

Washington University School of Medicine

Digital Commons@Becker

Washington University Record

Washington University Publications

12-3-2004

Washington University Record, December 3, 2004

Follow this and additional works at: <https://digitalcommons.wustl.edu/record>

Recommended Citation

Washington University Record, December 3, 2004. Bernard Becker Medical Library Archives.
<https://digitalcommons.wustl.edu/record/1022>.

This Article is brought to you for free and open access by the Washington University Publications at Digital Commons@Becker. It has been accepted for inclusion in Washington University Record by an authorized administrator of Digital Commons@Becker. For more information, please contact vanam@wustl.edu.

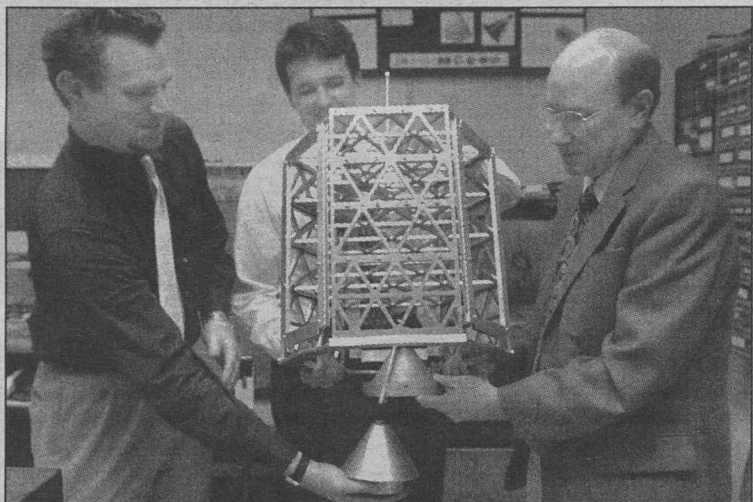
Record

Dec. 3, 2004

Volume 29 No. 16



Washington University in St. Louis



Graduate student Jared G. Macke (left) and faculty members Michael A. Swartwout (middle) and Keith J. Bennett simulate a docking exercise with *Bandit* — which Macke is holding — docking with its mother ship, *Akoya*. *Bandit* is a “university-class” satellite that is being prepared for a January NASA/Air Force-sponsored spacecraft design competition.

The value of failure

Students learn lessons in work on tiny satellite

By TONY FITZPATRICK

Failure at a university is a word with bad connotations, unless you are involved in building experimental satellites that the U.S. Air Force and NASA find interesting.

A University aerospace engineer who works with students building experimental spacecraft says the student-built ones, which he calls “university-class,” have a strong advantage over aerospace industry-built spacecraft: the freedom to fail.

“Experimental failure is a basic element of university life, and from the university perspective a failed spacecraft is not necessarily a failed mission,” said Michael A. Swartwout, Ph.D., assistant professor of mechanical and aerospace engineering. “Students still learn from the mistakes, and no one is hurt by

the failure.

“What universities can do for space science and engineering is tackle new or risky concepts — whether new technologies or different ways of operating spacecraft — and demonstrate a concept that might be used for a bigger spacecraft some day. This puts the risk on the student-side as opposed to Boeing, for instance, sinking millions of dollars into a dubious program.”

Swartwout said there has been a boom in spacecraft production at universities worldwide, with 30 university-built spacecraft launched over the past decade. Enabling this trend has been the electronics revolution of the late '90s, which made possible the opportunity for universities to make much smaller vehicles with much cheaper price tags.

See Satellite, Page 5

Chemist finds enzymes that ‘just say no to acid’

By DOUG MAIN

A University chemist has found surprisingly tough enzymes in a bacterium that “just say no to acid.”

Acid resistance is a valued trait for both pills and human pathogens. The bacterium *Acetobacter aceti* makes unusually acid-resistant enzymes in spades, which could make the organism a source for new enzyme products and new directions in protein chemistry.

A. aceti has been used for millennia to make vinegar, at least since an indirect reference in the Old Testament Book of Numbers to “vinegar made from wine.” But not until recently did anyone study the unusual biochemical features of the organism that allow it to survive — and even thrive — in very acidic conditions.



Kappock

T. Joseph Kappock, Ph.D., assistant professor of chemistry in Arts & Sciences, couldn't overlook this very promising bacterium.

“The thing that piqued our interest was that this organism has this weird growth habit of making vinegar from ethanol (alcohol), which means it's highly resistant to ethanol, which very few things grow in, and resistant to acetic acid (vinegar), which even fewer things grow in,” Kappock said.

“Important enzymes in this bug resist acid in a way almost all organisms cannot, and we're trying to answer the question, ‘How is this enzyme different?’”

See Enzymes, Page 5

WUSTL-associated startup Apath is model of success

By GWEN ERICSON

Originating in University research laboratories, St. Louis-based biotechnology company Apath has generated enough profit in just seven years to contribute \$1 million in royalty payments back to the School of Medicine.

Apath is the first University-associated startup to hit the \$1 million payback milestone.

The company identifies antiviral compounds effective against a group of viruses that cause serious diseases in humans. These viruses include the hepatitis C virus, the West Nile virus and the Ebola virus.

The company has an annual payroll exceeding \$1 million and revenue totaling \$15.5 million.

Apath's managing director is Charles M. Rice, Ph.D., who founded the company in 1997 while at the University.

An expert on viruses, Rice conducted research in the Department of Molecular Microbiology from 1986-2000. During this time, he patented his discoveries for diagnosis and treatment of the hepatitis C virus.

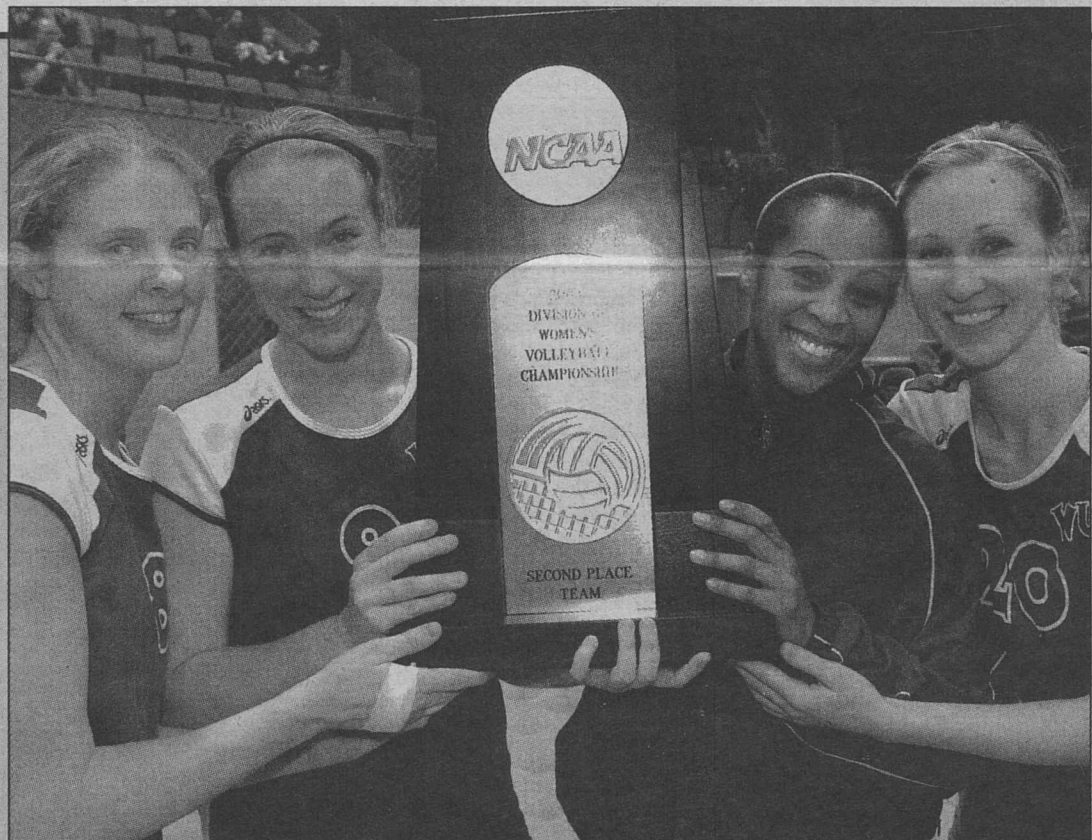
Rice is now head of the Laboratory of Virology and Infectious Disease at Rockefeller University.

His research drew the interest of a commercial diagnostic company, which bought the rights to use one of Rice's discoveries to develop diagnostic products.

Because the University gave Rice an exclusive license for the discovery, he was able to negotiate a deal with the company that provided funding and laboratory space to help launch Apath.

“Washington University generously granted Apath an exclusive license instead of going to a large company,” Rice said. “They not only took a risk that facilitated the success of Apath, they also took a stand for developing biotechnology startups in the

See Apath, Page 6



Reason to be proud Team captains Kara Liefer, Ishi Ballew, Jasmine Hunt and Colleen Winter hoist the second-place trophy after the volleyball squad fell to Juniata College in the NCAA Division III National Championship match Nov. 27 at the Mayo Civic Center in Rochester, Minn. The day before, the Bears bumped No. 3 University of La Verne to reach the finals. WUSTL finished the season 32-7 overall, 12-0 in the University Athletic Association. For more on the volleyball Bears and other University teams, see Sports, Page 2.

Seligman to become Rochester president

By JESSICA MARTIN

Joel Seligman, J.D., dean of the School of Law and the Ethan A.H. Shepley University Professor, has announced his intention to step down effective June 30, according to Chancellor Mark S. Wrighton.

Seligman, who came to Washington University in 1999 to serve as dean, will become president of the University of Rochester.

“Joel Seligman is an accomplished academic leader and will be a wonderful president for the University of Rochester,” Wrighton said.

“During his tenure as dean of the Washington University School of Law, he has contributed significantly to the progress of the school and has served the University in many ways. His dedication to students and faculty is a genuine strength, and he inspires the entire community he serves. He has the ability to develop a strategic plan and to lead its execution.

“His departure from Washington University in St. Louis is a loss for us, but he is destined to make contributions to American higher education as the president of a major research university, and I welcome the opportunity to work with him in his new capacity as a fellow leader of a member university in the Association of American Universities.

“I will look forward, too,” Wrighton added, “to friendly competition when the Washington University Bears take on the University of Rochester Yellowjackets in University Athletic Association play!”

Seligman is a nationally renowned author and expert on legal issues related to securities and corporations. His book, *The Transformation of Wall Street: A History of the Securities and Exchange Commission and Modern Corporate Finance*, is widely regarded as the leading history of the commission.

Seligman said he has enjoyed his time at the University.

“Washington University School of Law has been the finest community any law school dean could enjoy,” Seligman said. “It has been an honor and a joy to work with Mark Wrighton, wonderful administrators, an outstanding faculty, terrific students and loyal alumni.”

See Seligman, Page 6



Seligman

WASHINGTON UNIVERSITY MEDICAL LIBRARY

3 2201 20337 2038

World Trade Center site architect to read memoir

BY LIAM OTTEN

Daniel Libeskind, the master plan architect for the former World Trade Center site in New York City, will read from his new memoir, *Breaking Ground: Adventures in Life and Architecture*, at 7 p.m. Dec. 6 in Graham Chapel.

The reading — sponsored by Left Bank Books, the Contemporary Art Museum St. Louis and the University's Sam Fox Arts Center and School of Architecture — is free and open to the public, though seating is limited.

Libeskind is one of the world's most influential figures in architecture and urban design. *Breaking Ground*, written with Sarah Crichton, discusses his iconoclastic approach to public space, his ideas about tragedy and hope, and the way in which architecture can memorialize — and reshape — human experience.

