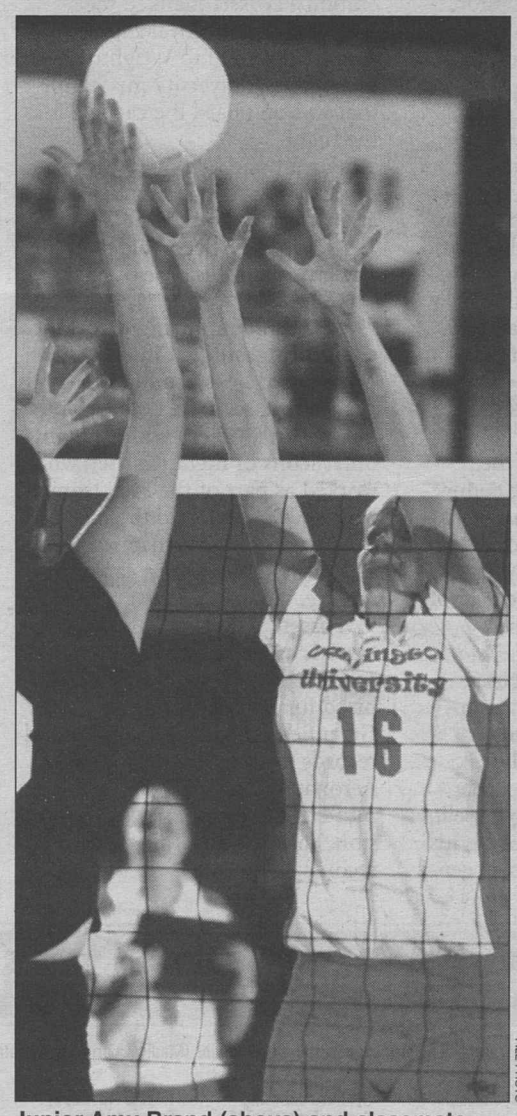
Sports

Volleyball captures WU Classic title

The No. 4 volleyball team had another perfect weekend with victories over Webster (3-0), Southwestern (3-0), Westminster College (3-0) and the University of Saint Francis (3-1) to claim the WU Classic title Sept. 6-7. Senior co-captain Rebecca Rotello recorded 123 assists in the four matches as she passed Meg Vitter for third place on the all-time WUSTL list with 3,286 assists. Rotello and juniors Amy Brand and Katie Quinn were named to the all-tournament team as the Bears captured their second straight tournament victory. Washington U. captured the Molten Pikes Peak Challenge in Colorado Springs, Colo., Aug. 30-31. The Red and Green (8-0) will try to keep its perfect record alive when it hosts the Washington University Invitational today and Sept. 14 at the Field House. The Bears will open up play today against No. 11 Wittenberg University at 3:30 p.m.

Other updates

For the second straight year, the **football team** went down to the final minute of its season-opener before pulling out a win. The Bears recorded a 16-14 victory over visiting Simpson College (Iowa) Sept. 7. Trailing 14-13 with 11:30 left in the game, the Bears embarked on a 22-play, 98-yard drive to set up Ben Lambert's game-winning, 18-yard field goal with 46 seconds left. The drive consumed 10:44 as WUSTL won its 12th straight season opener. Lambert, who tied the team's single-game record with three field goals in his first game with the team, gave the Bears a 6-0 lead after one quarter. A 56-yard Matt Alley-to-Brad Duesing touchdown pass made it 13-0 before Simpson took a 14-13 halftime lead. The Storm had just 91 yards of total offense in the first half, but an interception return set up a 1-yard TD run and a 38-yard punt return set up a 27-yard touchdown drive to give the Storm the one-point halftime edge. The Bears' Kevin McCarthy piled up 122 yards rushing on 29 carries in his first career start, including 43 on the game-winning drive. Alley finished 10 of 27 for 149 yards and a TD, while Duesing caught four passes for 90 yards and his first career TD. Freshman quarterback Nathan Szep took over late in the third quarter and completed nine of 16 passes for 82 yards, including seven of nine for 55 yards on the final drive. Brandon Roberts had a team-high seven tackles, while sophomore Ryan Jakusz recorded six tackles and a sack in his first career start.



FILE PHOTO

Junior Amy Brand (above) and classmate Katie Quinn were named all-tournament as the Bears won the WU Classic Sept. 6-7.

