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Record



Washington University in St. Louis

April 30, 2009

record.wustl.edu

Four honorary degrees to be awarded at Commencement

One was named among the 50 most important women in science by Discover magazine; another made Time magazine's list of the 100 most influential leaders in the world.

One is a pioneer and leader in mapping and sequencing the human genome; another guided the Olin Business School through a significant period of growth, helping it become a leading, nationally recognized business school.

The four notable people selected to receive honorary degrees during the 148th Commencement May 15 all stand out in their respective fields.

During the ceremony, which will begin at 8:30 a.m. in Brookings Quadrangle, WUSTL also will bestow more than 2,700 academic degrees on more than

2,600 students.

Wendy Kopp, chief executive officer and founder of Teach For America, will deliver the Commencement address and receive an honorary doctor of humanities degree.

The other honorary degree recipients and their degrees are:

- Robert L. Virgil, Ph.D., emeritus dean of the Olin Business School, emeritus professor of accounting and emeritus trustee, doctor of laws;

- Robert H. Waterston, M.D., Ph.D., the William H. Gates III Endowed Chair in Biomedical Sciences and chairman of the Department of Genome Sciences at the University of Washington in Seattle, doctor of science; and

- Patty Jo Watson, Ph.D., the Edward Mallinckrodt Distinguished University Professor of



Kopp

Anthropology Emerita in Arts & Sciences, doctor of humane letters.

Twenty years ago, **Kopp** proposed, in her Princeton University undergraduate thesis, the creation of Teach For America — the national corps of outstanding college graduates who commit to teach for at least two years in some of the country's highest-need schools and become lifelong leaders in pursuit of educational excellence



Virgil



Waterston

and equity. As a 21-year-old, Kopp raised \$2.5 million of startup funding, hired a skeleton staff and launched a grassroots recruitment campaign. During Teach For America's first year in 1990, 500 men and women, selected from 2,500 applicants, began teaching in six low-income communities across the country.

Since then, more than 20,000 individuals have participated in



Watson

Teach For America, impacting the lives of approximately 3 million students. Teach For America has provided more teachers for low-income communities than any other organization.

Teach For America's 14,000 alumni also are working to expand educational opportunity and to address the underlying causes of educational inequity from a variety of sectors. A significant number of alumni hold leadership roles in education — as veteran teachers, principals, district leaders and even superintendents — in high-need regions across the country.

In 1994, Time magazine recognized Kopp as one of the 40 most promising leaders under 40; in 2006, U.S. News & World Report named her one of America's best

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International meeting Leila Nadya Sadat, J.D. (right), the Henry H. Oberschelp Professor of Law and director of the Whitney R. Harris World Law Institute, introduces Guénaél Mettraux, former associate legal officer and former defense counsel for the International Criminal Tribunal for the former Yugoslavia, during the meeting to begin work on a specialized convention on Crimes Against Humanity April 13-15 at the School of Law. The conference, which featured international law experts from around the world, explored the issues of peace and justice, universal jurisdiction, the phenomenon of ethnic cleansing, interstate enforcement of treaty obligations and the relationship of a new treaty to the International Criminal Court. The second meeting of the Crimes Against Humanity Initiative will take place at The Hague June 11 and 12. The project will culminate with a global conference, at which the final draft of the multilateral treaty will be discussed and the problem of prevention, as well as punishment, will be taken up. Sadat is chair of the steering committee.

Genetic source of childhood cancer found

By GWEN ERICSON

The search for the cause of an inherited form of a rare, aggressive childhood lung cancer has uncovered important information about how the cancer develops and potentially sheds light on the development of other cancers.

The finding by researchers at the School of Medicine, Children's National Medical Center in Washington, D.C., the International Pleuropulmonary Blastoma Registry at Children's Hospitals and Clinics of Minnesota and other collaborating institutions adds the final link to the chain connecting the gene DICER1 to cancer development — something that had been suspected but until

now not definitively demonstrated.

The results were presented April 19 at the 100th Annual Meeting of the American Association of Cancer Research. The study shows that some children with the rare cancer pleuropulmonary blastoma (PPB) are born with a deleterious mutation in DICER1, a master controller gene that helps regulate the expression of other genes. The children studied came from families with a history of PPB or related disorders.

"PPB is the first malignancy found to be directly associated with inherited DICER1 mutations, making the cancer an important model for understanding how mutations and loss of DICER1 function lead to cancer," said lead

author D. Ashley Hill, M.D., chief of pathology at Children's National Medical Center. "We now believe that PPB tumors arise from an unusual mechanism in which cells carrying mutations induce nearby cells to become cancerous without becoming cancerous themselves."

Hill was principal investigator of the study, which began while she was on the School of Medicine faculty.

Only 50-60 cases of PPB are diagnosed each year worldwide. Most children with PPB are under age 5. The cancer progresses from air-filled lung cysts in the early stage to solid lung tumors in later stages. If detected in the earliest stage, 90 percent of patients can be

See **Cancer**, Page 7

DOE makes largest research award in Danforth Campus history

\$20 million awarded to WUSTL; \$15 million to Donald Danforth Plant Science Center

By TONY FITZPATRICK

Washington University and the Donald Danforth Plant Science Center have received two awards totaling \$35 million from the U.S. Department of Energy (DOE) to do research on novel energy initiatives. At \$20 million, the Washington University research award is the largest ever received on the Danforth Campus. The \$15 million for the Donald Danforth Plant Science Center is the largest the organization has ever received.

Washington University and the Donald Danforth Plant Science Center will be home to two of 46 new multimillion-dollar Energy Frontier Research Centers (EFRCs) announced April 27 by the White House in conjunction with a speech delivered by President Barack Obama at the annual meeting of the National Academy of Sciences.

The EFRCs, which will pursue advanced scientific research on energy, are being established by

the U.S. Department of Energy Office of Science at universities, national laboratories, nonprofit organizations and private firms across the nation.

As an EFRC, WUSTL will receive a five-year, \$20 million award from the DOE to establish the Photosynthetic Antenna Research Center (PARC) and study forms of energy based on the principles of light harvesting and energy funneling. Plans are to house the center at the Stephen F. and Camilla T. Brauer Hall, scheduled to open in 2010.

Robert E. Blankenship, Ph.D., the Lucille P. Markey Distinguished Professor in Arts & Sciences, will be director of the WUSTL program. Blankenship, also professor of biology and of chemistry, both in Arts & Sciences, will coordinate the efforts of 16 other principal investigators from around the world. Dewey Holten, Ph.D., professor of chemistry, will be associate director.

The center comes under the

See **Award**, Page 7

University swine flu response

On April 26, the federal government declared a public health emergency as a result of several confirmed cases of swine flu in the United States. As of April 28, there had been no cases of swine flu reported on the WUSTL campus or elsewhere in Missouri and Illinois.

The University has called together the Emerging Infectious Disease Task Force to monitor the situation and keep the University community informed and

provide updates as new information becomes available.

More information about WUSTL's planning and preparedness for this health emergency is available and will be regularly updated at emergency.wustl.edu.

WUSTL relies on emergency.wustl.edu as the primary communications channel for emergencies and recommends that faculty, staff and students check frequently for updates.

Women's Society presents leadership award, scholarship

By JESSICA DAUES

The Women's Society of Washington University honored the legacy of two of the University's most revered women — Elizabeth Gray Danforth and Harriet K. Switzer — at its annual meeting April 15.

The society presented the Harriet K. Switzer Leadership Award and the Elizabeth Gray Danforth Scholarship to two exemplary college students at the Formal Lounge of the Ann W. Olin Women's Building.

Harriet K. Switzer Leadership Award

The Harriet K. Switzer Leadership Award was presented to WUSTL senior Kristi Tanouye. Tanouye, of New Lenox, Ill., will graduate May 15 with a bachelor's degree and master's degree in biomedical engineering.

Tanouye has a 3.71 grade-point average and is a member of Alpha Eta Mu Beta, a biomedical engineering honors society, and Sigma Xi, a science honors society.

She has conducted research

on elbow implant usage in humans as well as the impact of diabetes on the structural and material properties of bones in rats. She also has been a tutor for other engineering students.

Tanouye served as co-president (2007-08) of the WUSTL Society of Women Engineers and as vice president (2006-07) and president (2007-08) of the WUSTL Biomedical Engineering Society. Tanouye also was the Society of Women Engineers' 2009 regional conference chair. In that role, she organized speaker and networking sessions, socials and business meetings for more than 200 students and professionals for the society's 2009 conference at Washington University.

Tanouye also manages the Edison Theatre Box Office.

The Women's Leadership Award, now in its 12th year, was renamed the Harriet K. Switzer Leadership Award in 2007 in honor of Switzer, Ph.D., longtime secretary of the Board of Trustees and University coordinator for the Women's Society.

The award is presented annually to a young woman who has made a significant contribution to



Mary Jane Gray, M.D. (right), sister of Elizabeth Gray Danforth, presents the Elizabeth Gray Danforth Scholarship to St. Louis Community College-Meramec student Simeona Georgiev.

WUSTL as an undergraduate.

The award consists of a \$500 cash prize and a silver clock inscribed with a quote from English writer Virginia Woolf: "I should remind you how much depends upon you and what an influence you can exert upon the future."

Elizabeth Gray Danforth Scholarship

The society, with the help of Mary Jane Gray, M.D., sister of Elizabeth Gray Danforth, presented the Elizabeth Gray Danforth Scholarship — which covers full tuition at the University and is awarded to outstanding St. Louis Community College transfer students — to Simeona Georgiev.

Georgiev has a 3.91 grade-point average and attends St. Louis Community College-Meramec.

She is president of the

Business Club and a member of Phi Theta Kappa, the Math Club and the International Club at Meramec. She works as the head French tutor at Meramec.

Georgiev, who was born in Bulgaria and has lived in Austria, also is a talented singer and performs in concerts with a Christian a cappella group and in nursing homes. She plans to earn a bachelor's degree in business administration as well as a master's degree in business administration.

Among her long-term goals is to travel to Africa to teach children about the importance of education.

The Elizabeth Gray Danforth Scholarship was established in 1976 and was renamed in 1995 in honor of the late Elizabeth Gray Danforth, wife of Chancellor Emeritus William H. Danforth, M.D., and the University's first lady for 24 years.

The Women's Society is a group of more than 600 volunteers and professional women from the St. Louis area.

The society was founded in 1965 to engage women in the life of the University through education, scholarships, student projects and leadership.

Women need not be WUSTL professors or alumnas — or parents or wives of WUSTL alumni or professors — to join the Women's Society.

For more information, visit womenssociety.wustl.edu or call 935-7337.