The book also shares Libeskind's vision for the World Trade Center site, including his proposed 1,776-foot-tall spire designed to restore New York's "spiritual peak" while creating "an icon that speaks of our vitality in the face of danger and our optimism in the aftermath of tragedy."

Born in Poland to Holocaust survivors in 1946, Libeskind became an American citizen in 1965, earning an undergraduate

degree in architecture from Cooper Union in 1970 and a post-graduate degree in history and theory of architecture from the School of Comparative Studies at Essex University in 1972.

A former director of architectural studies at the Cranbrook Academy of Art, he has also taught at the University of Toronto, Yale University, the University of Pennsylvania and the Karlsruhe Hochschule für Gestaltung in Germany.

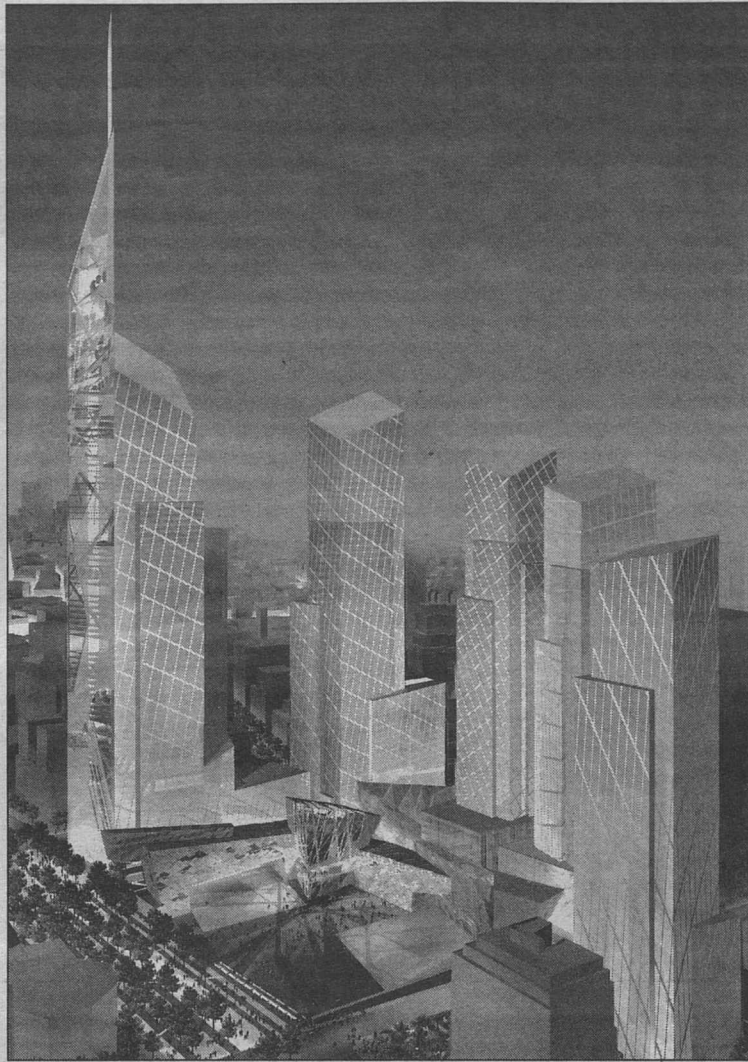
In 1989, Libeskind won the competition for the Jewish Museum Berlin, and he founded Studio Daniel Libeskind the following year. Even before the 2001 opening of the museum, Libeskind's radical, strikingly asymmetrical design — filled with disorienting angles, underground passages and slit windows — became something of a legend in architecture circles.

Many observers suggested that the museum remain empty, a monument to the void left by the Holocaust. Libeskind and museum director Michael Blumenthal, however, have noted such proposals defeat the project's purpose, which is to pay homage to the rich cultural contributions of Germany's Jewish community.

Other major completed works include The Felix Nussbaum Haus (1998), a museum for the city of Osnabrück, Germany; the Imperial War Museum North in Manchester, England (2002); the London Metropolitan University



Libeskind



An artist's rendering of Daniel Libeskind's proposed master plan for the World Trade Center site in New York.

Graduate Centre (2003); and the Danish Jewish Museum in Co-

penhagen (2004).

In addition to the World

Trade Center master plan, Studio Daniel Libeskind is designing or constructing more than a dozen projects around the world.

These include the Jewish Museum in San Francisco; extensions to the Denver Art Museum and the Royal Ontario Museum; the JVC University Colleges of Public Administration, Teaching and Art & Architecture in Guadalajara, Mexico; The Maurice Wohl Auditorium in Bar-Ilan, Israel; the Corporate Headquarters for Wohnbau Nord-west in Dresden, Germany; and the Dublin Docklands Grand Canal Performing Arts Centre and Gallery in Ireland.

In addition to his design work, Libeskind has earned a reputation as one of the world's preeminent architectural theorists. His previous books include *Daniel Libeskind: The Space of Encounter* (2001), *Libeskind Speaks: Writings of Construction* (1999) and *Radix-Matrix: Architecture and Writings* (1997).

A member of the European Academy of Arts and Letters, Libeskind's many honors include the German Architecture Prize (1999) and the Goethe Medal (2000).

In 2001, he became the first architect to receive the Hiroshima Art Prize, given to an artist whose work promotes international understanding and peace.

Doors will open at 6:30 p.m. A book-signing will be held afterward, and *Breaking Ground* will be available for purchase.

For more information, call 935-6293.

Sports

Volleyball finishes second in NCAA

The No. 4 volleyball team fell just short of winning its second straight national championship and ninth overall at the Final Four in Rochester, Minn., Nov. 26-27. The Bears dropped a 3-0 decision to No. 1 Juniata College in the national championship match Nov. 27. The Bears scored the first three points of the match before Juniata rallied to take a 10-9 lead. The teams went back and forth, with the Eagles holding on to take the first game, 30-27.

In the second game, Juniata jumped out to a 5-2 lead and extended it to 9-3. The Bears used a timeout to regroup, and embarked on an 11-5 run to tie the game at 14. Juniata then pulled away for a 30-27 win.

The Bears led for much of the third game before Juniata knotted the score at 20. The Eagles jumped ahead again and the Bears could never get closer in the 30-28 loss. The Bears finished 32-7.

Junior Kara Liefer and sophomore Whitney Smith were named to the all-tournament team.

The Bears opened the tournament with a 3-0 sweep of No. 3 University of La Verne in the semifinals Nov. 26.

A week earlier, the Bears defeated No. 10 University of Wisconsin-La Crosse, 3-1, in the quarterfinals in La Crosse.

Women runners make school history

The women's cross country team made Bears history Nov. 26 in Colfax, Wis. WUSTL, which entered the weekend ranked fifth, outperformed its ranking and finished third at the NCAA Division III Championships.

The Bears bettered their previous top performance, which was a fourth-place showing at the 2002 meet, among a field of 24 teams. Williams College took the wo-

men's team title with 110 points, while Middlebury College followed in second place with 129 points. The Bears totaled 149 points. Senior Maggie Grabow paced the Bears, finishing 40th in a time of 22:32.

Junior Greg Reindl represented the Bears men's squad. He finished 55th in the 8K run, clocking a time of 25:34 in his first NCAA Championship meet.

Women's soccer team falls to Puget Sound

The No. 11 women's soccer team fell to No. 6 University of Puget Sound, 3-0, in the NCAA Sectional Finals held at East Athletic Field in Tacoma, Wash., Nov. 28.

Puget Sound (21-1) got on the board first in the 11th minute as Kate Demers scored to put the Loggers up. UPS added another goal in the 32nd minute as Cortney Kjar scored her 22nd goal of the season on an assist from Gilly Trotta to make it 2-0.

The Bears advanced to the NCAA Sectional Final with a 5-4 win in penalty kicks over No. 22 Macalester College Nov. 27. Goalkeeper Charlotte Felber made four saves in the game, saving her biggest for the fifth and final shooter for Macalester.

Diving to her left, Felber touched the ball wide of the post, setting up the Bears final shooter. Sophomore Maila Labadie scored the game-winning penalty kick on the ensuing attempt as she drilled a shot to the right side past Macalester goalkeeper Louisa Bigelow.

Washington U. finishes the season 17-3-1. The 17 wins tie a team record set in 1997 and 1998.

Women hoopsters win tourney title

The No. 5 women's basketball team won the Fourth Annual McWilliams Classic title, capping



Bears senior distance runner Maggie Grabow finished 40th at the Division III championships in Wisconsin, helping WUSTL to a third-place finish.

off a perfect 3-0 week. The Bears opened the week with a 92-56 win at Maryville University Nov. 23. Junior Danielle Beehler led the Bears with 17 points and six rebounds; senior Kelly Manning and junior Katie Benson each added 15 points.

Washington U. then knocked off Whittier College, 86-58, in the opening round of the McWilliams Classic Nov. 27 at the WUSTL Field House. Manning led the Bears with 19 points; sophomore Rebecca Parker and junior Alicia

Herald posted career-highs of 13 points each.

In the championship game Nov. 28, the Bears beat Gustavus Adolphus College, 68-53, to improve to 5-0. Five Bears scored in double figures, led by Benson's career-high 15 points.

Senior Leslie Berger and Parker added 14 points each; Manning had 11 and Beehler 10. Parker also notched a career-high 12 boards in the win, while Manning added a career-high eight assists.

Berger earned the Jacqueline Bickel Schapp Most Valuable Player Award. She was joined on the all-tournament team by Manning.

Men's basketball team loses two of three

The No. 21 men's basketball team fell to 3-2 after dropping two of three games last weekend.

The Bears opened the week with a 90-70 loss at No. 2 Illinois Wesleyan University. WUSTL trailed 40-38 at halftime, but the Titans opened the second half with a 17-4 run to post the non-conference victory. Sophomore Brandon York led the Bears with 14 points on 4-of-5 shooting.

WUSTL then posted a 1-1 record at the Mike Rokicki Community Vs. Cancer Challenge at DePauw University.

In the opening game, WUSTL fell to Albion College, 81-61. Senior Rob Keller led the Bears with 15 points while Hollins added 12 on 4-of-5 shooting.

Washington U. finished the week on a high note as the Bears posted a 94-53 win over Wisconsin Lutheran College. WUSTL opened up a 41-point halftime lead (58-17) and maintained that margin the rest of the way.

Keller paced WU with 11 points in the first half on 5 of 8 shooting. Hollins garnered All-Tournament Team accolades.

Swimmers, divers shatter school records

The women's swimming and diving team put together a nice showing at the WUSTL Thanksgiving Invitational at Millstone Pool.

The Bears took first place with 972 points in a field of five, and in the process broke two school records. The men finished second with 836 points, just behind Lindenwood University (904).

Freshman Tina Deneweth broke the school record in the 100-yard butterfly, clocking a 58.64 to earn an NCAA "B" cut. Deneweth also contributed to the record-setting 400-medley relay team.

Classmate Meredith Nordbrock, junior Allie Boettger, Deneweth and junior Jennifer Scott combined to record a 3:58.21 in the event.

Freshman Ross Vimr clocked a team season-best 16:48.87 in the 1,650 free to help lead the men.

McCarthy, Woock academic all-district

Football players Kevin McCarthy and John Woock have been named to the College Division Academic All-District VII Football First Team, as selected by CoSIDA.

McCarthy and Woock are now eligible for selection to the Academic All-American Team, announced Dec. 1 after *Record* presstime.

McCarthy led the Bears with 603 yards rushing on 164 carries and seven touchdowns in 2004. He has a 3.75 grade point average in physics and is a three-time member of the UAA All-Academic Team.