The **men's soccer** team posted a 0-1-1 record this past weekend as it competed in the UAA/SCAC Challenge in Sewanee, Tenn. In the tournament's opening game, the Bears tied the University of the South, 0-0 in double overtime. Sophomore goalkeeper Jeremy Kaplan-Lyman posted the shutout for the Bears as he played all 110 minutes, making five saves. The Bears outshot the Tigers 13-9. In a 1-0 loss to Rhodes College Sept. 7, the Bears outshot Rhodes 14-9 but could not muster a goal. Jeff Wishnew scored the game-winner in the 84th minute as the Bears dropped their first contest of the season.

The **women's soccer** squad improved to 2-1-1 on the year with a win and a tie last week. The Bears earned their first draw, and first shutout, of the young season with a 0-0 deadlock at Illinois Wesleyan Sept. 3. Goalkeeper Charlotte Felber played all 110 minutes and made three saves for WUSTL. On Sept. 7, the Bears got their first home win with a 6-0 whitewashing of Carleton College. Kim Raess recorded her second two-goal game of the season and tallied her second game-winning goal with a score in the 10th minute. Lindsey Ulkus, Megan Drews and Kelly Jung all scored goals, while Readie Callahan and Casey Herrforth combined for the shutout.

On the Web

For complete sports schedules and results, go to **bearsports.wustl.edu**.

STEVEN PURCELL

Spirit of Freedom **intern team leaders surround the capsule at the National Air and Space Museum in Washington, D.C. Joining pilot Steve Fossett are (clockwise from bottom left) Stephen Forbes, radio team; Emily Fredrix, media coordinator for Australia; Barry Tobias, project leader and assistant air traffic controller; Ines Tiu, call center team and now coordinator of alumni and student marketing and relations; Bryan Maddocks, media center team; and Jared Macke, assistant project leader and Web page team.**

Fossett

Capsule at National Air and Space Museum

– from Page 1

committed team members on the ground," Dailey said. "For the students of Washington University in St. Louis who handled Mission Control, the *Spirit of Freedom* flight was a once-in-a-lifetime learning experience."

Wrighton congratulated Fossett, an alumnus and trustee, on behalf of the University.

"I'm pleased to publicly congratulate Steve Fossett on his historic achievement," Wrighton said. "Along with important contributions from other St. Louisans like Charles Lindbergh and James S. McDonnell in the area of aerospace achievements, Steve Fossett joins a very distinguished group of pioneers."

Wrighton mentioned the University's longstanding connection with Fossett's flights and faculty contributions, including the capsule's cabin-heating system designed by faculty in the School of Engineering and Applied Science.

He also thanked Anheuser-Busch and Hilton for their support in making the mission a learning experience for the interns.

Sitting next to the bright yellow capsule that will represent his historic achievement for future generations, Fossett thanked the University for its loyal support. And he returned to Wrighton the prestigious University medallion that was on board the capsule for the flight.

> **"Along with important contributions from other St. Louisans like Charles Lindbergh and James S. McDonnell in the area of aerospace achievements, Steve Fossett joins a very distinguished group of pioneers."**
>
> MARK S. WRIGHTON

Fossett said he hoped his successful circumnavigation would be an inspiration for students.

"I hope I've been able to excite students with this type of adventure," he said.

As a senior studying mechanical engineering, student intern Jim Garner said he is proud to have his name associated with the capsule as it sits in a gallery with so many other icons of flight. Garner, who worked as part of the Web team at Mission Control, said the internship experience has inspired him to continue pursuing a career in science.

Fossett, who also holds world records as an airplane pilot and speed sailor, officially was recognized for his efforts by Art Greenfield, director of contest and records for the National Aeronautic Association. On the *Bud Light Spirit of Freedom* mission, Fossett broke three world records:

- Total distance traveled, at 20,482 miles;
- Total flight duration, at 14 days 19 hours and 50 minutes; and
- Shortest time around the world, at 13 days 12 hours and 10 minutes.

After the announcement, Fossett signed over the historic capsule to the Smithsonian, with the media, his crew from America and Australia, student interns and a crowd of museum visitors witnessing the moment.

The capsule, made of a lightweight composite of Kevlar and carbon, measures 7 feet high, 5 feet long and 5 feet wide, and weighs 500 lbs. It was equipped with an autopilot, which helped Fossett maintain a constant altitude.

In addition to radio communications, Fossett had satellite e-mail and telephone communications on board. A heating system maintained the capsule temperature between 40 and 70 degrees Fahrenheit.

Fossett slept on a full-length bunk with a sleeping bag during the flight.

Spinal cord

Reeve regains ability to feel pinpricks

– from Page 1

and emotionally, and his confidence and outlook on life have dramatically improved," added McDonald, who also is a staff physician at Barnes-Jewish Hospital, the Rehabilitation Institute of St. Louis and St. Louis Children's Hospital. "However, this study only involved one person, and further research is needed to see if such therapies also are effective for others with spinal cord injury."