20 graduate, professional programs hold U.S. News' top 10 rankings

Twenty WUSTL schools, academic areas and departments at the graduate and professional levels currently hold top 10 rankings in U.S. News & World Report's rankings of graduate and professional programs, which were released April 23.

Overall, 43 graduate and professional academic areas at the University rank in U.S. News' top 25.

The School of Medicine remains No. 3 among research-oriented medical schools, tied this year with the University of Pennsylvania.

The School of Medicine's internal medicine program ranks No. 6, up from No. 8 in 2008 and retaining its top 10 standing, and the pediatrics program is tied at No. 8.

The medical school has ranked No. 1 in student selectivity for 11 consecutive years. In addition, its 2008 average entrance exam scores and undergraduate grade-point averages were the highest among the top 50 research-oriented medical schools.

"While we try not to place too much emphasis on rankings, it is nice to see — through both objective and reputational measures — we are in the company of such highly regarded institutions," said Larry J. Shapiro, M.D., executive vice chancellor for medical affairs and dean of the School of Medicine.

"We are proud of our students, faculty and staff who have helped the School of Medicine remain in the top 10 since U.S. News began the rankings in 1987," he said.

The Department of Biomedical Engineering in the School of Engineering & Applied Science is tied for No. 10 in the rankings, up from No. 17 in 2008.

"I am gratified and proud that our peers recognize the achievements of our extremely talented faculty, students, alumni and staff," said Frank C. P. Yin, M.D., Ph.D., the Stephen F. and Camilla T. Brauer Distinguished Professor of Biomedical Engineering and chair of the biomedical engineering department.

"Their hard work and dedication, together with the support

"We are proud of our students, faculty and staff who have helped the School of Medicine remain in the top 10 since U.S. News began the rankings in 1987."

LARRY J. SHAPIRO

of our many friends and colleagues, are what made this possible," he said.

Two Arts & Sciences departments — Political Science and Psychology — are tied for a No. 13 ranking in 2009. Two specialties within those departments — political methodology (No. 7) and cognitive psychology (tied for No. 9) — rank among the top 10.

"Political science and psychology are two of the strongest departments in Arts & Sciences, and I am not surprised that they have been recognized," said Richard J. Smith, Ph.D., dean of the Graduate School of Arts & Sciences and the Ralph E. Morrow Distinguished University Professor of physical anthropology.

"Political methodology and cognitive psychology are areas in which each department made the strategic decision to build strength. They demonstrate that, even at our moderate size, departments can identify areas in which they become international leaders," Smith said.

The School of Law remains in the top 20 for the fourth straight year, retaining its No. 19 ranking. Within the law school, the Trial and Advocacy Program remains among the nation's best at No. 4 (tie) in the nation, as does the Clinical Affairs Program, which ranks No. 5.

The School of Law is also included in this year's list of most diverse law schools.

"I am gratified that the excellence of our faculty, students and alumni continues to receive recognition," said Kent D. Syverud, J.D., dean of the law school and the Ethan A.H. Shepley University Professor.

The Olin Business School's MBA program claims a spot among the top graduate programs in the country, rising three places to tie for No. 22 overall. In

addition, two of Olin's programs are recognized for their excellence: The school's part-time program, the Professional MBA, is tied for No. 20, and the Executive MBA Program is tied for No. 18.

"Each of our MBA programs is a respected leader in the marketplace, distinguished by exceptional students and alumni and world-class faculty and staff," said Mahendra R. Gupta, Ph.D., dean of Olin Business School and the Geraldine J. and Robert L. Virgil Professor of Accounting and Management. Our collective, ongoing hard work will continue to advance our fine business school."

U.S. News ranks some graduate schools, areas and departments — such as law — annually, and some — such as psychology and political science — on a rotating cycle.

Among those not reranked in 2009 and therefore retaining their 2008 rankings were the George Warren Brown School of Social Work (No. 1), Program in Occupational Therapy (tied for No. 1), Program in Physical Therapy (tied No. 2) and Program in Audiology and Communication Sciences (No. 5).

Retaining their 2007 rankings are doctoral programs in biological science (tied No. 7), microbiology (tied No. 3); genetics/genomics/bioinformatics (tied No. 4), immunology/infectious disease (tied No. 5), cell biology (No. 9), neuroscience/neurobiology (No. 9) and biochemistry/biophysics/structural biology (tied No. 10).

Many of this year's rankings are in the May 2009 U.S. News magazine, available on newsstands April 28.

The "America's Best Graduate Schools" guidebook, published by U.S. News, also became available April 28.

The U.S. News rankings also can be found online at usnews.com.

University announces Danforth Campus Parking changes for 2009-10

Faculty, staff and students who park vehicles on campus must renew their permits for the upcoming 2009-10 academic year. Faculty, staff and students can renew their permit online at parking.wustl.edu or at the Parking and Transportation Services office in North Campus.

Permits for the 2008-09 academic year expire June 30.

Among the changes made to the parking program in 2009-10 will be a slight increase in price for 2009-10 Red, Yellow, Blue, Brown, North Campus, Official Business, Monthly and Evening permits.

The prices of other permits will remain the same, including the Off-site permit, which provides spaces on parking lots on West Campus or North Campus for students or employees who work elsewhere on the Danforth Campus. This permit costs \$15 per year and will be provided on a first-come, first-served basis with a maximum of 200 permits.

The Occasional Parking Program price of \$2.50 per day also will not change. This program is designed to provide an occasional, reduced-cost daily parking option for those who normally use an alternate mode (walk, bike, public transit and carpool) for their commute. The Occasional Parking Program will make a set number of discounted daily passes available annually for purchase by individuals enrolled in the program. For more information, visit parking.wustl.edu/occasional.htm.

The Motorcycle permit also will remain the same at \$15 per year.

WUSTL also offers students, faculty and staff several cost-effective alternatives to using a personal vehicle to commute to and from campus.

The University provides each benefits-eligible employee and

Parking permit prices for the academic year 2009-10

Red	\$996
Yellow	\$438
Blue	\$438
Brown	\$438
North Campus	\$231
Official Business	\$428
Off-site	\$15
Motorcycle	\$15
Monthly	\$102
Evening	\$102
Occasional Daily	\$2.50
Daily	\$5

full-time student with a complimentary U-Pass, which allows the holder unlimited use of Metro buses and MetroLink as an alternative method of transportation to and from campus. This benefit helps keep hundreds of cars off the roads daily, which reduces carbon emissions along with the need for parking. For more information on this benefit, visit parking.wustl.edu/metro.htm.

The WeCar car-sharing program provides a means of transportation for those who might typically commute via public transportation, bicycle or foot. For more information, visit parking.wustl.edu/wecar.htm.

Car-pooling is another environmentally friendly way to commute to and from campus. Parking and Transportation also is putting together a car-pool task force to enhance WUSTL's current car-pool program. An announcement of changes to the car-pool program is scheduled for July.

For more information about renewing a permit or a parking program, contact Parking and Transportation Services at 935-5601 or parktrans@wustl.edu.

School of Medicine Update

Life-saving devices to be installed in medical school buildings

By BETH MILLER

Automatic external defibrillators (AEDs) are being installed in School of Medicine buildings to improve a person's chances of survival after sudden cardiac arrest.

In the first phase of the program, about 140 public-access defibrillators will be installed in 34 School of Medicine-owned buildings beginning in May. In addition, four AEDs will be provided to the Protective Services Department, which already has three devices in its vehicles and on bicycles.

In buildings with large numbers of employees, an AED will be placed on every floor near the elevators. Buildings with fewer employees will have one AED in the first-floor lobby near the elevator. Future phases will place AEDs on all floors of these school buildings.

More than 250,000 Americans die each year from sudden cardiac arrest, or abnormal heart rhythms, according to the American Heart Association, and about half of those events occur outside of a hospital. A person in cardiac arrest generally has about 4 minutes in which to receive life-saving defibrillation, which provides an electric shock to restore the heart to its normal rhythm. For every

minute that passes without defibrillation, the chance of survival decreases by 7 percent to 10 percent.

Mary Z. Taylor, director of patient safety for the Faculty Practice Plan at the School of Medicine, said AEDs are becoming more common in airports, malls and schools, and it is timely and appropriate to install them in medical school facilities.

"As a leading medical center, Washington University has a commitment to excellence," Taylor said. "It's important that we have these life-saving devices accessible to our community."

"The evidence is clear that AED is the difference in saving lives — good CPR is critical, but that's not enough," said Robert M. Kennedy, M.D., professor of pediatrics and one of the physician advisers spearheading the project. "There are many physicians, nurses and others in our office and research buildings with resuscitation expertise, but these areas have no resuscitation equipment because patients are not present. When a cardiac arrest occurs in an office or lab, trained providers on the scene can do no more than basic CPR (cardiopulmonary resuscitation) and wait for emergency responders, losing critical minutes. Because of the size and complexity of the

"As a leading medical center, Washington University has a commitment to excellence. It's important that we have these life-saving devices accessible to our community."

MARY Z. TAYLOR

campus, it can be difficult for these outside rescuers to find someone in the 4- to 5-minute window," he said. "This initiative will dramatically improve our chances to save that heart-attack

victim."

Brent E. Ruoff, M.D., associate professor and acting chief of emergency medicine, and David Tan, M.D., assistant professor of emergency medicine and medical director of the Public Access Defibrillator Program, also are physician advisers to the project.

The School of Medicine is purchasing AEDs that are about the size of a lunchbox and weigh 3.3 pounds each. The machines provide simple, oral instructions. The defibrillator pads include illustrations indicating where to place them on the patient. Once the pads are in place, the machine searches for a shockable rhythm, and, if necessary, shocks the patient and then instructs the user to call Protective Services at 362-HELP and begin CPR.

Taylor said the initiative includes additional support for training of School of Medicine staff. The program will encourage at least two volunteers per floor in each building who may already be certified in CPR and have duties that keep them primarily on-site to be trained to operate the AEDs and to perform CPR.

"The people we train do not have to be health-care professionals," Taylor said. "Published studies have shown that trained lay volunteers can watch the training video and use the AEDs safely and effectively. Even without any training at all, these units are easy to use, and the instructions are easy to follow. Initiating help immediately while awaiting Protective Services' arrival could save a life."

Age may determine success of assisted-hatching method

By DIANE DUKE WILLIAMS

Assisted hatching, a procedure commonly thought to improve pregnancy rates during in vitro fertilization (IVF), does not affect outcomes in most women younger than 38 years old, according to School of Medicine researchers.

The findings are available online in the journal *Fertility and Sterility* and will appear in its January 2010 print edition.