A team captain as a senior, Woock led the Bears' defensive unit with 85 tackles, 15 pass-breakups and five interceptions. Woock, who has a 4.0 grade-point-average in biomedical engineering, was one of 15 football players chosen to College Football's 2004 National Scholar Athlete Class.

School of Medicine Update

Sickle cell spotlight DeBaun increases national awareness

BY KIM LEYDIG

With Michael R. DeBaun, M.D., and Republican Sen. Jim Talent standing proudly in the background, 10-year-old Isaac Singleton Jr. recently told a crowd of reporters and community members at the Sickle Cell Disease Awareness Stamp Dedication at the Saint Louis Main Post Office what life is like with sickle cell disease.

"I want you to know me, and how I deal with sickle cell disease," Singleton said. "Sickle cell hurts, and sometimes I have to stay in the hospital for a long time. I need to be careful when I play basketball because I get tired faster than other kids."

"I'm excited about this stamp because it will help more people learn about this disease."

Isaac hasn't been in pain since the start of this school year — and that's allowed him to dedicate his time and energy toward campaigning for fifth-grade class president at Gateway Elementary School.

The commemorative postage stamp aims to increase awareness and educate the public about sickle cell disease and to encourage early testing.

Sickle cell disease, an inherited disorder of the red blood cells, is the most common genetic disorder in African-Americans, but it affects other ethnic groups as well. The disease affects one in 400 African-American infants — and 20 percent of those children will suffer a silent stroke before they finish high school.

In sickle cell disease, red blood cells change to a curved, or sickle shape, instead of the normal, round shape. Sickle cells become stuck in blood vessels, causing damage to tissues and organs, which can be extremely painful.

In addition to pain, the most common afflictions associated with sickle cell disease are strokes, kidney and spleen dysfunction, chronic anemia and increased risk of bacterial infection.

Talent told the crowd at the stamp unveiling ceremony that sickle cell disease has lived in the shadows of other diseases far too long.

"This stamp helps raise visibility and shows the community that we can take on this disease and beat it," he said. "Sickle cell disease has been under the surface for far too long. It's time to put it under the national spotlight."

And this fall Talent did just that when he announced that President George W. Bush signed the Sickle Cell Treatment Act. The legislation, initiated and led by Talent, aims to treat and expand services for patients with the disease.

Talent became an advocate for sickle cell disease after he visited St. Louis Children's Hospital and toured the sickle cell disease unit two years ago.

The comprehensive health-care legislation will increase funding for treatment and research efforts, expand awareness about the disease and provide counseling about who is at risk for having a child with the disease. One



(From left) Sen. Jim Talent, Michael R. DeBaun, M.D., and Isaac Singleton Jr. help raise awareness about sickle cell disease at the Sickle Cell Disease Awareness Stamp Dedication ceremony recently held at the Saint Louis Main Post Office. The commemorative postage stamp aims to help educate the public about the disease and to encourage early testing.

in 12 African-Americans carry the gene for sickle cell disease and can have a child with the disease.

"The Sickle Cell Treatment Act is the most significant piece of health-care legislation for this community in 35 years," said DeBaun, associate professor of pediatrics and of biostatistics.

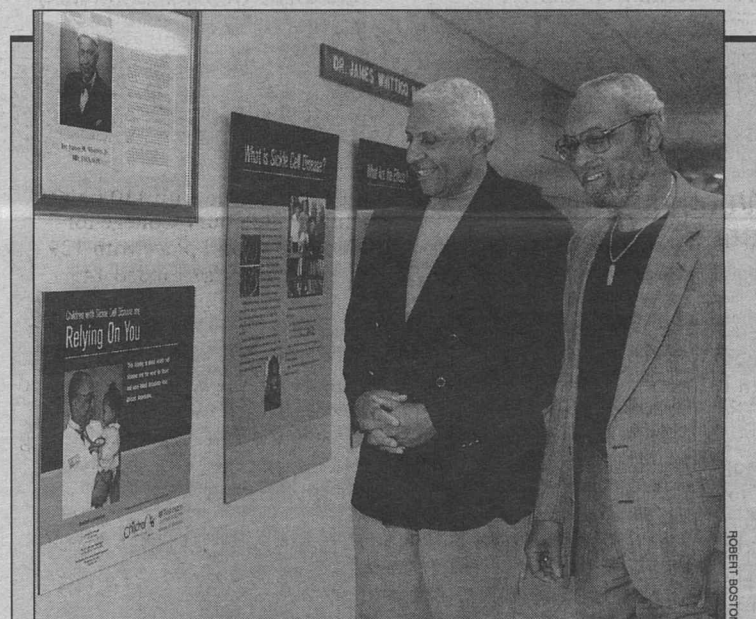
DeBaun worked closely with Talent to craft the bill that is now law.

"I'm grateful for Senator Talent's unyielding support to make a difference for those affected by sickle cell disease," DeBaun said. "This law will offer hope to millions of children and their parents who deal with this disease daily."

The legislation also enhances the number of services available to sickle cell disease patients by allowing states to receive a federal 50-50 funding match for treatment expenses such as genetic counseling, community outreach and education.

Additionally, the law creates 40 sickle cell disease treatment centers across the country and establishes a National Sickle Cell Disease Research Headquarters through the U.S. Department of Health and Human Services.

Singleton's mother, Everline, explained that the bill will help



Community outreach Clayvon Wesley (left), state of Missouri program development specialist, and Elam King III, executive director of the Prince Hall Family Support Center, discuss the center's new sickle cell display wall. The educational display is another effort by Michael R. DeBaun, M.D., and the University's Sickle Cell Medical Treatment and Education Center to raise awareness about sickle cell disease and the need for cord blood donations.

her son and family live stronger lives. "Sickle cell disease affects our family's decisions every day," she said.

"This bill will help families like ours have access to education and treatment that we need to stay healthy."

Grant boosts sickle cell disease programs

Children and teenagers with sickle cell disease face many barriers beyond health-care challenges.

An estimated 700 children and teenagers in the St. Louis metro area have sickle cell disease.

And fewer than 25 percent of these kids graduate from high school or find more than an entry-level job.

Most of them are unable to pursue higher education at a college or vocational school.

In an effort to help teenagers with sickle cell disease complete high school and find a rewarding job through mentoring and leadership training, the Centers for Medicare & Medicaid Services recently awarded the Sickle Cell Disease Medical Treatment and Education Center at the University a \$24,683 grant.

"With this grant, Senator Talent has helped us take an important first step to help those at very high risk for failure to live independent lives," said Michael R. DeBaun, M.D., director of the sickle cell disease center and associate professor of pediatrics and of biostatistics.

The grant, which was sponsored by Sen. Jim Talent, will also enhance Camp Crescent, an overnight summer camp for kids ages 9-13 who have sickle cell disease.

The free five-day summer program, created and directed by DeBaun and his team, provides fun and educational activities.

Camp Crescent is the only camp in the metropolitan area created to meet the unique medical, physical and emotional needs of children with sickle cell disease.

Nanomedicine research technique advances heart care

BY GILA Z. RECKESS

Miniscule, carefully engineered nanoparticles can detect the very beginning stages of clogged arteries in animals, thanks in large part to research at the School of Medicine.

With a five-year, \$7.3 million grant, medical school researchers will begin to translate this breakthrough into clinical advances.

Funded by the National Heart, Lung, and Blood Institute, the grant will support a biomedical research partnership between the School of Medicine and several commercial partners, including Kereos Inc., Philips Medical Systems, Bristol-Myers Squibb Medical Imaging and Dow Chemical.

The grant is an advancement of the medical school's BioMed 21

initiative, which focuses in part on translational research and biomedical imaging.

"We've developed a way to take images of very early arterial plaques, before they're detectable by any other means," said principal investigator Samuel A. Wickline, M.D., professor of medicine and of biomedical engineering in the School of Engineering & Applied Science.

"With this grant, we will bridge the gap between fundamental laboratory research and the development of new, investigational drugs."

Wickline and co-investigator Gregory M. Lanza, M.D., Ph.D., associate professor of medicine

and biomedical engineering, are co-founders of Kereos.

Hardened or clogged arteries, a condition called atherosclerosis, result from the accumulation of fatty plaques on the interior walls of blood vessels.

As a plaque begins to form, a crowd of small blood vessels, called capillaries, develops around the site. Wickline and his colleagues designed a way to take images of those young capillaries, thereby predicting locations that will soon fall prey to atherosclerosis.

Their technique uses specially engineered nanoparticles that serve as mailmen — researchers tell the particles exactly what kind of cell to find and give them a package to deliver when they arrive.



Wickline

In a study published in 2003, Wickline's team packed nanoparticles with two components: molecules that latch onto small, rapidly growing capillaries; and an imaging agent called gadolinium, which shows up as a bright spot on a magnetic resonance image.

Using rabbits, they found that arteries that were developing dangerous capillaries had gadolinium signals twice as bright as normal arteries.

The researchers have shown that this technique can also help distinguish between stable plaques and those that are about to break. Fragments of plaques are a common cause of heart attacks or strokes.

Now that their technique has been proven effective in animals, the researchers will use the new grant to develop imaging agents

that can be used in humans.

They also hope to design drugs that can be delivered on nanoparticles to prevent a future heart attack or stroke.

"Our ultimate goal is to change the usual course of atherosclerosis by using imaging techniques to determine who is likely to have a stroke or heart attack, and then targeting drugs to the site of the very earliest stages of disease," Wickline said.

Although this grant does not directly fund clinical trials, Wickline believes the team's research will be ready to be tested on patients in the next 2-3 years.

And, because tumors also require new populations of capillaries, the team believes these techniques may also help detect very early cancers at the beginning stages of tumor development.

University Events

Poised on a Knife Edge • The Role of Business Intelligence

"University Events" lists a portion of the activities taking place Dec. 3-16 at Washington University. Visit the Web for expanded calendars for the Hilltop Campus (calendar.wustl.edu) and the School of Medicine (medschool.wustl.edu/calendars.html).

Exhibits

The Washington University School of Art Faculty Show. Through Dec. 5. Kemper Art Museum. 935-4523.

Human Comedies: 19th-Century French Caricature. Steinberg Hall, Lower Lvl., Teaching Gallery. 935-4523.

Films

Friday, Dec. 3

3 p.m. George Warren Brown School of Social Work Presentation. *Last Chance for Eden.* Lee Mun Wah, dir. (Discussion with Wah follows.) Goldfarb Hall, Rm. 124. 935-6661.

Lectures

Friday, Dec. 3

8:30 a.m.-7:30 p.m. School of Law Center for Interdisciplinary Studies Conference. "Planning Reform in the New Century." (Continues 8:30 a.m.-12:45 p.m. Dec. 4.) Anheuser-Busch Hall. To register: 935-7988.

9:15 a.m. Pediatric Grand Rounds. "The Genetic (and Environmental) Structure of Social Impairment in Children." John N. Constantino, assoc. prof. of psychiatry and of pediatrics. Clopton Aud., 4950 Children's Place. 454-6006.

Noon. Cell Biology & Physiology Seminar. "Effectors of Replicative Senescence in Human Cells." John M. Sedivy, prof. of molecular biology and of cell biology & biochemistry. McDonnell Medical Sciences Bldg., Rm. 426. 362-7437.

3 p.m. Film & Media Studies Lecture. "Media, Culture and Class in Michael Hoffman's *Midsummer Night's Dream*." Peter S. Donaldson, prof. and head of literature, Mass. Inst. of Technology. Co-sponsored by the departments of English and Performing Arts. Duncker Hall, Rm. 101. 935-4056.