The research was a collaborative effort between the Department of Neurology, the Division of Bone and Mineral Diseases and the Mallinckrodt Institute of Radiology.

Reeve fractured his neck in an equestrian accident in 1995 when he was 42. His spinal cord injury was classified as the most severe type of injury with complete quadriplegia, also known as tetraplegia, which is paralysis of all four limbs.

Even optimistic specialists believe that recovery is possible only within the first six months to two years after injury. But unlike most patients with this condition, Reeve began an aggressive exercise program while he was still in rehabilitation in 1995.

Reeve began a series of evaluations at the medical school in the fall of 2000. The medical school's approach to spinal cord rehabilitation has three main goals: first, to help paralyzed individuals exercise and thereby receive the strength and cardiovascular benefits of physical activity; second, to help any undamaged nerve cells function as best they can; and third, to encourage new cells to grow.

To achieve those goals, the team combines several therapies, including functional electrical stimulation (FES), bone density treatments and aquatherapy.

"Our goal is to make recovery from spinal cord injuries a feasible option for most individuals," McDonald said. "I believe rehabilitation is going to shift to being a home-based, lifelong process that almost anyone with determination and proper medical supervision can achieve."

Reeve continued to use a specially designed FES exercise bicycle for one hour at least twice a week, which was part of his previous regimen. A computer sends electrical messages to his muscles, similar to what the brain does normally. This electrical stimulation causes the leg muscles to contract and pedal the bike.

FES also was applied to Reeve's other muscles, including his arms and abdominals. The research team theorizes that simulating normal motions will encourage spinal cord cells that still are intact to "remember" what it's like to be involved in movement.

Regular exercise also provides basic, physical benefits, including building muscle mass and bone density. By combining FES-assisted exercise with osteoporosis drug treatment, Reeve successfully reversed his previously severe osteoporosis and now has normal bone density.

Once Reeve could make small movements, he began aquatherapy at the Gaylord Rehabilitation Center in Connecticut. Since gravity's effects are drastically reduced under water, movements are enhanced and it is easier to practice any recovered abilities.

In 1999, Reeve still had no sensation or movement below his injury.

But now he can feel light touch and pinpricks on about 65 percent of his body and has regained about 20 percent of motor function. That means that he can move the majority of his joints when gravity is reduced and can move some joints against resistance, the best of which are his right wrist, left fingers and legs.

His motor improvement is about four times better than results in patients who receive the drug methylprednisolone within eight hours of injury, which is the only documented way to intervene in these patients.

Reeve's ability to feel touch has had the greatest impact on his daily life. For instance, he now can tell when he should shift his weight and can sit in a wheelchair for up to 16 hours.

The study also reports that Reeve's general health and quality of life have improved dramatically. Before 1999, he experienced nine life-threatening complications and required about 600 days of antibiotic treatment.

But in the past three years, he has not been hospitalized and has required only about 60 days of antibiotic treatment. As a result, his ability to commit to work projects and to participate in life have improved.

While it is impossible to determine the biological cause of physical improvements in a single case study, researchers at the medical school are conducting laboratory studies to determine whether regeneration and repair of nervous system cells may be responsible for these clinical results.

They also are planning a prospective, randomized clinical trial to examine the impact of physical and functional benefits of the therapy.

Employment

Go online to **hr.wustl.edu** (Hilltop Campus) or **medicine.wustl.edu/wumshr** (Medical Campus) to obtain complete job descriptions.

Hilltop Campus

Information regarding positions may be obtained in the Office of Human Resources, Room 130, West Campus. If you are not a WUSTL staff member, call 935-9836. Staff members call 9355906.