IVF is the process of fertilization that combines an egg and sperm in a laboratory dish to produce an embryo. The pregnancy rate after transfer of embryos into the uterus remains one of the primary barriers to the success of IVF.

Before implanting in the uterus, an embryo must emerge from an outer layer in a process called hatching. In some women, this outer layer or shell appears to harden, especially as women age.

In assisted hatching, a physician uses a delicate procedure to open the embryo's shell to help it break loose and attach to the walls of the uterus. This practice has been widely used by clinicians in IVF since the 1990s, but previous studies of assisted hatching have been far from uniform in study design and patient population, and few have evaluated the number of live births.

"Because assisted hatching adds to the cost of IVF and theoretically increases the risk due to extra handling of the embryo, we decided to conduct a prospective, randomized trial to determine if it was beneficial in this younger group of women," said Randall Odem, M.D., professor of obstetrics and gynecology and senior author of the study.

An average IVF cycle costs between \$10,000-\$12,000.

Women younger than 38 years old preparing to undergo IVF at

WUSTL between April 2004 and March 2007 were offered enrollment into the study and underwent egg retrieval and IVF.

Embryologists in the IVF lab evaluated the patient's embryos on the third day after fertilization, and the appearance of each embryo along with the thickness of its shell were measured and recorded. Women who had embryos with shells thicker than 12 microns were eligible to be randomized to either the hatching arm or the nonhatching arm of the study.

Only the embryologists knew to which study arm patients belonged. Patients who did not achieve pregnancy following the initial cycle and chose to undergo a second cycle were crossed over into the alternative study arm for their second cycle, if eligible.

No significant differences were observed between patients with assisted or unassisted hatching in the number of pregnancies (47 percent vs. 50 percent, respectively) or the number of live births (46 percent vs. 45 percent, respectively). Also, no significant differences were noted between hatched and unhatched groups in rates of spontaneous abortions, twins, chromosomal abnormalities or ectopic pregnancies.

Assisted hatching will continue to be routine care in older women undergoing IVF at the University's Infertility and Reproductive Medicine Center, Odem said. But the study results have changed the amount of assisted hatching performed at the center in women younger than 38.

"The amount of assisted hatching we do has gone down by more than 50 percent," he said. "We hope that other centers throughout the world will take note of these findings and also change their practices."



Odem



Tell me your story Brandi Brown (left) and her mother, Kathie Bryson (right), get help from Naomi Green, a StoryCorps facilitator, as they prepare to record a segment for StoryCorps, the nation's largest oral-history project. StoryCorps visited the Siteman Cancer Center at the Medical Center April 17-21 to record parents and children recalling how the parent communicated a cancer diagnosis to his or her children. StoryCorps intends to use these recordings to identify best practices for parents who are in a similar situation. StoryCorps also visited the Siteman Cancer Center at Barnes-Jewish West County Hospital April 24-27 and will visit the Siteman Cancer Center at Barnes-Jewish St. Peters Hospital April 30-May 3.

Constantino named Blanche F. Ittleson Professor, director of child psychiatry

By JIM DRYDEN

John N. Constantino, M.D., has been named the Blanche F. Ittleson Professor of Psychiatry and Pediatrics and director of the William Greenleaf Eliot Division of Child and Adolescent Psychiatry.

Charles F. Zorumski, M.D., the Samuel B. Guze Professor of Psychiatry, professor of neurobiology and head of the Department of Psychiatry, made the announcement.

"John is a world leader in understanding the roots of autism and related disorders," Zorumski said. "He also is an outstanding clinician and teacher, and I am pleased he has agreed to follow Richard Todd as director of child psychiatry."

Constantino succeeds Todd, an internationally known expert on the influences of genetics and environment on psychiatric illness in children, addressing such disorders as attention-deficit hyperactivity disorder, autism-spectrum disorders and affective disorders in childhood. Todd died of chronic lymphocytic leukemia last August at age 56.

"It is both an honor and a humbling experience to succeed Richard," Constantino said. "But it is also a bittersweet occasion because he was such a dear friend."

As Ittleson Professor, Constantino will oversee the School of Medicine's clinical and research efforts in child and adolescent psychiatry. He also becomes the child-psychiatrist-in-chief at St. Louis Children's Hospital. His appointment was praised by Alan L. Schwartz, Ph.D., M.D., the hospital's pediatrician-

in-chief.

"John is internationally known for his outstanding scholarship on the genetic bases of autism and associated disorders," said Schwartz, the Harriet B. Spoehrer Professor and head of the Department of Pediatrics. "He is a superior physician, scientist and educator."

A native of St. Louis, Constantino received his undergraduate training at Cornell University in Ithaca, N.Y. He earned a medical degree from the School of Medicine in 1988 and completed an internship and residency in pediatrics, followed by a psychiatry residency and a fellowship in child psychiatry, all at Albert Einstein College of Medicine in the Bronx, N.Y. Following another postdoctoral research fellowship in psychiatric epidemiology at the School of Medicine, he joined the faculty at Washington University and the staff at St. Louis Children's Hospital in 1993.

Constantino's clinical interests involve disorders of social development in children with autism, abnormally aggressive behavior, personality disorder, psychiatric complications of neurodevelopmental disorders and childhood psychiatric conditions that are resistant to standard therapies.

His research focuses on genetic and environmental factors involved in social developmental disorders in children.

He is a past recipient of the Distinguished Service Teaching Award at the School of Medicine and has served on the State of Missouri's Mental Health Commission.



Constantino

University Events

Unique video installation 'Chew the Fat' to open

Rirkrit Tiravanija creates spare yet provocative installations designed to blur lines between art and life, transforming galleries and museums into ephemeral social spaces for cooking meals, playing music and hanging out.

Beginning May 8, the Mildred Lane Kemper Art Museum will showcase one recent project with its exhibition "Rirkrit Tiravanija: Chew the Fat," a multifaceted video installation that together profiles a loose-knit group of 12 internationally known artists.

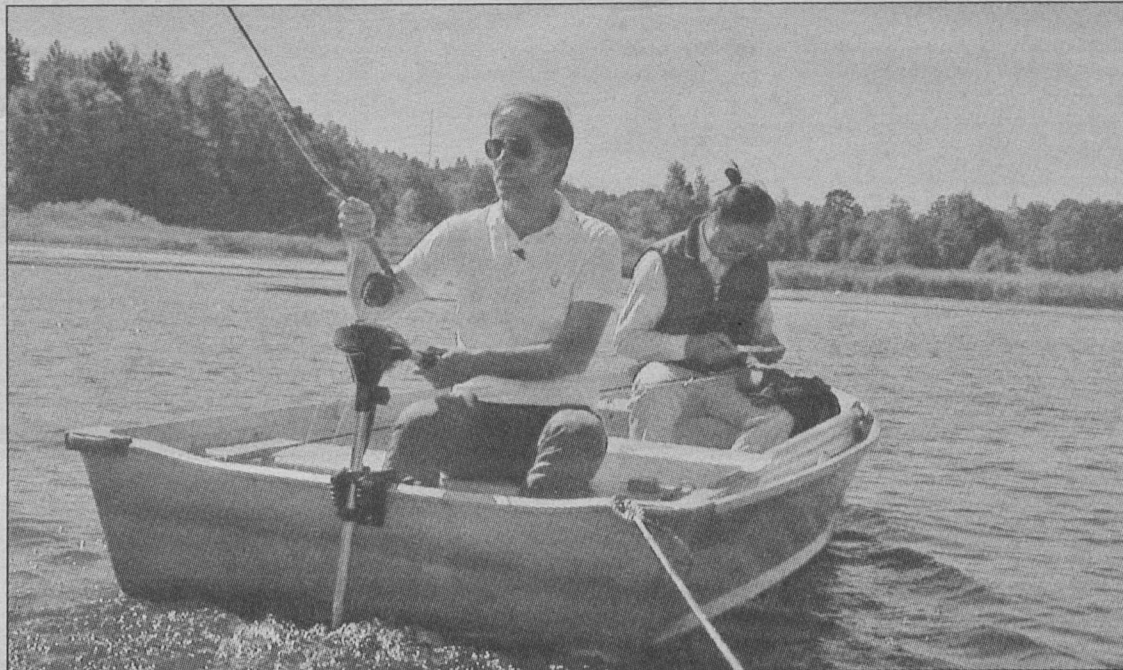
"Chew the Fat (A Documentary Portrait by Rirkrit Tiravanija)" — shown at WUSTL for the first time as an independent project after debuting last year in the group show theanyspacewhat- ever at the Solomon R. Guggenheim Museum in New York — consists of a large viewing space in which both a feature-length film and several individual portraits play in continuous loops.

Included are interviews and discussions with international artists Angela Bulloch, Maurizio Cattelan, Liam Gillick, Dominique Gonzalez-Foerster, Douglas Gordon, Carsten Höller, Pierre Huyghe, Jorge Pardo, Philippe Parreno, Elizabeth Peyton, Tobias Rehberger and Andrea Zittel.

Though working across a wide range of media, these artists share certain strategies and sensibilities, often gathered under the term "relational aesthetics," coined by French curator and critic Nicolas Bourriaud in the mid-1990s.

With "Chew the Fat," Tiravanija looks back upon the motivations and practices of this diverse group, which was united primarily by its interest in the mutation of social space in a global, digital age.

All interviews are conducted by Tiravanija, and his friendship with the artists — most of whom



Visual artist Rirkrit Tiravanija (right) goes fishing with Carsten Höller in one of the many scenes from the documentary "Rirkrit Tiravanija: Chew the Fat" opening at Kemper Art Museum May 8.

have been collaborators at one time or another — produces a relaxed and informal air. He goes fishing with Höller, walks the California desert with Zittel and checks e-mail with Gillick.

He visits Pardo's spacious Los Angeles studio and Peyton's Long Island porch and then receives a visit in Thailand from Huyghe. In Paris, Tiravanija drinks wine with Parreno and strolls along the Seine with Gonzalez-Foerster. He visits both Bulloch and Gordon in Berlin and then rides a train across Germany with Rehberger. (Cattelan, though not interviewed directly, appears through the commentary of his friends.) The result is a series of playful and wide-ranging conversations that capture the spirit of a generation.

"Rirkrit Tiravanija: Chew the Fat" is organized by Karen K. Butler, assistant curator at the

Kemper Art Museum.

"Tiravanija is known for making installations that critique the seeming neutrality and authority of the white walls of the museum by creating playful spaces for social interaction and relaxation," Butler said.

In keeping with that sense of playfulness, the exhibition transforms Kemper into a comfortably oversized sitting room in which dozens of large white meditation pillows, scattered about bright orange wall-to-wall carpeting, are interspersed with a series of video monitors.