Saturday, Dec. 4

8 a.m.-1 p.m. Cardiovascular Division CME Course. "Congestive Heart Failure Update." Cost: \$75 until Nov. 26, \$95 thereafter. Eric P. Newman Education Center. 362-6891.

Monday, Dec. 6

8:30 a.m.-4:30 p.m. Center for the Application of Information Technology Two-Day Workshop. "Developing IT Professionals Into Leaders." (Continues 8:30 a.m.-4:30 p.m. Dec. 7.) Cost: \$1,000; reduced fees available for CAIT members. CAIT, 5 N. Jackson Ave. 935-4444.

Noon. Molecular Biology & Pharmacology Seminar. "Molecular Mechanisms of Neuronal Growth Cone Guidance." Alex L. Kolodkin, prof. of neuroscience, Johns Hopkins U. South Bldg., Rm. 3907, Philip Needleman Library. 362-0183.

Noon. Neurology & CNSI Seminar Series. David H. Gutmann, Donald O. Schnuck Family Chair in Neurology, in Genetics & in Pediatrics. Maternity Bldg., Schwarz Aud. 362-9460.

4 p.m. Immunology Research Seminar Series. Student Sponsored Seminar. Klaus Rajewsky, prof. of pathology, Harvard U. 362-2763.

4:30 p.m. Internal Medicine Inaugural Professorship Lecture. "Fats and the Heart: The Good, the Bad and the Ugly." Daniel P. Kelly, Alumni Endowed Professor of Cardiovascular Diseases. Eric P. Newman Education Center. 286-0028.

Tuesday, Dec. 7

Noon. Molecular Microbiology & Microbial Pathogenesis Seminar Series. "Mechanisms of Virus-cell Membrane Fusion." Robert A. Lamb, John Evans Professor of Molecular & Cellular Biology, Northwestern U. Cori Aud., 4565 McKinley Ave. 747-2132.

1-3 p.m. Academic Publishing Services Lecture. "Developing and Delivering Biomedical Presentations." Thomas D. Fer, asst. prof. of medicine, and Peter Evensen, competent toastmaster and competent leader, Toastmasters International. Cost: \$50 for WUSTL faculty & staff, \$35 for postdocs, fellows, residents & students. McDonnell Medical Sciences Bldg., Erlanger Aud. 747-4656.

How to submit 'University Events'

Submit "University Events" items to Genevieve Podleski of the Record staff via:

- (1) **e-mail** — recordcalendar@wustl.edu;
- (2) **campus mail** — Campus Box 1070; or
- (3) **fax** — 935-4259.

Upon request, forms for submitting events may be e-mailed, mailed or faxed to departments to be filled out and returned.

University Events lists happenings sponsored by the University or its departments, schools, centers, organizations and recognized student organizations. It usually covers a 13-day time period from the Friday publication date to a week from the next Wednesday.

4 p.m. Anesthesiology Research Seminar Series. Peter Davis, chief and prof. of anesthesiology, Children's Hospital of Pittsburgh. Clinical Sciences Research Bldg., Rm. 5550. 362-8560.

4 p.m. Disabilities Studies Faculty Group Talk. "The ADA and American Disability." Sam Bagenstos, prof. of law. Brookings Hall, Rm. 100. 935-5340.

Wednesday, Dec. 8

4 p.m. Biochemistry & Molecular Biophysics Seminar. "An Experimentally Determined Protein Energy Landscape." Doug Barrick, assoc. prof. of biophysics, Johns Hopkins U. Cori Aud., 4565 McKinley Ave. 362-0261.

Thursday, Dec. 9

7:30-9:30 a.m. Center for the Application of Information Technology Executive and Management Forum. "The Agile Business and the Role of Business Intelligence." Michael Corcoran, vice pres., Information Builders, New York. Missouri History Museum. 935-4444.

Noon. Genetics Seminar Series. "The Proliferation Versus Meiotic Development Decision in *C. elegans*." Tim Schedl, assoc. prof. of genetics. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

4 p.m. Ophthalmology & Visual Sciences Seminar. "Neuronal Mechanisms of Circadian Rhythmic Behavior in *Drosophila*." Paul H. Taghert, prof. of anatomy & neurobiology. Maternity Bldg., Rm. 725. 362-1006.

8 p.m. Writing Program Reading Series Lecture. "Reading Restoration Lamps." Harold Love, Visiting Hurst Lecturer in English. Duncker Hall, Rm. 201, Hurst Lounge. 936-7130.

Friday, Dec. 10

9:15 a.m. Pediatric Grand Rounds. "Respiratory Viruses for the 21st Century — Three Stories." Gregory Storch, prof. of pediatrics, of medicine and of molecular microbiology. Clopton Aud., 4950 Children's Place. 454-6006.

Noon. Cell Biology & Physiology Seminar. "RGS Proteins — Functions and Therapeutic Potential." Richard R. Neubig, prof. of pharmacology, U. of Mich. McDonnell Medical Sciences Bldg., Rm. 426. 362-1668.

4 p.m. Dept. of Music Lecture. "Onyx Club Revue: Jazz and White Masculinity in the Early Swing Era." Patrick Burke, asst. prof. of music. Music Classroom Bldg., Rm. 102. 935-4841.

Saturday, Dec. 11

8:30 a.m.-3 p.m. Internal Medicine CME Course. "Coding for Physician Services: Hospital Setting." Cost: \$165 for physicians, \$140 for allied health professionals. Eric P. Newman Education Center. To register: 362-6891.

Monday, Dec. 13

Noon. CNSI & Neurology Research Seminar. Kelvin Yamada, assoc. prof. of neurology, asst. prof. of pediatrics. Maternity Bldg., Schwartz Aud. 362-9460.

4 p.m. Immunology Research Seminar Series. "Poised on a Knife Edge: Balancing Immunity Versus Virulence During Chronic Herpesvirus Infection." Herbert "Skip" Virgin, prof. of pathology & immunology. Eric P. Newman Education Center. 362-2763.

Tuesday, Dec. 14

8:30 a.m.-4:30 p.m. Center for the Appli-

cation of Information Technology Two-day Workshop. "The Politics of IT Project Management." (Continues 8:30 a.m.-4:30 p.m. Dec. 15.) Cost: \$1,195, reduced fees available for CAIT organizations. CAIT, 5 N. Jackson Ave. 935-4444.

Noon. Molecular Microbiology & Microbial Pathogenesis Seminar Series. "TRIM5alpha: A Mediator of Innate Intracellular Resistance to Retroviruses." Joseph G. Sodroski, prof. of pathology, Dana-Farber Cancer Inst., Harvard U. Cori Aud., 4565 McKinley Ave. 747-2132.

4 p.m. Anesthesiology Research Seminar Series. Basic Research Seminar. Jim Lederer, dept. of surgery, Harvard U. Clinical Science Research Bldg., Rm. 5550. 362-8560.

4 p.m. Medical Humanities & Social Science Talk. "Taking the 'Nox' Out of Nocumturm: Poisons, Drugs and Side Effects in Thirteenth- and Fourteenth-century France." Walt Shalick, prof. of history and of pediatrics. Brookings Hall, Rm. 100. 935-5340.

Wednesday, Dec. 15

4 p.m. Biochemistry & Molecular Biophysics Seminar. "Beyond Crystallography, Functional Protein Dynamics From Site-directed Spin Labeling." Wayne Hubbell, prof. of chemistry & biochemistry and of ophthalmology, U. of Calif., Los Angeles. Cori Aud., 4565 McKinley Ave. 362-0261.

Thursday, Dec. 16

Noon. Genetics Seminar Series. "Algorithmic Improvements in Linkage Analysis: Modelling Genotyping Error and Linkage Disequilibrium." Goncalo Abecasis, asst. prof. of biostatistics, U. of Mich. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

4 p.m. Cell Biology & Physiology Lecture. Erlanger-Gasser Lecture. "Mouse Models for Cancer." Anton I.M. Berns, prof., Nederlands Kanker Instituut, Amsterdam. McDonnell Medical Sciences Bldg., Rm. 426. 362-6812.

Music

Friday, Dec. 3

7:30 p.m. Concert. Washington University Jazz Band. Chris Becker, dir. Steinberg Hall Aud. 935-4841.

Sunday, Dec. 5

8 p.m. Concert. Washington University Concert Band. Dan Presgrave, dir. Graham Chapel. 935-4841.

Friday, Dec. 10

8 p.m. Concert. Concert Choir of Washington University. John Stewart, dir. Performance dedicated to the memory of William R. Kohn, prof. emeritus in the School of Art. Graham Chapel. 935-4841.

Monday, Dec. 13

8 p.m. Concert. Flute Choir. Jan Smith, dir. Graham Chapel. 935-4841.

8 p.m. Concert. Small Chamber Ensemble Extravaganza. Elizabeth Macdonald, dir. Holmes Lounge. 935-4841.

On Stage

Friday, Dec. 3

8 p.m. Performing Arts Department Presentation. Washington University Dance Theatre's *Dancescape*. (Also 8 p.m. Dec. 4 & 2 p.m. Dec. 5.) Cost: \$12, \$8 for seniors, WUSTL faculty, staff and students. Edison Theatre. 935-6543.

And more...

Monday, Dec. 6

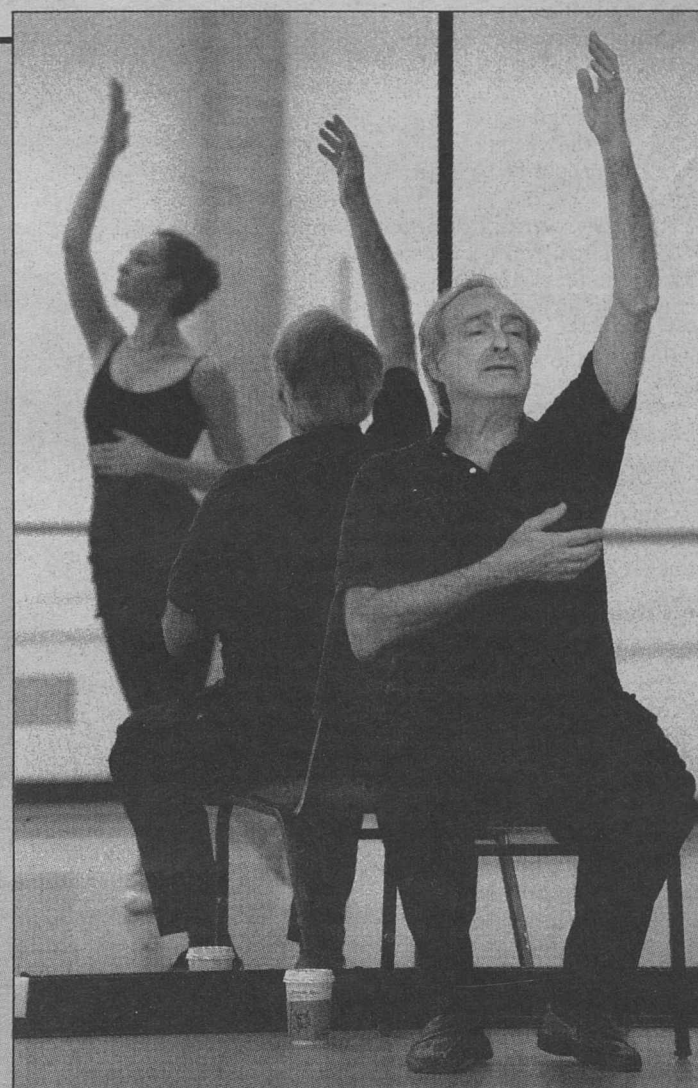
7 p.m. Sam Fox Arts Center Reading. Daniel Libeskind, master plan architect for the former World Trade Center site. Co-sponsored by Left Bank Books, Contemporary Art Museum St. Louis, and the School of Architecture. Graham Chapel. 935-6293.