Research Technician 000256

Senior Medical Sciences Writer 010108

Planned Giving Officer 020086

Lab Technician – Part Time 020234

General Lab Asst. – Part Time 020237

Career Development Specialist 020317

Engineering Collections & Services Asst. 020337

Occupational Health Safety Technologist 020339

Staff Psychologist 020351

Mechanic (Bargaining Unit Employee) 020358

Assoc. Dir, Corporate Relations 020365

Regional Director of Development 020367

Career Dev. Specialist – Grad Students 020381

Internship Coordinator 020382

Health Services Physician 030009

Assistant Director of Admissions 030011

PC Support Technician 030016

Application Processor 030022

Senior Contract Management Liaison 030032

Department Secretary 030033

Computer & Data Technician 030040

Grant/Accounting Supervisor 030045

Accounting Asst. 030046

Clinical Program Coordinator 030051

School Accounting Manager 030053

Animal Caretaker 030060

Deputized Police Officer 030062

Physical Therapist 030064

Admin. Asst. to the Dean 030068

Coordinator of Media Relations 030061

Accounts Receivable Service Rep. 030070

Laboratory Technician/Analytical Chemist 030071

Telephone Operator 030073

Secretary 030074

Manager, Accounts Payable 030076

Trial & Advocacy Program Coord. 030077

Volunteer Coordinator 030078

Registered Nurse 030079

Coord. Of Undergrad Admin. & Freshman Programs 030080

Data Entry Processor 030081

Regional Director of Development 030082

Sr. Regional Dir. Major Gifts, N. Atlantic Region 030083

Director of Corporate Relations 030084

Advisor to International Students/Scholars 030086

Administrative/ Grants Coord. 030087

Systems Coordinator 030088

Medical Campus

This is a partial list of positions in the School of Medicine. Employees: Contact the medical school's Office of Human Resources at 3627196. External candidates: Submit résumés to the Office of Human Resources, 4480 Clayton Ave., Campus Box 8002, St. Louis, MO 63110, or call 362-7196.

Phlebotomist – Part Time 020872

Clerk I 030092

Senior Departmental Accounting Asst. 030165

Professional Rater I – Part Time 030235

Medical Records Clerk 030244

Insurance, Billing and Collections Asst. II 030253

Senior Budget Analyst 030262

Medical Secretary II 030269

Research Patient Coord./Professional 030270

Supervisor, Clinical Office 030275

Division Administrator 030283

Custodian 030298

Custodian 030299

Custodian 030300

Clinical Nurse Specialist 030301

Health Physicist II 030302

Research Technician II 030304

Research Patient Coord./Professional 030305

Facilities Supervisor 030314

Research Technician I 030326

Administrative Asst.: Special Project Analyst 030327

Audiovisual Technician 030328

Secretary III 030330

Research Patient Asst. 030336

Campus Watch

The following incidents were reported to University Police **Sept. 3-10** Readers with information that could assist in investigating these incidents are urged to call 935-5555. This information is provided as a public service to promote safety awareness and is available on the University Police Web site at **police.wustl.edu**.

Sept. 3

8:55 a.m. — An unknown person took an oil painting of Elizabeth Danforth from the wall on the first floor common area of the Danforth House. Total loss is estimated at $500.

Sept. 6

4:20 p.m. — An employee reported that an unknown person stole a Canon digital camera from Bixby Hall. Total loss is estimated at $900.

Sept. 9

9:52 p.m. — A student reported that between 6:45-9:45 p.m., an unknown person entered her green 1998 Honda Accord, parked in the center of Parking Lot No. 4 by North Brookings Hall. The person broke the rear passenger window and stole a laptop computer. Total loss is estimated at $3,505.

10:15 p.m. — A University employee reported that between 6:30-9 p.m., an unknown person punched open the passenger door of her 1991 Toyota, which was parked in Parking Lot No. 4 by North Brookings Hall. The faceplate of her stereo was ripped off and damaged. Total loss is estimated at $750.

Additionally, University Police responded to nine reports of larceny, two reports of fraud and one report each of auto accident, alarm, drug offense, disturbance, property damage and animal complaint

Sept. 11 – One Year Later

We are one nation, united by differences

Gerald Early, Ph.D., the Merle Kling Professor of Modern Letters and a frequent essayist on American cultural issues, comments here on national unity and what it means to be an American in the wake of Sept. 11.

The tragedy of Sept. 11 has forced many Americans to confront again the familiar question: What does it mean to be an American? The question has perhaps acquired a pitch of urgency as anti-Americanism seems more virulent now, exceeding even the anti-Americanism of the Vietnam War era.

The United States was visited, on Sept. 11, by what is, virtually, a commonplace in the modern world: large-scale death and destruction motivated by hatred. The fact that we thought ourselves virtually immune to such an attack because of our power and our geographical isolation uncovered a troubling complacency. It was the product of two unattractive states of mind that have afflicted Americans' sense of themselves: arrogance and innocence.

How dare someone attack us; and, in God's name, what have we done that we should be attacked? We Americans have often believed it is possible to consider people quite apart from the forces that have produced them. This has sometimes confounded our ability to understand ourselves in any mature way. Our moral simplicity as Americans has often made it difficult for us to understand how others see us or themselves. Our optimism and our success have convinced the rest of the world that we have no ability to understand tragedy, only a need to fix things. The world considers us privileged juveniles, alternately narrow-minded and gluttonous. Sometimes, the world has been right.