The feature-length film, which combines excerpts from all the artist interviews, is screened on seven monitors while five monitors play individual profiles of five artists: Bulloch, Gonzalez-Foerster, Gordon, Huyghe and Peyton. (Tiravanija is continuing

to edit his original footage and eventually will produce individual profiles of 11 participants.)

Born in Buenos Aires in 1961, Tiravanija attended high school in Bangkok and then studied at the Ontario School of Art in Toronto, the Banff Center School of Fine Arts, the School of the Art Institute of Chicago and the Whitney Independent Studies Program in New York.

His works typically focus on creating participatory experiences and frequently revolve around food or music. "Untitled (Free)" transformed a New York gallery into a restaurant offering free bowls of curry and rice in 1992, while "Untitled (D)" consisted of a rock band practice space installed as part of the 1995 Whitney Biennial.

Other projects range from

"The Land," an ongoing and self-sustaining artistic community located near Chiang Mai, Thailand, to "Demonstration Drawings," for which he enlisted young Thai artists to make pencil drawings based on news photographs.

With Molly Nesbit and Hans Ulrich Obrist, he organized "Utopia Station," a plywood platform where hundreds of artists and visitors came together for debate, performance, film projection and artistic creation at the 2003 Venice Biennial.

He is currently designing a bookstore for the 2009 Venice Biennial.

Tiravanija has exhibited at museums and galleries around the world, including solo shows at the Kunsthalle Basel, Switzerland; The Museum of Modern Art, New York; the Los Angeles County Museum of Art; Portikus, Frankfurt; and the Secession, Vienna.

His many honors include the 2004 Hugo Boss Prize as well as the Benesse Prize (2003), Lucelia Artist Award (2003), Central Kunst Prize (1996) and a National Endowment for the Arts Visual Artist Fellowship. He divides his time between New York, Berlin and Bangkok.

The exhibition will open with a reception at 7 p.m. May 8 and remain on view through July 27. Both the reception and exhibition are free and open to the public.

In conjunction with the exhibit, Butler will lead a pair of special tours at 2 p.m. May 31 and July 12.

In addition, the museum will host a free screening of "Zidane: A 21st-Century Portrait," directed by Douglas Gordon and Philippe Parreno, at 5 p.m. June 26.

For more information, visit kemperartmuseum.wustl.edu or call 935-4523.

Eclipse of the Gene • Urban Air Pollution • OVATIONS Sneak Preview

"University Events" lists a portion of the activities taking place April 30- May 13 at Washington University. Visit the Web for expanded calendars for the Danforth Campus (news-info.wustl.edu/calendars) and the School of Medicine (medschool.wustl.edu/calendars.html).

Exhibits

"Expressions of Jewish Life Through Texts and Objects." Through June 28. Olin Library, Lvl. 1, Grand Staircase Lobby and Ginkgo Rm. 935-4151.

"Painting with Light." May 1 & 2. (Refreshments served.) 7520 Forsyth Blvd. 935-6700.

"Rirkrit Tiravanija: Chew The Fat." A multifaceted video installation. May 8-July 27. Kemper Art Museum. 935-4523.

Film

Monday, May 4

7 p.m. "The Alzheimer's Project." Documentary premiere, featuring John C. Morris, dir., Alzheimer's Disease Research Center. (6 p.m. pre-reception.) Discussion follows. Mo. History Museum, 5700 Lindell Blvd. 286-0105.

Lectures

Friday, May 1

10:30 a.m. Boeing Center for Technology, Information and Manufacturing Lecture. Annual Meir Rosenblatt Lecture. "Risk and Global Supply Chain Management." Paul R. Kleindorfer, prof. of sustainable development, INSEAD. Charles F. Knight Center, Rm. 220. 935-5577.

Monday, May 4

3 p.m. Siteman Cancer Center Neuro-oncology Seminar Series. "Role of the Tumor Microenvironment in Neoplastic Progression and the Response to Therapy." Zena Werb, prof. of anatomy, U. of Calif., San Francisco. South Bldg., Rm. 3907, Philip Needleman Library. 454-8566.

4 p.m. Anthropology Special Lecture. "The Eclipse of the Gene and the Return of Divination." Margaret Lock, emerita prof. in social studies in medicine, McGill U. (3:30 p.m. reception, McMillan Cafe.) Co-sponsored by Medicine and Society Program. McMillan Hall, Rm. 149. 935-7770.

4 p.m. Immunology Research Seminar Series. "Identifying T Cell Epitopes for CD4 T Cells in Type-1 Diabetes in the NOD Mouse." John Kappler, investigator, Howard Hughes Medical Inst. Farrell Learning & Teaching Center, Connor Aud. 362-2763.

Tuesday, May 5

Noon. Molecular Microbiology & Microbial Pathogenesis Seminar Series. "Chemical, Virtual and Industrial Genetics of Malaria." Elizabeth Winzler, assoc. prof. of cell biology, Scripps Research Inst. Cori Aud., 4565 McKinley Ave. 362-1514.

4:30 p.m. Freedom From Smoking Class. "Quit Day." (Also at 5:30 p.m. May 5.) Center for Advanced Medicine, Barnard Health and Cancer Info. Center. To register: 362-7844.

5:30 p.m. Biochemistry & Molecular Biophysics Biophysical Evenings Seminar. "Pif the Magic Helicase." Roberto Galletto, asst. prof. of biochemistry & molecular biophysics. Cori Aud., 4565 McKinley Ave. 362-4152.

Wednesday, May 6

Noon. Siteman Cancer Center Seminar. Roy Cameron, dir., center for behavioral research and program evaluation, U. of Waterloo, Ontario. Goldfarb Hall, Rm. 132. 454-8110.

4 p.m. Institute for Public Health Faculty Seminar Series. "Environmental Risk Assessment." Ruth Chan, research assoc. in chemical engineering, and "The Impact of Water Chemistry on the Concentrations of Lead and Arsenic in Drinking Water." Daniel Giammar, assoc. prof. of energy, environmental and chemical engineering. Steinberg Aud., Medical School. 454-7998.

4 p.m. QUAD-Departmental Seminar Series. "The Genomic Code for Nucleosome Positioning." Jonathan Widom, prof. of biochemistry, molecular biology and cell biology, Northwestern U. Co-sponsored by depts. of Genetics, of Biochemistry & Molecular Biophysics, of Cell Biology & Physiology and of Developmental Biology. Moore Aud. 362-2139.

Thursday, May 7

8:30 a.m.-3 p.m. Program in Audiology and Communication Services Annual PACS Student Research Colloquium. (Also 8:30 a.m.-3 p.m. May 8.) Farrell Learning & Teaching Center, Holden Aud. 747-0108.

4:30 p.m. Freedom From Smoking Class. "Winning Strategies." (Also at 5:30 p.m. May 7.) Center for Advanced Medicine, Barnard Health and Cancer Info. Center. To register: 362-7844.

Friday, May 8

11 a.m. Energy, Environmental and Chemical Engineering Seminar. "Multiscale Atmospheric Modeling: From Urban Air Pollution to Global Climate." Yang Zhang, asst. prof. of marine earth and atmospheric sciences. Lopata Hall, Rm. 101. 935-5548.

Monday, May 11

5:30 p.m. Cardiac Bioelectricity & Arrhythmia Center Seminar. "The Genetics of Hereditary Cardiac Arrhythmias." Silvia G. Priori, prof. of molecular cardiology, U. of Pavia, Italy. (5 p.m. reception.) Whitaker Hall, Rm. 218. 935-7887.

Tuesday, May 12

Noon. Molecular Microbiology & Microbial Pathogenesis Seminar Series. "Infection

and Spread of Alpha Herpes Viruses in the Nervous System." Lynn W. Enquist, prof. of molecular biology, Princeton U. Cori Aud., 4565 McKinley Ave. 362-2689.

4:30 p.m. Freedom From Smoking Class. "The New You." (Also at 5:30 p.m. May 12.) Center for Advanced Medicine, Barnard Health and Cancer Info. Center. To register: 362-7844.

Wednesday, May 13

4 p.m. QUAD-Departmental Seminar Series. "On Sperm, Membranes and Mysteries." Barbara Wakimoto, prof. of biology, U. of Wash. Co-sponsored by depts. of Genetics, of Biochemistry & Molecular Biophysics, of Cell Biology & Physiology and of Developmental Biology. Moore Aud. 362-2139.

Music

Thursday, April 30

8 p.m. Concert. Guitar Gala. Graham Chapel. 935-5566.

Friday, May 1

8 p.m. Opera Scenes. "The Magic Flute." (Also 8 p.m. May 2.) Umrath Hall Lounge. 935-5566.

Wednesday, May 6

8 p.m. Concert. Nuclear Percussion Ensemble. Formal Lounge, Danforth University Center. 935-5566.

On Stage

Tuesday, May 5

7 p.m. OVATIONS Season Preview. Sneak preview of the 2009-10 OVATIONS lineup. RSVPs requested. Edison Theatre. For more information: 935-6564.

And More

Friday, May 1

8 a.m.-5 p.m. Occupational Therapy Scholarship Day. Presentation of final projects. Keynote speaker: Mary Law, prof. of rehabilitation science, McMaster U., Canada. Eric P. Newman Education Center, 286-1600.

Monday, May 4

7:30 a.m. National Predoctoral Clinical Research Training Program Meeting. (Also 7:30 a.m. May 5.) Eric P. Newman Education Center. 454-8540.

Saturday, May 9

1 p.m. Memorial Service for Abdullah Nassief. Farrell Learning & Teaching Center, Connor Aud. 286-0072.

Saturday, May 16

9:30 a.m.-4 p.m. Free Asthma Screening. Conducted by School of Medicine physicians. St. Louis Science Center, 5050 Oakland Ave. 454-7376.

Sports

Thursday, April 30

1 p.m. Baseball vs. Maryville U. Athletic Complex. 935-4705.

Saturday, May 2

10 a.m. Baseball vs. Webster U. Athletic Complex. 935-4705.

Noon. Softball vs. DePauw U. WUSTL Field. 935-4705.

Sunday, May 3

12:30 p.m. Baseball vs. DePauw U. Athletic Complex. 935-4705.

Washington U. Opera presents 'Magic Flute'

By LIAM OTTEN

A handsome prince, a distant land, a damsel in distress. Yet, in the world of "The Magic Flute," little is as it seems.

At 8 p.m. May 1 and 2, Washington University Opera will present an abridged version of Wolfgang Amadeus Mozart's beloved classic in Karl Umrath Hall.