Friday, Dec. 10

7 p.m.-1 a.m. Tango/Swing/Salsa Dance Event. Umrath Hall Lounge. 935-6098.

Saturday, Dec. 11

2 & 3:30 p.m. Tango Workshop. Brigitta Winkler, tango instructor, Berlin. (Also 2 & 3:30 p.m. Dec. 12.) Cost: \$20. Mudd Hall Multipurpose Room. 935-6098.



Training with a master Renowned choreographer Donald Mahler, former director of ballet for the Metropolitan Opera in New York and a visiting artist in the Performing Arts Department in Arts & Sciences' Dance Program this fall, works with junior Margaret Day. While on campus, Mahler, an authority on the work of Antony Tudor (1909-1987), worked with 11 dancers selected to perform excerpts from Tudor's classic ballet *Dark Elegies* (1937), a meditation on the theme of grieving. The piece will be performed Dec. 3-5 in Edison Theatre as part of *Dancescape*, the 2004 Washington University Dance Theatre concert.

Literary historian Love to speak Dec. 9

BY LIAM OTTEN

Literary historian Harold Love, the visiting Fannie Hurst Professor of Creative Literature in the Department of English in Arts & Sciences, will speak on "Reading Restoration Lamps" at 8 p.m. Dec. 9.

The talk — part of The Writing Program Reading Series — is free and open to the public and will take place in Hurst Lounge, Duncker Hall, Room 201. A book-signing and reception will follow and copies of Love's books will be available for purchase.

A prominent critic of early modern literature, Love is the author of numerous scholarly works, including *English Clarendon Satire 1660-1702* (2004); *Attributing Authorship: An Introduction* (2002); *The Works of John Wilmot, Earl of Rochester* (1999); *The Culture and Commerce of Texts: Scribal Publication in*

Harold Love

Who: Literary historian

What: Lecture, "Reading Restoration Lamps"

When: 8 p.m. Dec. 9

Where: Hurst Lounge, Duncker Hall, Room 201

Cost: Free and open to the public

For more information, call 935-7130.

Seventeenth-Century England (1997); and *The Golden Age of Australian Opera: W.S. Lyster and His Companies 1861-80* (1981).

Born in Brisbane, Australia, Love is professor emeritus in the Department of English at Monash University's School of Literary, Visual and Performance Studies.

For more information, call 935-7130.

Vehicle inspections offered to holiday travelers

On Dec. 4, University Police and the Department of Parking and Transportation, in partnership with Hartmann's Towing, will sponsor a free traveler's vehicle inspection service for students, faculty and staff.

People traveling by car for the holiday break can bring their vehicles to the parking lot outside the police/parking office on the South 40 between noon-3 p.m. for an inspection.

Staff will check tire pressure, fluid levels, wipers, headlights and taillights. Local businesses have donated oil and wind-

shield-washer fluid so that fluids can be topped off.

"Too often we all neglect to check our vehicles before taking off on a trip," said Don Strom, chief of University Police.

"This is a great, quick and easy opportunity for members of our campus community to get their vehicles inspected and help ensure they have a safe trip over the upcoming holidays."

The WUPD Bear Patrol will assist with the inspections.

For more information, call 935-5084.

Architecture exhibition showcases international competition

On view in Givens Hall through Dec. 20

BY LIAM OTTEN

Six student teams from the School of Architecture recently submitted proposals as part of an international competition to design a soccer pitch, or field, for the town of Somkhele in KwaZulu-Natal, South Africa.

The entries were coordinated by Zeuler Lima, Ph.D., assistant professor in the School of Architecture, who included the competition as an exercise in his fall studio dedicated to architecture in the Southern Hemisphere.

The competition, organized by the New York-based Architecture for Humanity, challenged designers to create a youth-sized playing field, sideline benches and a small changing room on a \$5,000 budget while employing sustainable and/or local building materials. The pitch will serve as a gathering place for children ages 9-14 and as home to the area's first-ever girls' soccer league.

In addition, because Somkhele suffers from one of the highest HIV/AIDS rates in the world, the pitch will serve as a dissemination point for information on HIV/AIDS prevention and treatment and will be managed by medical professionals from the nearby

Africa Center for Health and Population Studies.

"Globalization is a contemporary phenomenon that affects all professional and intellectual activities, including architecture," Lima said.

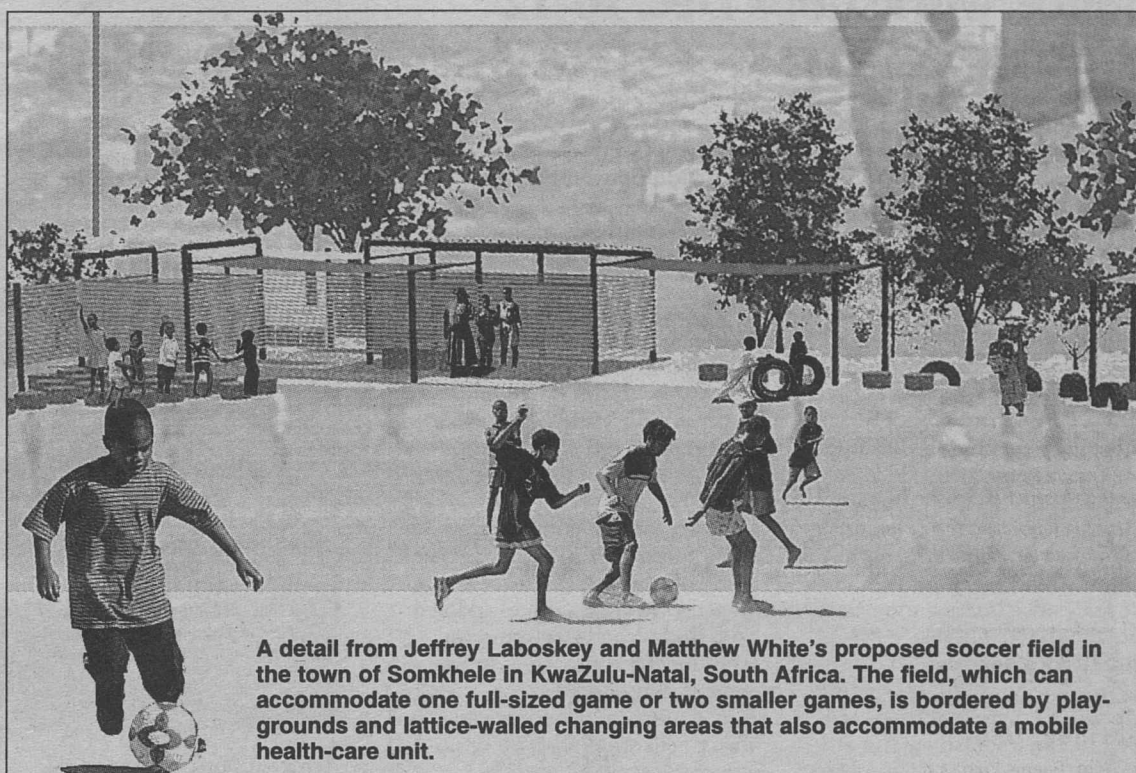
"As globalization contracts the distances between different areas of the globe, it also expands the cultural and human repertoires that define how the built environment is imagined, produced and experienced."

In all, more than 270 teams from 37 countries entered the competition. Finalists — selected by an international jury of architects — will be announced this week. A winner will then be chosen by the Somkhele Girls Football team.

The WUSTL submissions, on view in Givens Hall through Dec. 20, emphasize multiple use, local sustainability and economic development.

Three proposals — by Sam Stribling and Anthony Tong; Carl Schwarz and James Wegener; and Jeffrey Laboskey and Matthew White — center on open modular structures that can easily expand to accommodate future development, such as a health clinic or local market.

Tracy Bremer and Naoko



A detail from Jeffrey Laboskey and Matthew White's proposed soccer field in the town of Somkhele in KwaZulu-Natal, South Africa. The field, which can accommodate one full-sized game or two smaller games, is bordered by playgrounds and lattice-walled changing areas that also accommodate a mobile health-care unit.

Tanikama add a system for collecting rainwater (about 85,000 liters annually, they estimate), while Lee Dunfield and Lindsey Neeman focus on creating a variety of spaces to host performances and public events as well as athletics.

Since much of the local population survives on subsistence

farming, Jeffrey Gaines and James Lewis offer an ambitious plan for an adjacent network of community gardens.

"Soccer is a passion and provides mental escape," noted Laboskey and White, whose elegant, highly flexible field design also incorporates swings and play areas constructed largely of

recycled tires.

"In creating a fun environment, we can create a destination that draws the community and involves the people in its creation and growth. This is a place to play, live and grow."

For more information about the competition, go online to architectureforhumanity.org.

Satellite

Bandit has roots in Project Aria

— from Page 1

This in turn led to Swartwout developing the modus operandi of developing student-built, "disposable" spacecraft that function over the short time frame of a few weeks.

The hope, Swartwout said, is that someday an innovation developed by students at a university will become a "disruptive" technology — one that is implemented and alters the status quo of spacecraft design. He might have such a disruptive technology at Washington University in *Bandit*, a satellite not much bigger than a cantaloupe.

Swartwout recently presented a paper on the future of university-class satellites at the 18th annual AIAA/USU Conference on Small Satellites at Utah State University.

Bandit is similar in size to the hottest technology class in spacecraft design, CubeSats. These tiny payloads usually weigh no more than 2 pounds, with their electronics occupying several inches of space.

While CubeSats are self-sufficient crafts, *Bandit* will depend on a mother ship for recharging its batteries and communications.

Swartwout oversees the construction of *Bandit*, which over the past two years has benefited from the sweat equity of about 60 students. Currently, a dozen students are putting the finishing touches on *Bandit*, with 12 others in different university classes having some input.

Bandit's outstanding feature is its ability to be launched and dock on another spacecraft, making it a prime candidate to serve NASA or the Air Force in an inspector capacity. The *Bandit* inspector, dock and flight electronics are less than 6 pounds and require less than two watts of power, on average.

Bandit is the lead experiment

for the University's *Akoya* nano-satellite (about the size of a beach ball, making it actually bigger than *Bandit*), a part of the Air Force Research Laboratory/NASA University Nanosat 3 competition. Using image-based navigation, *Bandit* will travel with *Akoya*, usually no more than 10 feet away from the mother ship, and will dock on *Akoya*, recharge and then leave the mother ship to navigate on its own.

"*Bandit* is of high interest to NASA and the Air Force because they like the notion of small, automated spacecraft that can go out and do inspections of a shuttle or communications satellite," Swartwout said.

The *Bandit's* concept was hatched three years ago by WUSTL students in an introductory space engineering class who came up with the idea of a small satellite to be launched from a spacecraft and serve as a re-entry probe. It grew from that to its present status as a docking inspector.

enzymes, which are the ultimate green catalyst. The more things we can do with enzymes, the better for the environment, because they have no waste products."

Enzymes already are used in products as diverse as laundry detergents and various medications.

According to Kappock, the more long-range goal is to involve insights from studies of this bacterium with the numerous diseases caused by protein mis-folding. Alzheimer's disease, Lou Gehrig's disease and possibly even cataracts begin with mis-folded proteins.

"A lot of times, a mild acid-mediated unfolding of an enzyme precipitates these kinds of disease," Kappock said. "Insights from these marvelous *Acetobacter* enzymes might lead to making more stable enzymes or elucidating ways to treat these debilitating diseases."

"There are a lot of things that this research could help, but it's at a basic stage now."