Early

The Sept. 11 attack caused some Americans to believe our culture to be both fragile and superficial, an unreal combination of contrived desire and rabid status-seeking, as we seem fixated on luxurious possessions and dieting. Americans may be as disliked by the rest of the world for our narcissism as for our seeming chauvinism, and this narcissism is, to many Americans, a sign of weakness. But other aspects of our cultural life became apparent after the attacks: our tremendous sense of volunteerism and moral duty, our deep philanthropic urge, our willingness to join and to organize. We are not shallow people.

The left condemns Americans for an inhumane foreign policy that has been constricted by provincialism, corrupted and controlled by huge money interests and flawed by racism. This has often been true, but not always. The United States has done things that were unwise, even morally reprehensible at times. But it is a distortion to characterize the United States, as some Marxists do, as an evil country. We have, on several occasions, tried to do good in the world and sometimes even succeeded. Yet I think the right is almost certainly correct in saying that the attack was not motivated by some historical memory of a dastardly U.S. intervention somewhere but rather by more desperate, and more irrational, expressions of jealousy, hatred and anger. We should take no false comfort in this by demonizing our enemy as our enemy has demonized us. Our enemy is not a sect of organized lunatics but a passionate movement against Western liberalism of some considerable reach and influence. The attack was a symptom, not the problem. Still, a war on terrorism is quixotic (terrorism by states is the true bane of the world) and likely only a political gambit to generate consensus to help a weak president get re-elected.

Never was the atmosphere in the United States more stifling, more oppressive, than during the few months immediately following the Sept. 11 attack when President George W. Bush enjoyed unnatural popularity and no one dared breathe a word of criticism for fear of being labeled unpatriotic. That phony consensus seemed to comfort many Americans, striking some oddly tuned chord of sentimentality that, finally, the Vietnam generation was going to get its Good War, as The Greatest Generation had with World War II. Thank goodness, we seem to have awakened from the fantasy that there are good wars or that we are Humphrey Bogart and Ingrid Bergman in Casablanca.

American ideology is not simply a belief in free markets and individual rights, it is the belief in the power of dissent. What makes America the powerful and, I think, ultimately, great nation that it is, is that we have a roiling, fluid culture, that we are a fairly divisive people but we manage our divisions, we learn to use the creative tensions they provide. We are factions and special interests, but we understand the limitations of our divisions as we understand our need for them.

Belief in America is the idea that there are many ways of seeing what we are, and we need all those ways of seeing. Many other nations have not come close to learning this. I hope the Sept. 11 tragedy has taught us that this unity in division might be the most important aspect of what it means to be an American.

— *Reprinted from the Sept. 8* St. Louis Post-Dispatch.

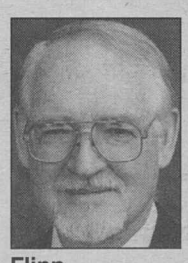
Sept. 11 memory: Love won a great victory here

Frank K. Flinn, Ph.D., adjunct professor of religious studies in Arts & Sciences and a noted authority on religious thought and expression, comments here on his experience of Sept. 11 and his hope that love will flourish in wake of terror and destruction.

On the morning of Sept. 11, 2001, I was on a Delta Air Lines flight from Barcelona to Atlanta. About 10 a.m. New York time, I sensed the plane was loosing altitude. I opened the shade and saw full sunlight directly out the window. I deduced that the plane was no longer heading toward the American coastline. In fact, it was headed north. Soon I spotted some islands. Having once landed at this spot in the Atlantic Ocean, I deduced again that the plane was going to land in the Azores. The plane was flying well, so I guessed that something else was going on. Maybe a hijacking, I thought.

At that moment, the captain's voice came over the speaker system. "We are all right," he assured us. "Nothing is wrong with the plane. We are going to be landing shortly. You are to exit the plane as quickly as possible. The stewards and stewardesses with assist you in this. Once we are in the waiting room, I will explain everything to you."

The woman traveling in the seat next to me was returning from a pilgrimage to San Juan Compostela. We had talked of spiritual things prior to the announcement. At that moment, we held hands and said the Lord's Prayer together. The plane landed and parked at the end of the runway. We were all hustled into the waiting room of the airport. Then


Flinn

the captain told us what had happened in New York and that our plane was being checked for a bomb.

We made our way into the airport restaurant just as the crumbling towers of the World Trade Center flickered over Portuguese television. We gaped in horror. Some of us who had been to New York a lot wondered how many perished with the buildings' collapse. To this day, as my sadness for those lost deepens, I marvel that so many escaped.