"The Magic Flute" centers on Tamino, a lost prince who falls in love upon viewing a portrait of the maiden Pamina, who has been spirited away by the high priest Sarastro.

At the behest of her mother — Queen of the Night — Tamino sets out to free Pamina, armed with a charmed flute and accompanied by the birdcatcher Papageno. Yet the pair soon discovers that Sarastro is not the villain he appears, nor is the Queen of the Night easily denied her vengeance.

"The complications, hardships and tests Tamino and Papageno must face are difficult indeed," said Jolly Stewart, director of the Washington University Opera. "But, by their steadfast perseverance, they are deemed worthy and are rewarded with love."

Mozart's final opera, "The Magic Flute," was composed at the behest of his friend Emanuel

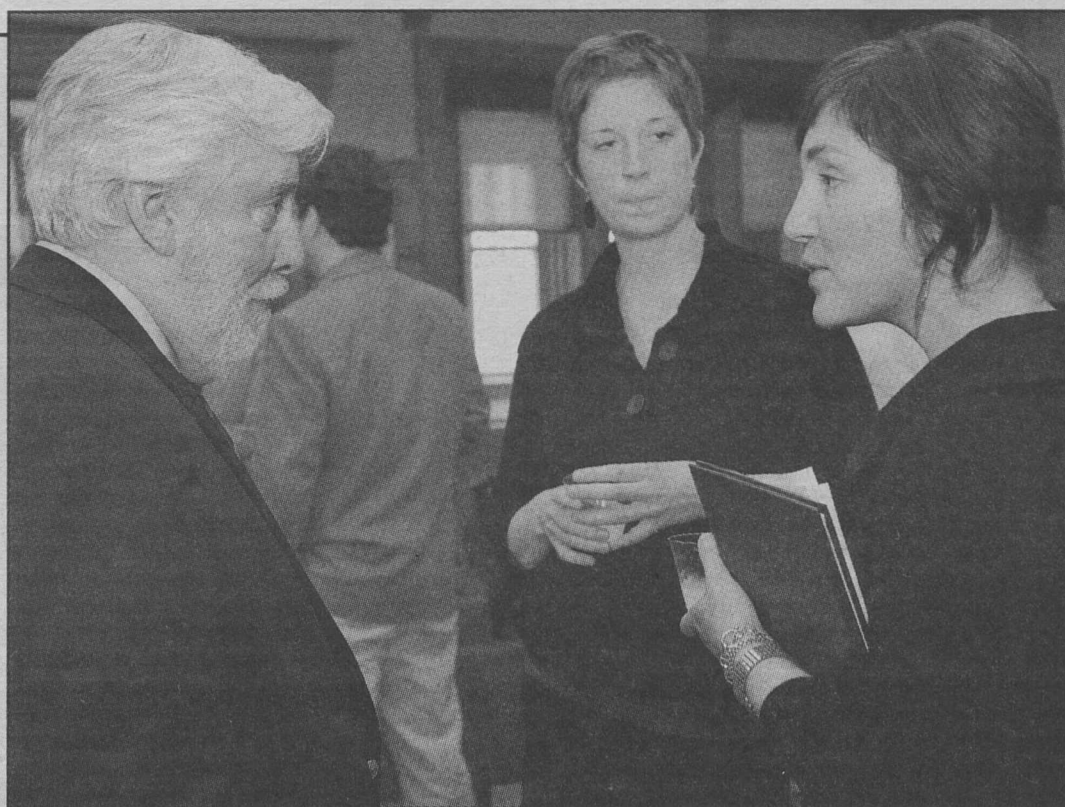
Schikaneder, a Vienna theater manager who wrote the libretto. Originally based on a fable by Christopher Martin Wieland, the story was sharply reworked when Mozart and Schikaneder discovered that a rival theater had selected the same subject — a reworking that led to Sarastro's transformation from evil magician to judicious philosopher.

The finished piece debuted in the fall of 1791, only months before Mozart's death, with Schikaneder himself in the role of Papageno.

John Stewart, director of vocal activities in the Department of Music, conducts the performance. The cast of 13 is led by Joshua Stanton as Tamino, Sarah Shipkowski as Pamina and Alan Naylor as Papageno.

Also starring are Sara Gottman as the Queen of the Night, Kevin Nicoletti as Sarastro and Stephanie Ball as Papagena, Papageno's beloved. Adam Krentz-Wee is Monostatos, Sarastro's slave. Rounding out the cast are Lindsay Keller, Taylor Martin, Nora Maynard, Carli Miller, Allison Moritz and Tom Sitzler.

Both performances — sponsored by the Department of Music in Arts & Sciences — are free and open to the public. For more information, call 935-5566 or e-mail kschultz@artsci.wustl.edu.



Teaching excellence Richard J. Smith, Ph.D., dean of the Graduate School of Arts & Sciences and the Ralph E. Morrow Distinguished University Professor of physical anthropology, chats with doctoral students Julia D. Kleinheider (center), in Germanic languages and literatures, and Emily M. Fammartino, in English, after he presented them and 10 other recipients with the Arts & Sciences' Dean's Award for Teaching Excellence during an April 20 ceremony in the Danforth University Center. Departments nominate outstanding teaching assistants for the annual award, which includes a \$1,500 cash prize and certificate. To see the names of the other recipients of the teaching award for the 2008-09 academic year, visit artsci.wustl.edu/GSAS/Teaching/Resources/award.html.

WUSTL recycles its way to top 10 percent contest finish

By JESSICA DAUES

Washington University recycled 428,663 pounds of waste this spring to rank No. 28 out of 293 schools — among the top 10 percent — in the annual RecycleMania contest's Gorilla category, based on total recycled materials collected. The 2009 RecycleMania competition began Jan. 18 and ended March 28.

WUSTL's 428,663 total pounds was good enough to rank No. 2 in the state of Missouri (behind the University of Missouri-Columbia), No. 2 among University Athletic Association rivals (behind Emory University) and No. 9 among private colleges and universities nationwide.

"Once again, our campus community represented Washington University well in the RecycleMania competition," said Matt Malten, assistant vice chancellor for sustainability. "While we again ranked among the top 10 percent of institutions in the nation in this competition, we know we have much room to improve and will work to do so throughout the year and in next year's contest."

"This competition is so terrific because it serves as an annual reminder to us all of the importance of the three Rs — reduce, reuse, recycle — and that preventing the landfill of valuable, useable materials is a simple way all of us can be environmental stewards because it conserves natural resources and protects land and water resources," Malten said.

Malten also said that this event can teach us how to be good fiscal stewards as well.

"One thing that is clear from our performance data from this competition is that we still have tremendous room for improvement in waste minimization," Malten said. "By simply not creating waste in the first place, we not only protect the environment but also reduce the amount we need to spend on facilitating recycling. This is crucial at all times, but especially in our current economy, where it has been a challenge to sustain recycled materials markets."

The University also excelled in the Targeted Material-Paper category, finishing No. 16 of 87 schools (top 20 percent) with 11.56 pounds of recycled paper per person, and the Per Capita Classic, ranking No. 62 of 293 schools (top 25 percent) with 18.82 pounds of recycled material per person.

This year, 510 schools participated in the contest, the most in RecycleMania's nine-year history.

RecycleMania is a 10-week competition administered by the National Recycling Coalition that pits WUSTL against colleges and universities throughout the United States to see which campus can prevent the most materials from landing in a landfill.

For more information on the contest or to see the full results, visit recyclemaniacs.org. For information about recycling on the WUSTL campus, visit sustain.wustl.edu.

Steam plant shuts down early this year

In keeping with Washington University's commitment to financial and environmental sustainability, the University decided to shut down the main steam plant on the Danforth Campus April 27, three weeks earlier than usual.

Traditionally, the University has waited until after Commencement to shut down this plant, which provides steam heat to some campus buildings. The estimated savings to the University of acting now is \$56,000 and 70,000 therms of energy. Current weather predictions for the next three weeks indicate daily average high temperatures in the 70s and low temperatures in the 50s, suggesting this change should not lead to significant discomfort. In the effort to conserve funds as well as energy, the support of the

University community is encouraged.

The practical implications of this measure vary from building to building. The Women's Building, Radiochemistry Building and January, Eliot, Cupples I, McMillan, Sever, Lopata, Cupples II, Jolley and Urbauer halls do not have summer boilers, so they will have no heat once the plant is shut down. If an extended cold snap were predicted, the main steam plant would be reactivated after a delay of 18 hours. Other buildings on campus could be adjusted more quickly if the weather turns unexpectedly cold.

It is suggested that employees keep a sweater or a jacket in their office during this period, particularly for the early morning. Students should be prepared for possibly colder classrooms and dress accordingly.

Sports

Track teams sweep UAA championship

The men's and women's outdoor track and field teams swept the University Athletic Association (UAA) outdoor championships April 25 and 26.

The women's team won the UAA outdoor title for the 10th straight year, while the men won a team UAA title for the first time since they were the indoor champions in 2007. The Bears swept the conference outdoor titles for the first time since 2006.

The squads combined to produce 17 UAA champions (10 men's events and seven women's), 10 NCAA Division III outdoor championship provisional qualifying marks and two school records.

The men's record came in the 4x100-meter relay, where the team of sophomore Tom Gulyas, junior Iby Umana, senior Todd Mowry and senior Pierre Hoppenot finished first with a time of 41.93. Senior Aubrey Edwards set a school record in the women's hammer throw, where she finished

third with a distance of 49.52 meters.

Men's tennis fares well in Ojai tourney

Senior Charlie Cutler and junior John Watts made the most of WUSTL's first-ever appearance in the prestigious 109th Ojai Tournament April 24-26.

Despite never teaming up together, Cutler and Watts advanced to the championship match before falling to No. 1 seed and No. 5-ranked Ilya Gendelman and Max Liberty-Point of the University of California, Santa Cruz, 6-4, 3-6, 7-5.

Watts and Cutler also had a nice showing in singles, with Watts losing in the championship match, while Cutler fell in the quarter-finals.

Softball splits doubleheader

The No. 20 softball team split a doubleheader April 25 against Missouri Baptist University at the

WU Softball Field.

Sophomore Claire Voris tossed a two-hit shutout in an 8-0 win in five innings in Game 1, with junior Carter Malouf pounding a grand slam to left-center field to open the scoring. The team then saw its nine-game winning streak come to an end in a 4-2 loss in the nightcap.

Baseball remains in hunt for postseason

The baseball team posted a 3-1 record last week as it continues a late-season push to secure an at-large berth into the NCAA Division III championship.

The Bears began the week with a win in a wild game against Webster University April 20. WUSTL led Webster 15-3 in the seventh inning, but Webster scored 12 runs over the final three innings to erase its deficit. The Bears held on to win, 16-15.