Still, the research is promising enough to have been awarded federal and private funding.

Kappock is a little surprised that relatively few others have studied *Acetobacter*, given the common and widespread nature of the organism.

"It's literally garden-variety," he said. "*Acetobacter* clings to plant surfaces in the wild. For example, a big part of winemaking is excluding the grape skins from the wine because the bug lives there."

Plants, microorganisms and their proteins are the bases for developing valuable drugs.

"Many antibiotics are derived from soil organisms like bacteria that are trying to kill other bacteria," Kappock said.

Fortunately, in the case of *Acetobacter*, any useful enzymes it may provide should be completely harmless, just as it is to humans (besides ruining their wine).

"I think it's likely going to be a piece of a larger story," Kappock said. "What I'm hoping to get out of it is a better understanding of how proteins work. Our contribution is to find out how a couple of examples work and seeing if we can find general principles."

Enzymes

Acetobacter bacterium is relatively little-studied

— from Page 1

That answer, Kappock said, could reveal many important insights.

Kappock discussed his research at the American Chemical Society's annual meeting held recently in Philadelphia.

Specifically, Kappock and his research group study the enzyme citrate synthase, one of the oldest enzymes in a cell. Citrate synthase is important because it initiates the citric acid cycle, or Krebs cycle, a biochemical pathway vitally important for energy production in the cells of organisms as simple as bacteria and as complex as humans.

There also are a couple of ways *Acetobacter* could produce industrially applicable information.

"There are people who want to make more stable proteins," Kappock said.

"There are increasing numbers of industrial processes that use

Record

Founded in 1905
Washington University community news

Editor Kevin M. Kiley
Associate Editor Andy Clendennen
Assistant Editor Neil Schoenherr
Associate Vice Chancellor Judith Jasper Leitch
Executive Editor Susan Killenberg McGinn
Medical News Editor Kimberly Leydig
Production Carl Jacobs
News & Comments
(314) 935-6603
Campus Box 1070
kiley@wustl.edu
Medical News
(314) 286-0119
Campus Box 8508
leydigk@wustl.edu

Record (USPS 600-430; ISSN 1043-0520), Volume 29, Number 16/Dec. 3, 2004. Published for the faculty, staff and friends of Washington University. Produced weekly during the school year, except school holidays, and monthly during June, July and August by the Office of Public Affairs, Washington University, Campus Box 1070, One Brookings Drive, St. Louis, MO 63130. Periodicals postage paid at St. Louis, MO.

Where to send address changes

Postmaster and nonemployees Record, Washington University, Campus Box 1070, One Brookings Drive, St. Louis, MO 63130.

Employees Office of Human Resources, Washington University, Campus Box 1184, One Brookings Drive, St. Louis, MO 63130.

Washington University in St. Louis

Tango legend Winkler to present dance, workshops Dec. 10-12

Tango legend Brigitta Winkler will host a weekend of dances and workshops Dec. 10-12 for the University's Tango Group.

Winkler, a native of Berlin, is one of the world's foremost teachers and performers of tango.

On Dec. 10, Winkler will host a free tango/swing/salsa dance from 7 p.m.-1 a.m.

The event will begin with a half-hour introduction to swing dancing and also will include, at 9:15 p.m., an introduction to authentic Argentine-style tango.

Tom Stermitz, organizer of Denver's annual Memorial Day and Labor Day tango festivals, will play traditional Argentine tango music.

The dance is free and open to the public and will take place in Umrath Hall Lounge.

In addition, Winkler will lead a series of tango workshops at 1, 2:45 and 4 p.m. Dec. 11 and at 1 and 2:45 p.m. Dec. 12. The cost

for each class is \$20, and a discount is available for the series.

Beginners are welcome. Workshops will take place in the Mudd House Multipurpose Room.

Winkler is known for her exquisite creativity, clarity and understanding of the dance and music.

In 1987, Winkler co-founded the highly respected Tanzart studio in Berlin as well as the internationally acclaimed Tango Mujer, a pioneering dance company exploring the boundaries between tango and contemporary dance.

In her classes, Winkler integrates more than 20 years of experience of teaching and performing the tango with techniques adopted from Body-Mind Centering, an experimental approach to movement re-education.

For more information, call Shaun Sellers at 935-6098 or go online to cec.wustl.edu/~hs3.

Campus Watch

The following incidents were reported to University Police Nov. 18-Dec. 1. 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.

Nov. 19

8:40 a.m. — A coordinator for academic programs reported that a window on the east side of January Hall was damaged by an unknown object. The window has metal bars in the glass, and two small panes of glass were damaged. The damage occurred between 8:30 p.m. Nov. 18 and 8:30 a.m. Nov. 19. Maintenance was notified. An investigation is continuing.

Nov. 20

1:30 p.m. — A person was observed inside of Ridgely Hall with the door locked. The subject has been arrested on campus in the past on a charge of trespassing. The suspect has active fugitive-wanted status from St. Louis City and County Police, as well as the Pagedale Police Department. The suspect was arrested.

Nov. 30

5:35 p.m. — A student reported that sometime between Nov. 22-24, an unknown person broke into his vehicle parked on the top level of Snow Way Garage and stole approximately 40 CDs. Also, between Nov. 24-30, an unknown person broke into his vehicle and stole his two sub-woofer speakers. Total loss is estimated at \$1,450. An investigation is continuing.

9:29 p.m. — An investigation of an alarm sounding at Olin Library revealed that an unknown person or persons cut a padlock, disabled an alarm and removed a computer from Level B. The unit was removed from the work station immediately inside the glass entry doors. An investigation is continuing.

Additionally, University Police responded to four reports of property damage, two reports each of lost article, alarm and bad check, and one report each of disturbance, assault, suspicious person, burglary, fraud and larceny.

Crime alert

On Dec. 1, University Police released the following crime alert: A person reported being approached by a suspect after exiting his car in the 700 block of Interdrive Avenue Nov. 30. The suspect displayed a handgun and demanded the person's wallet. The person initially delayed in complying with the suspect's demand, and the suspect struck him in the face. The person gave the suspect his wallet, and the suspect fled on foot.

Precaution:

- Avoid walking or jogging alone and never do so alone after dark.
- Always choose a well-lit path and avoid dark or vacant areas.
- Carry a whistle to summon help.
- Be alert to your surroundings.

If you suspect you are being followed, run in a different direction; go to the other side of the street and yell or whistle for help; or head quickly to a lighted area, a group of people or business.

- If you are confronted by a thief, give them what they want and don't chase them as they leave.

Report suspicious persons or activity immediately to the police.

- Be extra cautious if someone approaches your car and asks for information.

Response:

- Contact University City Police if you have any information that might assist in this investigation.
- Report suspicious activities/persons immediately to the University City Police.

American Institute of Certified Public Accountants Professional Ethics Executive Committee.

Additionally, he sits on the National Association of Securities Dealers Board of Governors.

Seligman earned a bachelor's degree from the University of California, Los Angeles, in 1971 and a law degree from Harvard University in 1974.

His teaching career began at Northeastern University. After faculty appointments at George Washington University and the University of Michigan, Seligman was named dean and the Samuel M. Fegly Professor of Law at the University of Arizona College of Law.

Seligman

— from Page 1

"Friederike (his wife) and I will always consider ourselves part of the School of Law and hope the friendships that began here long endure."

While at the University, Seligman has served as a reporter for the National Conference of Commissioners on Uniform State Law, the chair of the Securities and Exchange Commission Advisory Committee on Market Information and a member of the

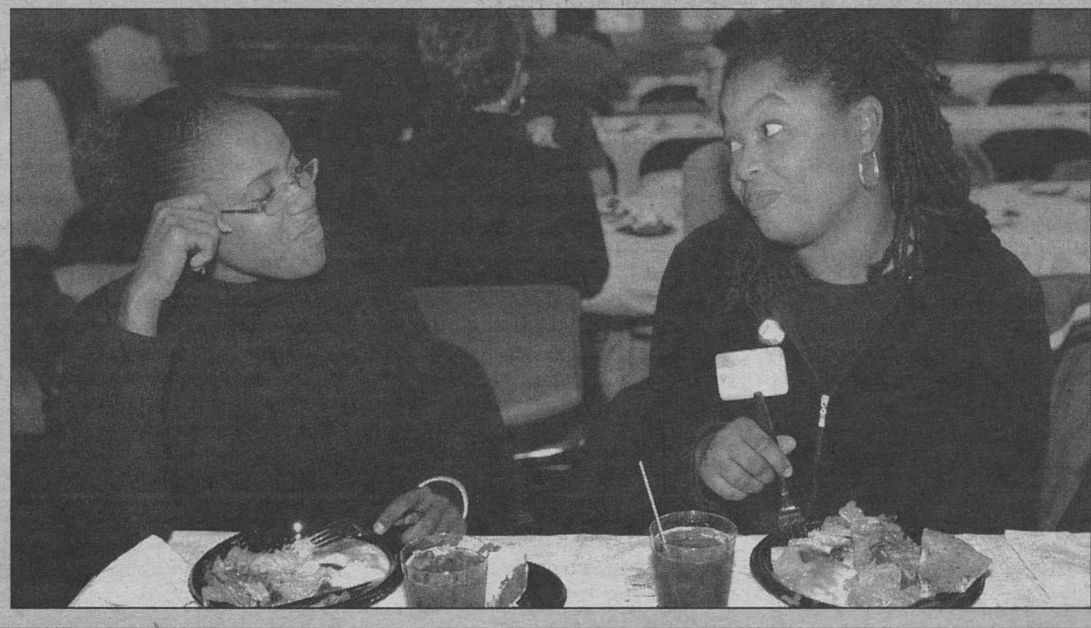


Turkey Day

For University community members who couldn't head home for Thanksgiving, or for those just looking for a good meal, several traditional Thanksgiving dinners were held on campus to celebrate the holiday.

ABOVE: Mahendra R. Gupta, Ph.D. (right), senior associate dean and the Geraldine J. and Robert L. Virgil Professor of Accounting and Management in the Olin School of Business, serves turkey to master of business administration student Sam Delagarza (left) and his wife, Belinda, during the Olin School's dinner.

RIGHT: Law students Yan Yan Lin (left) and Yi-Fang Wu take a helping of food during the School of Law festivities. BOTTOM: Ta-Keesha White (left) and Andrea Hall, both graduate students in the George Warren Brown School of Social Work, chat during that school's meal.



Apath

— from Page 1

St. Louis area.

"In the ensuing years, Apath has become well-established, branching out from our roots in hepatitis C to tackle several other important human viral pathogens."

Paul D. Olivo, M.D., Ph.D., president and chief scientific officer, joined Apath in 1998. He was a member of the Department of Internal Medicine from 1989-1998, conducting research that led to patents on methods for detecting infectious viruses.

He now holds an adjunct faculty position in the Department of Molecular Microbiology.

"In choosing Apath's research direction, we decided to work where the greatest need is," Olivo said. "There are just not enough

treatments for viral infections. And because many viruses can be turned into weapons, our antiviral work ideally positions us to address biodefense concerns."

As a result of national defense concerns, the company has obtained more than half of its income from federal grants, supplementing income obtained from numerous patent licenses.

"Apath has been in the right place at the right time," Olivo said. "There is an element of luck involved, I suppose. But it's the sort of luck that comes from seeing what's needed and being prepared to take advantage of what comes along."

Michael G. Douglas, director of the University's Office of Technology Management, said: "We congratulate the owners and employees of Apath on their success. We're pleased to see a startup with beginnings at Washington University grow to generate such impressive value."

The University has more than 150 inventions stemming from research funded by the National Institutes of Health, with about half of these being licensed to private companies.