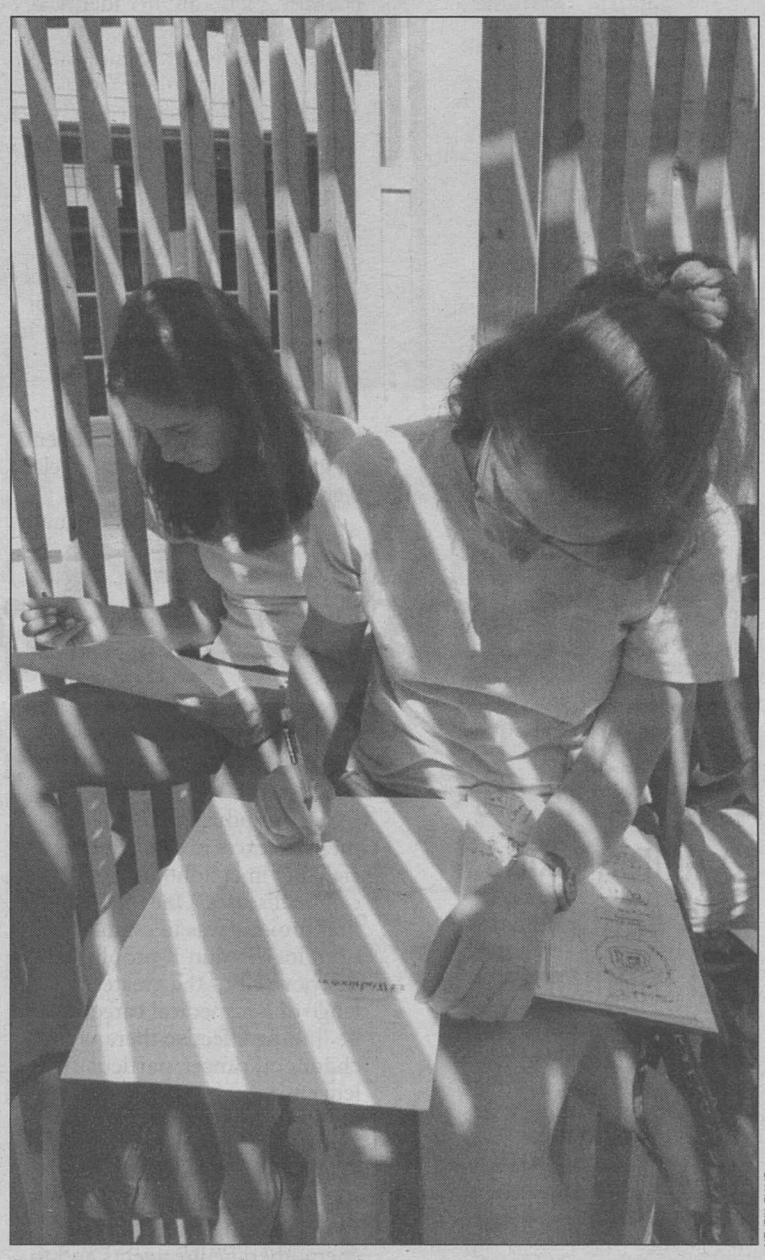
Travelers were frantically trying to reach loved ones. Many were calling New York. Those with cell phones kindly reached theirs to those without. The captain and the crew marshaled all the local people they could to make sure we had a place to eat and stay that night. The next morning I woke early and walked in grief to a church to meditate, but it was locked so I sat on the steps. That afternoon, we were flown back to Madrid. I did not make it home until late Friday.

As I watched television in Madrid over the Spanish, German and French channels, it became clear that al-Qaida was involved, and my inner self quaked at the possibility of worldwide religious war. But reporters started talking of something extraordinary that had taken place. Just at the moment when victims were aware that they could or were about to die, their last words were "I love you." "It looks bad, I love you." "Take care of the kids, I love you." "Tell Grandma goodbye, I love you." "I love you." "I love you."

No words of revenge. No hatred. No resentment. Just "I love you." It happened everywhere, again and again. From the World Trade Center, from the plane that went down in Pennsylvania, from the Pentagon. "I love you."

In the coming months, my thoughts of world affairs kept drifting toward the dark pit of hopelessness. My wife, Alice, kept calling me back. In January, went we to New York. We took the subway to Ground Zero. Amid the throng of people, we quietly said the prayer of St. Francis, "Lord, make me a channel of your peace." I turned toward the cranes and dust wafting up from the hole of devastation, and an inner voice spoke to me, "Love won a great victory here." It is this lesson that has kept me from despair.