WUSTL picked up a 13-7 win over Case Western Reserve University April 25 and then won its third game of the week with an 8-1 decision over the University of Chicago April 26. The Bears (20-10) return home Thursday, April 30, for a doubleheader with Maryville University at 1 p.m.

Billing will go green in Office of Student Accounting

The Office of Student Accounting will switch from paper to e-billing for the upcoming 2009-2010 school year.

Beginning in June 2009, bills will be available online only through WebSTAC. Following the University's emphasis on sustainability, paper copies of bills no longer will be mailed.

WUSTL is making the change in an effort to cut down on paper waste, said Brandi Schnarre, manager of Student Accounting. In addition, the University will realize significant savings by not incurring the processing costs

associated with the mailings.

Schnarre said that students have found online billing through WebSTAC convenient and easy to use. The online billing system also offers direct deposit of student refunds and online payment options using a checking or savings account.

Schnarre encourages students whose parents will be affected by this change to invite their parents to view the bills online. As is current practice, an e-mail will be sent to the student and other payers at the end of the

month if an account balance is due.

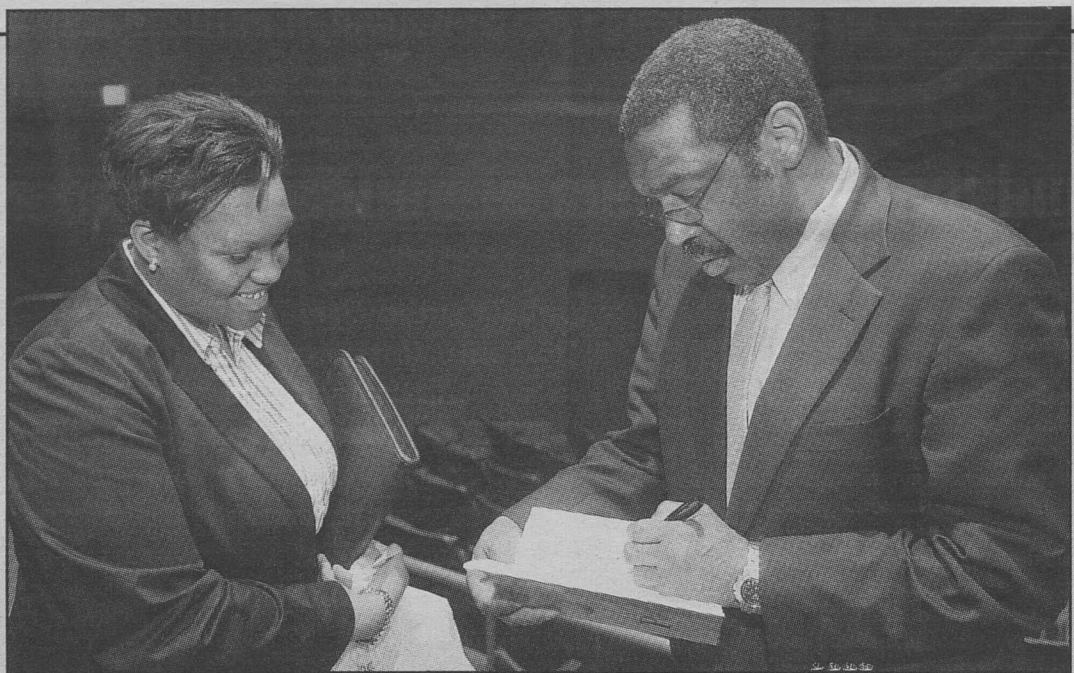
Step-by-step instructions about accessing and paying bills online can be found on Student Accounting's Web site, studentaccounting.wustl.edu.

"Staff members from our office are available to answer any questions students or parents might have about accessing and paying their bills online," Schnarre said.

For more information, contact Student Accounting at 1-800-758-0050, 935-5274 or student.billing@wustl.edu.

Green Your Office

Skip plastic report covers. Choose paper clips or binder clips instead. Staples are an option, but removable fasteners make paper easier to reuse.



SEIC awards Legendary social entrepreneur Bill Strickland (right) talks with prospective Olin student Elayne Wesley of Rochester, N.Y., after his talk at the 2009 Social Entrepreneurship & Innovation Competition (SEIC) awards ceremony April 23. WUSTL student Claire Wolff (MSW '09) received the \$5,000 student award for her work with the Urban Studio Cafe, which received the \$30,000 Deaconess Foundation award. Four other ventures received awards: The Exchange received \$35,000 from the YouthBridge Community Foundation; Rupununi Learners earned the \$25,000 Skandalaris Foundation award; Missouri Women in Trades won the \$25,000 Daughters of Charity Foundation of St. Louis award; and Fathers Support Center Legal Clinic won the \$30,000 Lutheran Foundation of St. Louis award. For more information about the SEIC and the winners, visit scs.wustl.edu.

Degrees

— from Page 1

leaders; and, in 2008, Time named her one of the world's 100 most influential leaders.

She earned a bachelor's degree from Princeton, where she participated in the undergraduate program of the Woodrow Wilson School of Public and International Affairs.

Virgil arrived at Washington University five decades ago as an MBA student. Today, as emeritus trustee, dean and professor, he continues to serve WUSTL in numerous roles since his "retirement" in 1993. Most recently, he chaired the Campaign Committee for the Danforth University Center, which opened last summer.

His second career as a partner in the Edward Jones investment firm followed a distinguished career at the Olin School, where students elected him "Teacher of the Year" nine times.

An equally gifted administrator, Virgil's tenure as dean marked a period of vibrant growth for Olin with an endowment surge from \$200,000 to \$75 million and the construction of Simon Hall.

He initiated the executive master of business administration and expanded the experiential learning programs that remain hallmarks of the school today.

In addition to leadership roles with multiple civic and educational concerns, including The Magic House, City Academy and Harris-Stowe State University, Virgil served as a director and

chairman of the Federal Reserve Bank of St. Louis and chair of the Consortium for Graduate Study in Management.

He has been recognized for his service to the University with numerous honors, including the William Greenleaf Eliot Society's "Search" Award in 2001 and a Distinguished Alumni Award from Olin.

He and his wife, Gerry, received the school's Dean's Medal in 1996, and, upon his retirement, friends and alumni established an endowed scholarship in the couple's name. In 2004, friends established the Geraldine J. and Robert L. Virgil Professorship in Accounting and Management, which is held by Mahendra R. Gupta, Ph.D., Olin's dean.

Waterston is internationally known for his pioneering contributions to the field of genomics. In the 1990s, while at WUSTL, he, together with John Sulston, Ph.D., at the Sanger Centre in England, painstakingly unraveled the genetic code of the tiny, transparent worm *C. elegans*, marking the first time scientists had sequenced the complete DNA of any organism larger than a single cell.

The team's success paved the way for the Human Genome Project, the deciphering of the 3 billion chemical units of DNA that contain the instructions for human life.

With his expertise in large-scale DNA sequencing, Waterston played a pivotal role in getting the ambitious project off the ground, and his laboratory, along with the Sanger Centre, contributed more than half of the data to delineate the human genetic code.

They went on to generate the sequence of the laboratory mouse, the chimpanzee and other genomes.

A native of Detroit, Waterston earned a bachelor's degree in engineering in 1965 from Princeton University and medical and doctoral degrees from the University of Chicago in 1972.

Waterston joined the School of Medicine faculty in 1976. He was named the James S. McDonnell Professor, chairman of the Department of Genetics and director of the Genome Sequencing Center in 1993.

In this capacity, he established WUSTL as a leader in large-scale genome sequencing, one that garnered a reputation for producing data at a significant rate and with a high degree of accuracy.

Watson, considered one of the world's leading experts on cave archaeology and a pioneer in the fields of agricultural origins and ethnoarchaeology, has shaped the way archaeology is conducted.

During her distinguished 55-year career, Watson has done groundbreaking fieldwork on agricultural origins in both the Near East and North America.

She is credited with defining and pioneering ethnoarchaeology — the branch of archaeology that studies contemporary societies to aid the understanding of archaeological remains left by ancient peoples.

Watson developed a technique for flotation of archaeological remains to create a new method of retrieving charred plant remains from sites studied. The plant evidence collected in this way has revolutionized understanding of the pattern and timing of plant domestication in many parts of the world.

She began her career excavating prehistoric sites in Iraq, Iran and Turkey and then shifted her primary focus to North America, where her work has focused on artifacts left by prehistoric people who explored and mined Salts Cave in Kentucky, a portion of the world's longest cave system in Mammoth Cave National Park.

Her work in Salts Cave was instrumental in defining pre-maize agriculture for the Woodland period of eastern North America.

In Watson's more recent studies, she continues to focus on the subsistence, technology and economy of these early people.

Watson earned a master's degree in 1956 and doctoral degree in 1959, both in anthropology, from the University of Chicago. She joined the WUSTL faculty in 1969 and twice served as chair of the Department of Anthropology.

Burson named to new position in law

Charles Burson, J.D., has been named the School of Law's first senior professor of practice. The new position is for distinguished lawyers and legal practice senior lecturers who meet criteria established by the law faculty to serve as full-time teaching faculty.

"The new senior professor of practice designation creates an effective and innovative means for outstanding legal professionals to share their expertise with our law students as full-time teachers and to work closely with their colleagues on the law faculty," said Kent Syverud, J.D., dean and the Ethan A.H. Shepley University Professor.

"Charles Burson is an exemplar of the ideal of the senior professor of practice," Syverud said. "He comes to the law school after a highly distinguished career in law and government service, and his classes are rigorous and popular

with our students."

Since 2007, Burson has been a visiting professor of law, teaching "The Lawyer's Role in Corporate Crisis Management"; "Supreme Court & Presidential Elections"; and "The Legacy of Bush v. Gore."

Burson served as Tennessee's attorney general as well as counsel and chief of staff to former vice president Al Gore.

After leaving the White House, Burson came to St. Louis to work as general counsel and executive vice president for Monsanto.

A member of the law school's National Council, Burson is of counsel at Bryan Cave LLP. He recently directed the transition team for Missouri Gov. Jay Nixon.

Burson earned a bachelor's degree in political science from the University of Michigan; a master's degree from Cambridge University; and a juris doctorate from Harvard University.

Sam Fox School honors six

BY LIAM OTTEN

The Sam Fox School of Design & Visual Arts honored four outstanding architecture and art alumni at its second annual awards for distinction dinner April 23. The school also recognized one young alum and one recipient of the Dean's Medal for distinguished service to the school.

The awards recognize graduates who have demonstrated creativity, innovation, leadership and vision through their contributions to the practices of art and architecture as well as to Washington University and the Sam Fox School.