"Apath's success reflects the quality of research and discovery at the University, as well as the talents of the company's founders," Douglas said. "Apath serves as a model for other faculty members on how to capitalize on the value of their discoveries."

Apath has its laboratories and offices at the Nidus Center for Scientific Enterprise in Creve Coeur, Mo.

In addition to Rice and Olivo, three other employees have ties to the University. The company's grants coordinator and senior administrative director, L. Janet Milton, is a former University employee. One of Apath's doctoral scientists graduated from the University, and another conducted postdoctoral research here.

Notables

Olin School names Beirne associate dean, director

James J. Beirne has joined the Olin School of Business as associate dean and director of the Weston Career Resources Center effective Nov. 29.

Beirne replaces Gregory Hutchings, who resigned in June to pursue other opportunities.

"Jim has a wealth of experience, a disposition and a professional intelligence that qualifies him to take career services at Olin to the pinnacle of achievement and renown," said Olin School Dean Stuart I. Greenbaum, Ph.D.

Beirne worked at the Wharton School at the University of Pennsylvania from 1985-1994, serving most of that time as director of career development and placement. Most recently, he managed

the Americas Recruiting Program for Hewlett-Packard.

From 1994-2002, Beirne worked in corporate recruiting at General Mills Inc., serving as the company's director of recruiting and human resources from 1999-2002.

His other experience includes product management and marketing with International Multifoods, based in Canada, Venezuela and Brazil. He holds a master of business administration degree from the American Graduate School of International Management, and a bachelor's degree in food marketing from St. Joseph's University.

Beirne is fluent in Spanish and Portuguese.

Of note

Mark S. Conradi, Ph.D., professor of physics in Arts & Sciences, received a three-year, \$360,000 grant from the National Science Foundation for research titled "NMR Studies of Hydrogen-Hydrate Clathrates and Large Band-Gap Amorphous Semiconductors and Development of Ultra-High Sensitivity NMR." ...

Rudolf B. Husar, Ph.D., professor of mechanical and aerospace engineering and director of the Center for Air Pollution Impact and Trend Analysis, received a one-year, \$75,000 grant from the Mid-Atlantic Regional Air Management Association for research titled "Phase II Combined Aerosol & Trajectory Tool (CATT) Project." ...

Richard A. Loomis, Ph.D., assistant professor of chemistry in Arts & Sciences, received a three-year \$543,792 grant from the National Science Foundation for research titled "CAREER: Experimental Investigation of the Dependence of Intermolecular Dynamics on Molecular Orientation." ...

Jonathan B. Losos, Ph.D., professor of biology in Arts & Sciences, received two one-year, \$6,000 grants from the National Science Foundation for research titled "Comparative Study of Adaptive Radiation in Iguanian Lizards" and "Collaborative Research: Redevelopment of Insular Communities Following a Catastrophic Hurricane." ...

Travis Bullock, M.D., a urologic surgery resident, has been named the 2004 Pfizer Scholars in Urology Program recipient at the School of Medicine. The Scholars in Urology program demonstrates Pfizer's commitment to the discipline of urology as it honors outstanding physicians in the field.

Shirley J. Dyke, Ph.D., the Edward C. Dicke Professor of

Engineering, received a one-year, \$112,000 grant from the National Science Foundation for research titled "Non-NEES User Requirements Assessment through Deployment of Mini-MOST (Multi-Site Online Simulation Test) Experiments." NEES (Network of Earthquake Engineering Simulation) is the first nation-wide cyber-infrastructure project for earthquake engineering. ...

Pratim Biswas, Ph.D., the Stifel and Quinette Jens Professor of Environmental Engineering Science, received a five-year, \$517,953 grant from the Department of Defense's Multidisciplinary University Research Initiative for research titled, "Relationship Between Physico-Chemical Characteristics and Toxicological Properties of Nanomaterials." **Da-Ren Chen**, Ph.D., assistant professor of mechanical and aerospace engineering, is co-principal investigator for the study. ...

Michael J. Welch, Ph.D., professor of radiology and co-director of the Division of Radiological Sciences, has been named an honorary fellow of the American College of Radiology. Welch was one of only three radiologists to receive the honor this year at the group's annual meeting. ...

Da-Ren Chen, Ph.D., assistant professor of mechanical and aerospace engineering, received a 13-month, \$75,000 grant from the Department of Energy for research titled "Nanoparticle Formation in Laser Ablation," and a one-year, \$75,223 supplement from NASA for research titled "Development of a Microscale Particulate Classifier (MiPaC)." ...

Ramesh K. Agarwal, Ph.D., the William Palm Professor of Engineering, received a \$25,000 grant from the The Boeing Co. for research titled "Simulations of Drag Reduction Using Active Flow Control." ...

Philip V. Bayly, Ph.D., professor of mechanical and aerospace engineering, and **Guy M. Genin**, assistant professor of mechanical

and aerospace engineering, have received a one-year, \$79,560 grant from the Southern Consortium for Injury Biomechanics to study the mechanics of head impact. ...

Michael J. Mueller, Ph.D., associate director of the Program in Physical Therapy, was elected to the Catherine Worthington Fellows by the American Physical Therapy Association. The award honors Mueller's contributions to the profession through leadership, influence, and achievements. ...

Krista L. Lentine, M.D., clinical trainee of internal medicine, has received a one-year, \$55,000 grant from the American Kidney Fund for the 2004 AKF Clinical Scientist in Nephrology Fellowship. ...

Kevin M. Korenblat, M.D., assistant professor of medicine, has received a two-year, \$70,000 grant from the American Gastroenterology Association Foundation for research titled "Metabolic Abnormalities in Obese Subjects with Non-Alcoholic Fatty Liver Disease." ...

Lawrence N. Eisenman, M.D., instructor of neurology, has received a five-year, \$797,164 grant from the National Institute of Neurological and Stroke for research titled "Pregnenolone Sulfate Inhibition of GABA Current." ...

Anitha Vijayan, M.D., assistant professor of medicine, has received a five-year, \$732,400 grant from the Veterans Administration-Connecticut Healthcare System for research titled "Acute Renal Failure Trial Network (ATN) Study." ...

Dan W. Haupt, M.D., instructor of psychiatry, has received a five-year, \$765,555 grant from the National Institute of Mental Health for research titled "Metabolic Effects of Valproate and Antipsychotic Therapy." ...

John P. Rice, Ph.D., professor of psychiatry, has received a five-year, \$619,650 grant from the National Institute of Mental Health for a "Collaborative Depression Study."

Obituaries

Toroian, 80; director of news office

By ANDY CLENDENEN

Soren Albert "Al" Toroian, director of the University's news office for nearly two decades, died Tuesday, Nov. 23, 2004, from complications of pneumonia at the Life Care Center in St. Louis. He was 80.

After an inauspicious start to his career — dropping out of Beaumont High School in his freshman year — Toroian finished a bachelor's degree in journalism in just three years at the University of Missouri 10 years later, in 1952.

He started out doing public relations for the National Society of Public Accountants, and then started his own public relations business, followed by working for such railroads as the Missouri Pacific and Wabash.

In 1961, Toroian began his 12 years as a vice president and account executive for Winius-Brandon advertising and public relations agency, and then did a stint in public relations with the Missouri Botanical Garden.

Toroian came to the University in 1977, where he stayed until his retirement in 1994.

"Al endeared himself to many here, always going the extra mile to advocate for faculty scholars and researchers on accomplishments that deserved attention in the local and national news

media," said M. Fredric Volkman, vice chancellor for public affairs. "He cared deeply about the University, its students, faculty and staff, and he was especially proud that both his daughters earned their undergraduate degrees here."

Toroian was a member of the Society of Professional Journalists, the Missouri Society of Newspaper Editors, the Press Club of Metropolitan St. Louis and the Journalism Foundation of Metropolitan St. Louis.

A charter member of the Press Club and the Journalism Foundation, Toroian served as the Press Club's secretary and as a board member for many years.

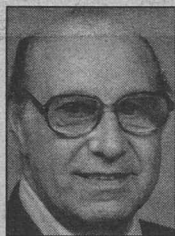
Toroian is survived by two daughters, Diane Toroian Keaggy and Rosanne Toroian; a brother, Haig Toroian; and former wife, Delores Schnietz Toroian.

Though divorced after 29 years of marriage, they remained devoted friends.

He is also survived by a grandson, Liam Ulysses Keaggy.

A memorial service is tentatively scheduled for 2 p.m. Jan. 2 in Graham Chapel.

The family has requested that memorial gifts be made to the Armenian Viper Conservation Fund at the Saint Louis Zoo Friends, One Government Drive, St. Louis, MO 63110.



Toroian

Sobol, 22; senior in Olin School

By EILEEN P. DUGGAN

Kevin Louis Sobol, a senior in the Olin School of Business, died Saturday, Nov. 27, 2004, in a one-car accident in St. Charles (Mo.) County. He was 22.

A St. Louis-area native, Sobol was a 2001 graduate of Chaminade College Preparatory School and lived in University City.

Sobol transferred to Washington University in fall 2003 from the University of Southern California.

He was a marketing major and had planned to attend law school after graduation, following in the footsteps of his father, Lawrence, and his brother, David.

"He was a nice kid, just a pleasant person to work with," said Lana Skadden, Sobol's ac-

ademic adviser. She had planned to meet with him Nov. 30 for his graduation audit.

Sobol was a quiet student in the consumer behavior class of Amar Cheema, Ph.D., assistant professor of marketing.

"I was deeply saddened when I heard of this loss, and I struggled with how I would tell his friends and colleagues in class," Cheema said Nov. 29. "My thoughts and prayers go out to his family."

In addition to his father and brother, Sobol is survived by his mother, Maureen Sobol; grandparents Mary Sobol and Thomas and Johanna O'Connell; and aunts, uncles and cousins.

A funeral mass was celebrated Nov. 30 at Saint Anselm Catholic Church. Burial was at Resurrection Cemetery, 6901 Mackenzie Road in Affton, Mo.

Campus Authors

Gerald A. Gutenschwager, Ph.D., professor emeritus, School of Architecture

Planning and Social Science: A Humanistic Approach

(University Press of America Inc.)

(From the book jacket)

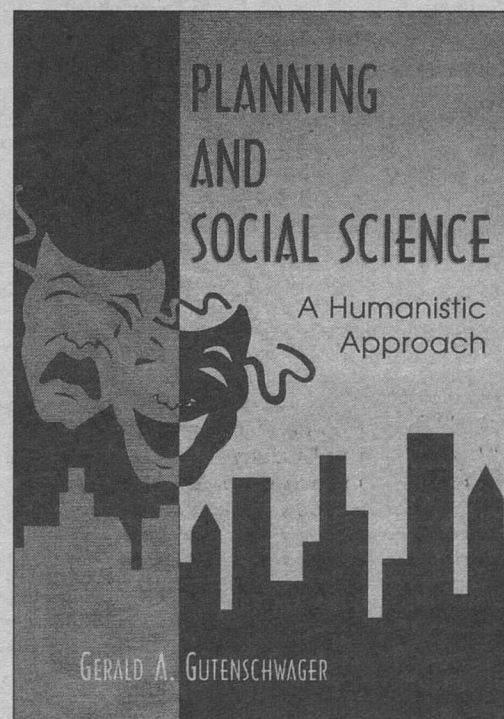
"When planning in the U.S.A. shifted from a design activity to a technocratic process after World War II, it sought a scientific basis for its new professional approach.

The academic climate in the United States at that time would permit no other concept of social science than that inspired by positivism, along with the ontological and epistemological presuppositions that it carried with it from the natural sciences.