Today I pray that this great lesson does not get overwhelmed. Too quickly our leaders have deflected our attention from love to patriotism, and revenge and war in a kind of mindless militarism. But that is not the message those who lost most left us. They taught us that the only way to conquer the hatred that showed its gaping maw on Sept. 11 is to learn to love, to learn to continue to love. Gandhi once said true patriotism is love of your neighbor, even if your neighbor is a Jew, a Muslim, a Hindu, a Christian or someone who has no belief at all. "I love you" is stronger that all the hatred the world can spew forth, and it is the only way the pain of the world will be healed. "I love you."


DAVID KILPER

Art as a means of expression The 300-some students and faculty in the School of Architecture — including first-year students Anisa Baldwin-Metzer (left) and Sara Morgan — marked the anniversary of the Sept. 11 terrorist attacks with an all-school, afternoon-long design forum. In groups or individually, participants prepared visual responses to the tragedy in the medium of their choice, working abstractly or figuratively, in color or in black and white, using words, images or any combinations thereof. The afternoon closed with an impromptu hanging of all drawings in the main lobby of Givens Hall, where they will remain on view for one week. "Many of our students made clear their desire to uphold the relevance of art as a means for expressing that which is inexpressible in words," said Peter MacKeith, associate dean in the School of Architecture, "whether you call it shock or horror or grief."


JOE ANGELES

Healing words First-year student Catherine Ogorzaly, from Englewood, N.J., writes her thoughts on Sept. 11 in a book of remembrance in Graham Chapel, which was kept open most of the day for reflection.

Washington People

Putting children first

Teresa Vietti, M.D., devotes her life to helping kids with cancer and mentoring medical students

BY KIMBERLY LEYDIG

Even as a little girl growing up in a rural Houston home, Teresa J. Vietti, M.D., knew she wanted to become a medical doctor.

When she wasn't tending to injured chickens, immobilizing their broken legs and nursing the frail birds back to health, she spent her time studying cells under a microscope.

"When I was about 8 years old, I began saving up my monthly allowance so I could buy a microscope," Vietti says. "At an early age, there was no doubt in my mind that I wanted to go to medical school."

As the daughters of a physical chemist, Vietti and her identical twin sister, Ardel, were captivated by the mysteries of science introduced to them by their father. Both girls boldly decided to pursue careers in medicine — in an era that didn't produce many female doctors.

They began undergraduate medical studies together at Rice University. Teresa went on to pursue her medical degree at Baylor University College of Medicine in 1949. Ardel attended the University of Texas Medical Branch in Galveston.

Only 5 percent of the students in the Baylor medical school class were female.

"Some of my teachers actually said they didn't believe women should become physicians," Vietti says.

Her response to that sentiment: to excel in medicine by specializing in childhood blood and cancer diseases. One of Vietti's first projects was to establish the need for vitamin K prophylaxis in newborns. But the greatest challenge of her medical career would be finding effective therapy for childhood cancer, particularly leukemia.

For the past four decades, Vietti has been a vital force in the clinical trials of pediatric malignancies. She contributed to laboratory investigations of chemotherapeutic agents and to new drug development.

She also served as the first chair of the national Pediatric Oncology Group from 1980-1993.

Now professor emerita of pediatrics, her interests include sarcomas of soft tissue and bone as well as acute lymphoblastic leukemia.

"Dr. Vietti is a stalwart member of the faculty," says Philip R. Dodge, M.D., professor emeritus and former chair of the Department of Pediatrics. "She is an excellent teacher, clinician and an empathic physician — and she has a great, dry sense of humor."

COURTESY PHOTO

Both Teresa (right) and her identical twin sister, Ardel, knew they wanted to study medicine when they were little girls.

Twin flames

The pioneering spirit that drove Vietti to pursue medicine in the wake of a sexist society was a trait she shared with her twin sister. After graduating from medical school, the Vietti twins were lured to foreign lands by the desire to help underprivileged nations.

Teresa ventured to Ankara, Turkey, where she spent six months in 1961 as a visiting pediatrician, focusing on malnutrition and infectious disease.

"Turkey was a fascinating and frustrating place," Vietti says. During her teaching post, she noticed that in some rural areas few Turkish children were living past the age of 6. The Turks had made bread with wheat supplied to them by the United States that was meant for planting.

Unfortunately, the wheat contained a fungicide that trigged a toxic reaction. Adults developed skin lesions, but young children were dying.

While Teresa was teaching young physicians in Turkey, Ardel spent five years as a medical missionary in Vietnam. Deep inside the South Vietnamese jungle, she directed a large leprosarium where she cared for 120 patients in the hospital and 1,200 outpatients.