"The awards dinner is one of the Sam Fox School's most important events of the year and a crucial way to recognize the career achievements of our alumni and friends," said Carmon Colangelo, dean and the E. Desmond Lee Professor for Collaboration in the Arts.

Awards for distinction

Ralph Cunningham, AIA (B.A. '83) is a founding principal of Cunningham|Quill Architects and has worked in residential, in-fill mixed-use, institutional and commercial architecture for more than 20 years.

His projects have received numerous design awards, including 29 awards from chapters of the American Institute of Architects and two "Best of the Year" awards from Remodeling magazine. He also has served on numerous juries for local and national publications, including the Residential Architect Awards last year. Cunningham has been visiting faculty at both Catholic University and Howard University and is a trustee on the Board of The Washington Architectural Foundation.

Ann Fertig Freedman (BFA '71) joined Knoedler & Co., one of the New York's preeminent galleries, in 1977 as director of contemporary art and, in 1993, was appointed president and director.

She has served on the executive board of directors of the Art Dealers Association of America and on the National Council of the Sam Fox School. With her husband, Robert L. Freedman, Ann Freedman is active both as a collector of art and a museum patron, donating works from their collection to museums across the country. Recent donations include the gift of Frank Stella's wall relief "Lo Sciocco Senza Paura (The Fearless Fool)" to the Mildred Lane Kemper Art Museum.

Tom Friedman (BFA '88) is known for transforming mundane consumer products into playful yet meticulously crafted works of art, ranging from sculptures and drawings to prints, installations and multimedia constructions.

His work has been exhibited at major museums throughout the world, including solo shows at the

Museum of Modern Art in New York and the Art Institute of Chicago. In 2006, the Kemper Museum inaugurated its new College of Art Gallery with "Pure Invention: Tom Friedman," an exhibition of more than 20 works, drawn largely from St. Louis-area collections, surveying the last decade of his career.

Harry C. Kendall, AIA (B.A. '78) co-founded BSK Architects in 1985 and serves as partner-in-charge of business development as well as the firm's public liaison for projects requiring complex regulatory approvals.

Kendall also has led the design of some of BSK's largest projects in landmark districts, including New York's Fischer Mills Building and 124 Hudson Street Condominiums, both of which were lauded by the Landmarks Preservation Commission. An adjunct professor of architecture in Columbia University's graduate historic preservation program, he lectures widely on the topic of adaptive reuse and new buildings/additions in landmark districts.

Young alumni award

Sara Velas (BFA '99) is a visual artist and founder and director of The Velaslavasay Panorama, an exhibition hall, theatre and garden in the historic Union Square area of Los Angeles, which she launched in 1999.

Velas has traveled extensively, visiting 19th-century panoramas — as well as their contemporary counterparts — throughout the United States, Europe and Asia. A member of the International Panorama Council, she has lectured extensively on her interpretation of the panoramic artform.

She recently participated in the exhibition "20 Years Ago Today: Supporting Visual Artists in Los Angeles at the Japanese American National Museum" and completed a monthlong printmaking residency at Kala Institute in Berkeley, Calif.

Dean's medal

Judy Pfaff (BFA '71) is one of the most celebrated artists of her generation, known for crafting large-scale installations that combine local materials with elements of painting, sculpture and architecture.

Her work has been featured in more than 100 one-person shows and installations and more than 200 group exhibitions. Today, it can be found in such prestigious collections as the Detroit Institute of Art, the Philadelphia Museum of Art and New York's Museum of Modern Art and Whitney Museum of American Art. Her numerous awards include a 2004 MacArthur "genius" Fellowship as well as grants from the National Endowment for the Arts, the Guggenheim Foundation and many others.

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Notables

GPC presents annual awards

The Graduate Professional Council (GPC) hosted its Bridging GAPS (Graduate and Professional Students) Leadership and Awards Ceremony April 6 in the Graduate Center in the Danforth University Center.

GPC, which is celebrating its 15th anniversary this academic year, is the graduate student association that represents WUSTL's approximately 6,000 graduate and professional students.

GPC created its Bridging GAPS Awards in 2001 to recognize and honor graduate student groups and individual leaders for outstanding contributions in promoting interdisciplinary programs and for promoting communication, cooperation and collaboration between graduate students across schools.

Other major graduate student groups on campus also are celebrating their founding 15 years ago and were recognized at the event. They are the Graduate Student Senate, the governing body that represents some 2,000 students in the Graduate School of Arts & Sciences; the Association of Graduate Engineering Students, the organization that represents and coordinates activities for engineering graduate students; and the graduate student representation to the Board of Trustees.

Chancellor Mark S. Wrighton and Richard J. Smith, Ph.D., dean of the Graduate School of Arts & Sciences and the Ralph E. Morrow Distinguished University Professor of physical anthropology, spoke during the event, recognizing the contributions of the graduate student leaders and groups and congratulating

the groups celebrating their 15th anniversaries.

"From its beginning as a networking session and awards dinner, Bridging GAPS has evolved into developing a series of programs and resources designed to promote communication and collaboration among graduate and professional students across the Washington University campuses," said GPC President Brooke Curtiss, a dual-degree student in law and social work.

The programs and resources have included leadership seminars, a resource guide for student groups, Web workshops and an online directory of graduate student groups.

Curtiss said that Bridging GAPS launched a new activities match program this year that will promote networking across different departments by helping students find other graduate students who share similar recreational interests.

"It's exciting to see the impressive sharing of ideas and information among students of varying fields and disciplines," Curtiss said.

"The graduate student experience is enhanced because of the many opportunities for professional development and leadership experience as well as social activities and professional networking," she said.

Curtiss and GPC Committee Chair Pia Banerjee, a doctoral student in psychology in Arts & Sciences, presented the Bridging GAPS awards at the ceremony.

For a complete list of awards, visit record.wustl.edu/news/page/normal.13980.html.

Obituaries

Edwards, trustee emeritus, 77

Benjamin F. Edwards III, trustee emeritus and former chairman, chief executive officer and president of A.G. Edwards Inc., died April 20, 2009, at his home in Naples, Fla., of prostate cancer. He was 77.

Edwards, who presided over A.G. Edwards as it grew from a St. Louis regional brokerage firm into one of the largest in the nation, was the great-grandson of the company's founder, Albert Gallatin Edwards. Benjamin Edwards joined the firm in 1956 after graduating from Princeton University and serving as an officer in the U.S. Navy.

Edwards was named the firm's managing partner in 1966 and president in 1967, and he became chairman emeritus in March 2001. Under Edwards' leadership, A.G. Edwards grew from 44 offices and 300 financial consultants in 1965 to nearly 700 offices and 7,000 financial consultants in 2001.

Edwards also was a member of WUSTL's Board of Trustees for 22 years. He was elected to the board in 1987 and became emeritus trustee in 2004.

While on the Board of Trustees, Edwards served as a member of the development, medical finance, asset management, investments, undergraduate life and compensation committees.

He also served on WUSTL's Undergraduate Experience National Council from 1998-2007 and the Social Work National

Council from 1996-2005 and was an early supporter and advocate for the Danforth University Center.

"Ben Edwards was an outstanding civic leader and a wonderful person. He will be deeply missed," Chancellor Mark S. Wrighton said. "In his role on the Board of Trustees, he provided wise and thoughtful guidance. He will be remembered as a great leader and a true friend."

Edwards also was a chairman of what is now known as the Securities Industry and Financial Markets Association and served on the board of the New York Stock Exchange. He also served on the board of directors at Barnes-Jewish Hospital and Benjamin Edwards Inc., a brokerage company started by his son, Benjamin "Tad" F. Edwards IV.

Active in the St. Louis community, Edwards was a chairman and longtime board member of the United Way of Greater St. Louis and longtime member of the Civic Progress Board of Directors. He chaired the Civic Progress Education Committee for 15 years, working to involve local businesses in public education. He was named the St. Louis Variety Club's Man of the Year in 1992.

Edwards is survived by his wife of nearly 56 years, Joan Moberly Edwards; two sons; two daughters; two sisters; and 11 grandchildren.

Award

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umbrella of the International Center for Advanced Research in Energy and Sustainability (I-CARES).

"For the St. Louis region to receive two Department of Energy awards represents a great opportunity to advance bioenergy research," Chancellor Mark S. Wrighton said. "These awards are in recognition of the leadership roles that Washington University and the Donald Danforth Plant Science Center are playing in the development of new energy sources. We are particularly pleased that this comes under the umbrella of the I-CARES initiative involving leading scholar-scientists from biology and chemistry in Arts & Sciences as well as engineering."

Roger N. Beachy, Ph.D., president of the Donald Danforth Plant Science Center and WUSTL professor of biology, was sitting in the audience at the National Academy of Science when Obama announced the awards.

"I was delighted to learn that both the Danforth Plant Science Center and Washington University proposals were awarded," Beachy said. "These awards validate the tremendous strength of research related to algae, photosynthesis and biofuels that is under way in the St. Louis region. The breadth of the DOE support for fundamental and applied science is encouraging, and we look forward to contributing to our nation's long-term solutions for energy independence."

Altogether, there are five WUSTL principal investigators in PARC. Besides Blankenship and Holten, there are Pratim Biswas, Ph.D., the Stifel & Quinette Jens Professor of Environmental Engineering Science and director of the McDonnell Academy Global Energy and Environment Partnership; Cynthia Lo, Ph.D., assistant professor of energy, environmental and chemical engineering; and Himadri B. Pakrasi, Ph.D., the George William and Irene Koechig Freiberg Professor of Biology and director of I-CARES.

"We are delighted that DOE has chosen Washington U. as the site of one of the EFRC centers," Blankenship said. "We look forward to the exciting research that will be carried out in the center,

which will contribute to the effort to provide clean energy resources to the world. We also are pleased that the Danforth Plant Science Center was selected for an EFRC grant and look forward to working with them to make St. Louis a worldwide center for bioenergy research."

Photosynthesis transforms light, carbon dioxide and water into chemical energy in plants and some bacteria. The wavelike characteristic of this energy transfer process can explain its extreme efficiency, in that vast areas of phase space can be sampled effectively to find the most efficient path for energy transfer.

PARC will explore basic science research aimed at understanding the principles of the harvesting of light and funneling of energy as applied to natural photosynthetic, biohybrid and bio-inspired antenna systems, which gather light and carry it to an organism's reaction center, where the chemistry that creates energy takes place.