Subsequent developments, both inside and outside academia, have raised doubts about how sufficient positivism is for comprehending society in all its complexity, especially to the extent that it differs from nature in important respects.

This is not to say that positive social sciences should be abandoned in any sense of the word, but rather that there are important additional dimensions of society that cannot be understood from such a perspective.

Thus, borrowing a term from Thomas Kuhn, an attempt is made here to explore the limitations and potential of not only positivism, but also of two other 'paradigms,' phenomenology and



structuralism, in the hopes that a more comprehensive social scientific basis for planning could be articulated.

Thus, planning as a scientific activity faces a double challenge. First, it must understand its social reality (as differentiated from the reality of nature).

Second, it must understand its own role in constituting that

socially constructed reality, which is also its object of study. This is not an easy challenge, and it carries planning well beyond its traditionally defined role, both as an academic as well as a professional activity.

These boundaries were transgressed briefly in the 1960s, so there is a glimpse of what could be done. But planning would have to sharpen its understanding, not only of the society into which it is intervening, but also of its own rhetorical resources for intervening in socially and politically responsible ways."

Gutenschwager is professor emeritus in the School of Architecture and a research fellow in the Department of Regional Planning and Development at the University of Thessaly, Volos, Greece. He earned a doctorate in city and regional planning from the University of North Carolina in 1969.

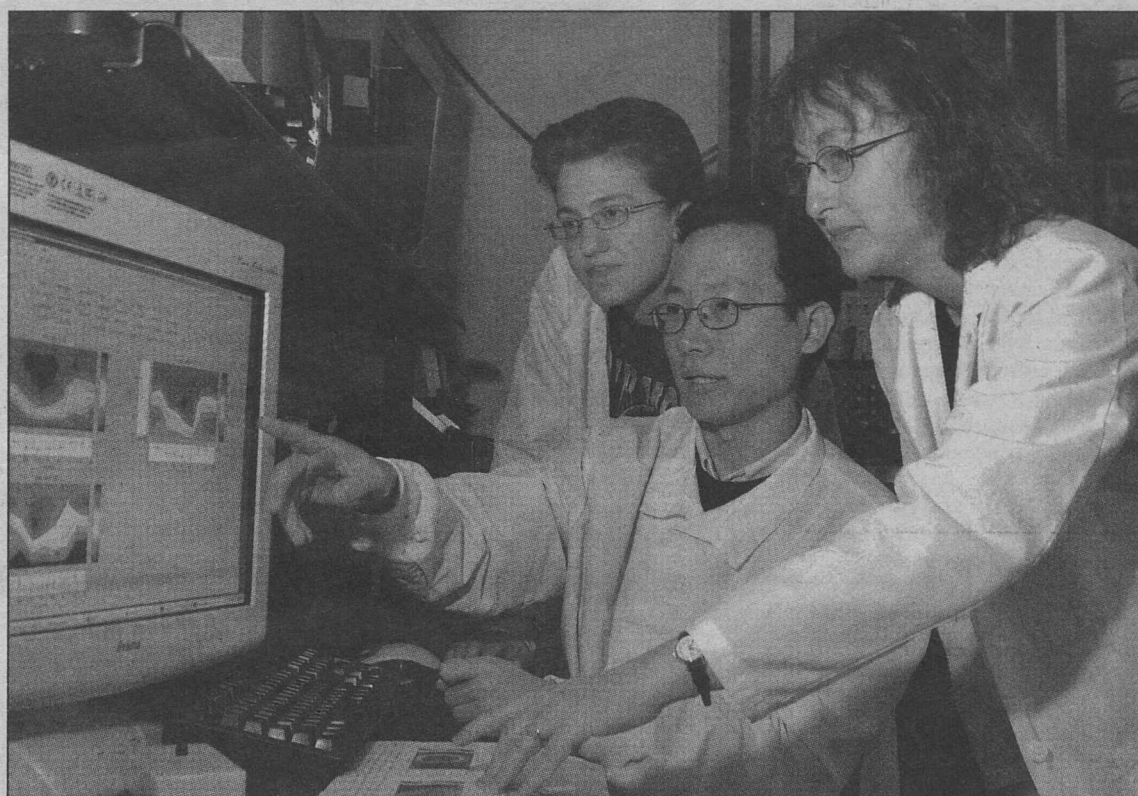
Washington People

Ever since Dora E. Angelaki, Ph.D., left the small Greek island of Crete to attend college, she's pursued her dream of becoming an academic with what her colleagues agree is one of her most distinguishing features: energy.

"Dora is a scientific dynamo, and her boundless energy and enthusiasm are infectious for students and faculty alike," says David Van Essen, Ph.D., the Edison Professor of Neurobiology and head of the department.

Driven by an insatiable desire to learn and be stimulated, Angelaki has matured from a small-town girl to a respected leader in brain research.

"With her sustained commitment to excellence and her rigorous, quantitative approach to problems in neuroscience, Dora has made major contributions to the field," Van Essen says. "She also has played an important role in building strong bridges between the neuroscience and biomedical engineering communities here at



Dora E. Angelaki, Ph.D., graduate student Kim McArthur (left) and research associate Yong Gu, Ph.D., discuss data analyses for a project studying motion perception using a newly developed virtual reality apparatus that combines real motion and visual stimulation.

Balancing act

Dora E. Angelaki's research bridges neuroscience and biomedical engineering

Washington University."

The allure of academia

Though always enchanted by the allure of research-based higher education, Angelaki appeased her parents by agreeing to pursue a more-applied undergraduate degree. Their hope was that electrical engineering would satisfy their daughter's natural scientific talents and curiosity while preparing her for a more practical career than academia — and one that wouldn't take her too far from home.

The plan was futile. Rather than squelch her academic yearnings, college fueled them.

During her studies, Angelaki, now the Alumni Endowed Professor of Neurobiology, was inspired by several articles she read that mentioned a newly emerging field called biomedical engineering. She decided it was the ideal opportunity for her to apply her engineering background to a more theoretical, research-oriented field.

Though she had no formal training in any of the biological sciences, she moved away from her beloved family and country and enrolled in the biomedical engineering graduate program at the University of Minnesota.

"I didn't even know what a red blood cell was," she recalls. "I had to start from scratch, and every day I had to go back and study the basic information my classmates already knew just so I could un-

derstand what was being taught."

These challenges were overshadowed by her passion for the material and unquenchable thirst for knowledge. By her second year of graduate school, she had discovered her niche in an area of science she had never heard of before.

Unlike the more well-known senses of vision and hearing, few people notice their sense of balance, let alone know what it's called. But the system of fluid-filled passages in the inner ear, collectively called the vestibular system, is critical for orienting ourselves in space and maintaining posture and equilibrium. Damage or disruption to the system can be devastating, resulting in dizziness,

nausea and confusion. Researching the vestibular system and its role in spatial orientation incorporates all of Angelaki's strengths and interests. By studying the network of cells that communicate with each other and with the brain via electrical signals, Angelaki could apply her knowledge of mathematics and control systems to broader, biologically relevant questions.

"Dora is a scientific dynamo, and her boundless energy and enthusiasm are infectious for students and faculty alike. ... With her sustained commitment to excellence and her rigorous, quantitative approach to problems in neuroscience, Dora has made major contributions to the field."

DAVID VAN ESSEN

our eye movements into a broad and interesting perspective that relates to the larger concepts of neuroscience," says Stephen G. Lisberger, Ph.D., director of the W.M. Keck Foundation Center for Integrative Neuroscience and professor of physiology at the University of California, San Francisco.

In 1996, just a few years after starting her first faculty appointment at the University of Mississippi, Angelaki's scientific potential was recognized with the Presidential Early Career Award for Scientists and Engineers. She came to Washington University as an associate professor of biomedical engineering in the School of Engineering & Applied Science in 1999.

Her accomplishments have continued to garner respect and accolades, which have allowed her to take on more leadership roles such as editorial and scientific advisory positions — a charge that helps satisfy her constant craving for incorporating new research perspectives into her own work.

The recognition and responsibility also have enabled her to fulfill another goal: encouraging aspiring scientists to study the underappreciated vestibular system.

For example, she participated in the development of a new subspecialty within the University's neuroscience program, called Systems,

Cognitive and Computational Neuroscience, dedicated to providing graduate students training on the brain's interconnected systems.

When Angelaki isn't studying the body's feats of balance, she is focused on maintaining her own. She spends her little spare time with her husband, J. David Dickman, Ph.D., associate professor of anatomy and neurobiology, and their two daughters, either sailing their boat in the Ozarks or enjoying the sunshine on their annual trip to visit her family in Greece.

An ideal role model

As one of a growing number of successful female scientists — including one of eight female faculty in the School of Medicine with an endowed professorship — she is especially dedicated to attracting more women to the field.

"Being a female scientist has always been one of my biggest challenges," she says. "I am very proud I'm a woman, and I feel it's important to make sure universities and communities accept, support and promote women scientists."

In her laboratory, more than half of the postdoctoral research fellows are female. According to two trainees, Andrea Green, Ph.D., and Eliana Klier, Ph.D., Angelaki not only is an effective motivator, but she also is an inspiring role model simply by the example she sets as a scientist, wife and mother.

"Dora is an extremely motivated, enthusiastic and energetic scientist who is consistently pushing the field forward in new directions," Green says.

Klier adds, "She's successfully involved in so many things that I ever wonder if I can do anything; I just look at her and realize that I can."

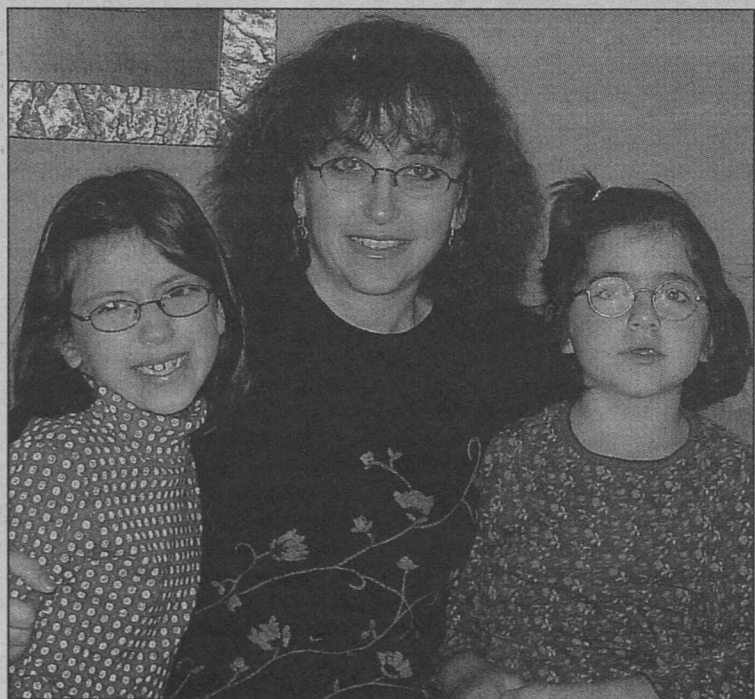
Dora E. Angelaki

Title: Alumni Endowed Professor of Neurobiology and professor of biomedical engineering

Reason for joining WUSTL: "I remember that after my first day of interviews here, I called my husband and told him this is where I want to be. The reason I enjoy science is that it allows me to continue learning and expanding my research, and I knew right away that I would be able to get that here. I was absolutely right."

Family: Husband, J. David Dickman, Ph.D., associate professor of anatomy and neurobiology; daughters Kristina, 9, and Natalie, 7.5 ("the half is very important")

"My rule is that whenever I can find time to be with my family, that's exactly what I do."



Dora Angelaki with her daughters, Kristina (left) and Natalie.