On a late May evening in 1962, communist guerillas raided the leprosarium, capturing Ardel and her staff. Now — after almost 40 years — Ardel Vietti remains the only American woman still unaccounted for from the Vietnam War.

Vietti fondly remembers her sister, stressing her twin's deep religious beliefs and dedication to caring for others. A year before she was kidnapped, Ardel returned to America to visit Teresa, who had just joined the School of Medicine as an assistant professor of pediatrics. At the medical school, Ardel hoped to learn surgical procedures that would benefit her leprosy patients in Vietnam.

"I remember her visiting me at the hospital and saying, 'You spend more money in one day on one patient than I do in my whole hospital,'" Vietti says.

BOB BOSTON

Teresa Vietti, M.D., studies a blood smear with Katherine Tsai, a third-year medical student, during Tsai's oncology/hematology rotation. "I love teaching," Vietti says. "I love taking the medical students aside and teaching them about childhood blood and cancer diseases."

Child care

The vast resources and excellent level of care at St. Louis Children's Hospital have long impressed Vietti.

"Everybody's primary interest is the health of the child and returning the child back to his or her family," she says. "And I think that's fantastic."

> **"A teacher is invaluable. But a teacher who explains, encourages and befriends — and who takes time every morning to mentor medical students — is priceless. Dr. Vietti is that kind of teacher."**
>
> VIVIAN YU

Early in her medical career, Vietti was drawn to the unyielding determination and unstoppable spirit that children possess when it comes to fighting for their health.

"I, like many pediatricians, went into pediatrics because I don't like to have my patients die," she says.

Losing a patient, Vietti explains with anguish, is the most challenging aspect of her job.

"I've had parents console me and say, 'Dr. Vietti, you told us there wasn't a chance.' Telling parents that their child is going to die, and then trying to console them when they do die, is so difficult."

But over the course of her distinguished career, Vietti fortunately has seen mortality rates in oncology patients drastically decrease. When Vietti first entered the field of oncology/hematology in the early '60s, the survival rate of children with cancer was only around 15 percent.

"It used to be that unless surgeons could remove the cancer, the child would die," Vietti says. "When we added radiation therapy and especially chemotherapy, there was a marked improvement in life expectancy. Now, the survival rate is about 80 percent."

And Vietti's peers insist that her medical expertise has been key to the field's profound advances.

"Dr. Vietti has complemented the field of pediatric oncology in a profound way by pioneering studies of new agents in animal models of leukemia and solid tumors," says William Crist, M.D., dean of the University of Missouri School of Medicine. "She also has strongly supported basic science and translational research within the cooperative group system, leading to formation of central reference labs and cell banks that facilitated a host of scientific discoveries."

Crist first met Vietti in 1970 when he began his fellowship in pediatric hematology/oncology at the School of Medicine. Vietti had been appointed director of the Division of Pediatric Hematology/Oncology and soon took Crist under her wing.

"She has been tireless, caring, devoted and selfless in this effort, and through her efforts, and those of a few other giants in this field, children with cancer have benefited enormously," he says.

Crist adds that Vietti supported and inspired him through her work both in the lab and clinic, and with patients. "Later, she supported me within the Pediatric Oncology Group and gave me a chance to lead," he says.

Mentoring young physicians is still a gift Vietti shares with medical students today.

"A teacher is invaluable," explains third-year medical school student Vivian Yu, who recently worked with Vietti. "But a teacher who explains, encourages and befriends — and who takes time every morning to mentor medical students — is priceless. Dr. Vietti is that kind of teacher."

Vietti adds that she also receives endless rewards from working with bright students like Yu.

"I love teaching," she says. "I love taking the medical students aside and teaching them about childhood blood and cancer diseases."

As professor emerita of pediatrics, Vietti volunteers much of her time for teaching and academic writing. She has contributed to nearly 30 books and more than 200 publications.

Ever since she was a little girl tending to injured birds, Vietti has been devoted to medicine.

"I love medicine — forget about everything else," she says. "It doesn't make a difference what other priorities I have, medicine always comes first."

Teresa J. Vietti, M.D.

Award highlights: The American Cancer Society Spirit of Health Award in 2001; the Leukemia Society of America Return of the Child Award in 1999; the Society of Pediatric Hematology/Oncology's Distinguished Career Award in 1994; the UNICO Award in 1976

Family: Her brother, Victor, an engineer, lives in Houston; her 11-year-old Maine coon cat, Peter, and two Jack Russell terriers, Spuds and Big John — "The latter is such a little tyrant"

Hobbies: Reading scientific journals and gardening

Upcoming adventures: "I've always wanted to see the Great Barrier Reef in Australia," says Vietti, who will head Down Under later this month