PARC brings together 17 diverse scientists, including five from Washington University and five from Oak Ridge, Sandia and Los Alamos National Laboratories. In addition, there are six other academic scientists from universities in the United States and the United Kingdom and one from the Donald Danforth Plant Science Center — Richard Sayre, Ph.D., who also heads the Danforth Plant Science Center team that has received the \$15 million DOE grant.

PARC will make significant educational and outreach efforts at the K-12, undergraduate and graduate levels. There are plans for a yearly meeting of all participants at WUSTL to discuss research progress and collaborations.

As an EFRC, the Danforth Plant Science Center will receive \$15 million over a five-year period to establish a Center for Advanced Biofuels Systems (CABS) that will be led by Sayre, who will serve as director. Sayre also is the director of the Enterprise Rent-A-Car Institute for Renewable Fuels at the Danforth Center.

The team of principal investigators from the Danforth Center include Jan Jaworski, Ph.D., Sam Wang, Ph.D., Toni Kutchan, Ph.D., Oliver Yu, Ph.D., and Leslie Hicks, Ph.D., as well as Ed Cahoon, Ph.D., of the University of Nebraska, David Gang, Ph.D.,

of the University of Arizona, and Yair Shachar-Hill, Ph.D., of Michigan State University. Jaworski, Kutchan and Cahoon are WUSTL adjunct professors of biology.

The objective of the Center for Advanced Biofuel Systems is to increase the thermodynamic and kinetic efficiency for select plant and algal-based fuel production systems. A unique feature of the Danforth Center's approach is the integration of all aspects of plant metabolism from photosynthesis to the synthesis and accumulation of oils and novel biofuels products.

This "systems" approach will bring new and emerging technologies to bear on complex problems and will improve bio-fuel production and product development.

"The EFRC award will allow us to transition basic research on algal and plant-based biofuel systems into sustainable energy production systems for the future," Sayre said.

"As global energy demand grows over this century, there is an urgent need to reduce our dependence on fossil fuels and imported oil and curtail greenhouse gas emissions," Secretary of Energy Steven Chu, Ph.D., said. "Meeting this challenge will require significant scientific advances. These centers will mobilize the enormous talents and skills of our nation's scientific workforce in pursuit of the breakthroughs that are essential to make alternative and renewable energy truly viable as large-scale replacements for fossil fuels."

The 46 EFRCs, to be funded at \$2 million to \$5 million per year each for a planned initial five-year period, were selected from a pool of some 260 applications received in response to a solicitation issued by the DOE Office of Science in 2008. Selection was based on a rigorous merit review process using outside panels comprising scientific experts.

The criterion for providing an EFRC with Recovery Act funding was job creation. The EFRCs chosen for funding under the Recovery Act provide the most employment for postdoctoral associates, graduate students, undergraduates and technical staff in keeping with the Recovery Act's objective to preserve and create jobs and promote economic recovery.

Cancer

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cured when treated with surgery and sometimes chemotherapy. Overall survival drops to about 40 percent if the cancer is diagnosed in the latest stage.

The researchers found that all the children studied with PPB carried damaging mutations in one of their DICER1 genes, giving them one functional and one nonfunctional DICER1 gene in all their body's cells. The researchers indicate that PPB lung tumors probably originate when one or more cells in the lung acquire a harmful mutation in their functional copy of the DICER1 gene.

The researchers also found that PPB lung tumors appear to result from a novel cancer induction mechanism not previously demonstrated. They discovered that loss of DICER1 protein specifically in lung airway cells appears to deregulate signals to nearby cells and somehow causes those cells to transform into malignant cells. However, the cells with the loss of DICER1 do not progress to malignancy.

DICER1 is so-named because its job is to chop up large molecules into smaller control molecules that help regulate the output of many of the 20,000 human genes. The short bits of genetic material it produces during its dicing activities are termed microRNAs.

"Prior research showed that the microRNA profiles of cancer cells are different from those of normal tissue, which pointed toward a possible role for DICER1 in cancer," said senior author Paul Goodfellow, Ph.D., professor of surgery and of genetics and co-director of the Hereditary Cancer Core at the

Siteman Cancer Center. "Very recently, other research found that reduced DICER1 gene expression in tumor cells is associated with worse outcomes in patients with ovarian, lung, breast and prostate cancers. Now we've shown that mutations in the DICER1 gene are directly linked to the development of PPB."

Studies show that about 40 percent of PPB cases occur in families with a history of the disease or certain other childhood cancers. Most pediatric cancers occur sporadically, without any familial patterns. This led scientists and doctors to suspect that PPB was caused by an inherited genetic abnormality.

To uncover the role of DICER1, the research team studied the genetic makeup of 11 extended families with two or more members having PPB or related childhood cancers.

The scientists say that finding this variant form of a gene in some PPB families is a first step to understanding why PPB and other conditions may occur in some families.

But, because only a small number of families were studied, it isn't known whether DICER1 mutations explain all PPB cases, and much more needs to be learned before this information can be directly helpful to PPB families.

In collaboration with Hill and Goodfellow, and with Louis P. Dehner, M.D., professor of pathology and immunology at the School of Medicine, who first described PPB in 1988, the International PPB Registry in Minnesota has collected and analyzed PPB cases from around the world for more than 20 years. More than 260 confirmed cases are being followed.

It is the only organization in the world focused exclusively on PPB.

Washington People

When Brad Warner, M.D., arrived in 2007 as the new pediatric surgeon-in-chief at the School of Medicine and St. Louis Children's Hospital, it was a homecoming of sorts.

He grew up in University City and, as a teenager, volunteered in the emergency room and clinics of Jewish Hospital. It was there that a surgical resident took Warner under his wing, inviting him into the operating room to observe surgeries.

"That experience was like a spark around dynamite for me," he says.

Warner's return to St. Louis after more than two decades at the University of Cincinnati Medical Center and Cincinnati Children's Hospital Medical Center has created a similar spark, reenergizing the pediatric surgery program. He has hired three additional pediatric surgeons, placed a renewed emphasis on research and transformed the pediatric surgery rotation into one that is highly ranked by medical students and residents. Along the way, Warner has earned high praise for his compassionate care to young patients and their families.

BY CAROLINE ARBANAS

Making an impact

Warner's leadership and compassion invigorate pediatric surgery, research

Brad Warner

Education: M.D., University of Missouri-Kansas City School of Medicine

Titles: Pediatric surgeon-in-chief at the School of Medicine and St. Louis Children's Hospital, and the Apolline Blair St. Louis Children's Hospital Professor of Surgery

Family: Barbara Warner, M.D., associate professor of pediatrics and a neonatologist at St. Louis Children's Hospital; daughters Lauren, 17, a senior at Mary Institute Country Day School who will attend Washington University in the fall, and Emily, 14, a freshman at Ladue Horton Watkins High School

Hobbies: Landscape and portrait photography and running marathons. He is training to run the San Diego Marathon with daughter Lauren in May.

"He's spectacular," says Timothy Eberlein, M.D., the Bixby Professor and chairman of the Department of Surgery. "Every facet of the job Brad has touched has changed for the better. He's a superb mentor and role model for the students and residents. Many times I wonder how any one human being can do all the things that he does and do them so well. He's made a huge impact on our pediatric surgery program."

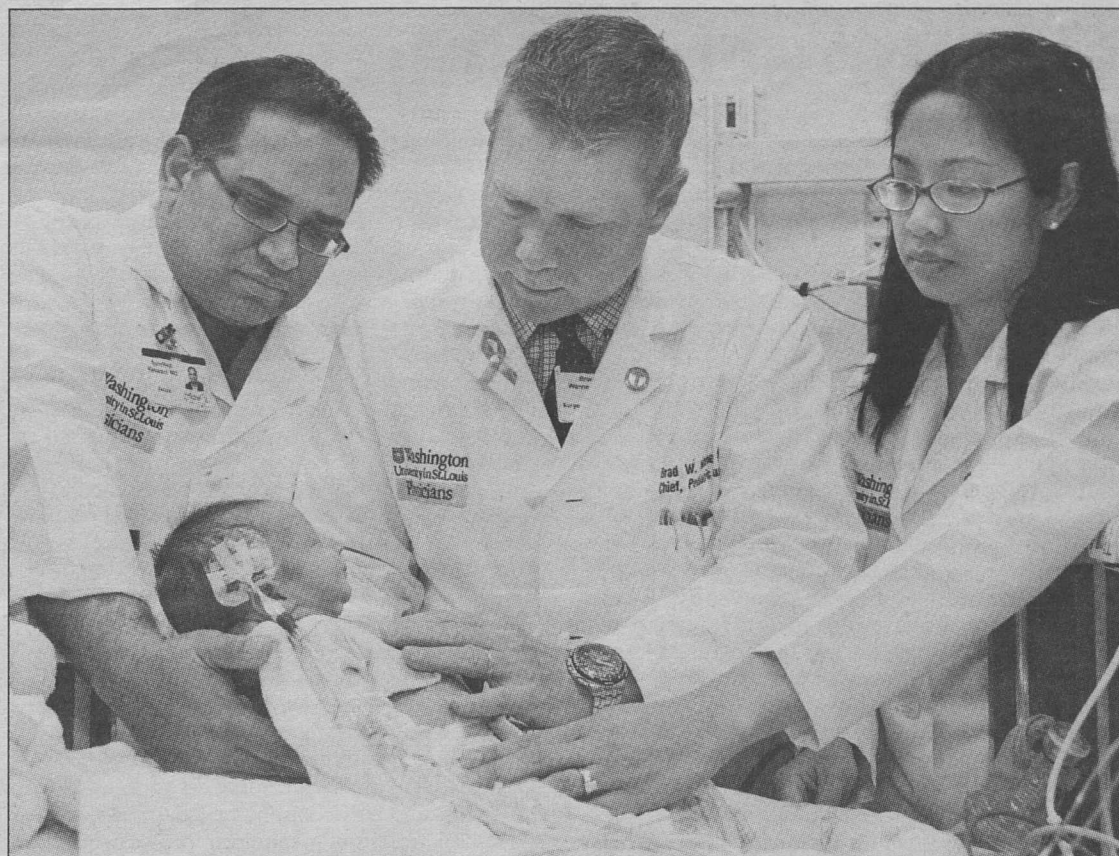
Warm and engaging, Warner is widely regarded for his clinical expertise in pediatric cancer surgery and surgical procedures for inflammatory bowel disease and other gastrointestinal illnesses. He was attracted to the medical center's rich academic environment, with its top-ranked medical school, children's hospital and surgery department, all on the same campus.

"This environment has all the elements to produce the finest pediatric surgery program in the country," he says.

Compassion for kids

Even as a preschooler, Warner knew he wanted to be a surgeon. Without patients on which to practice, he hauled home dead animals to dissect, much to his mother's dismay. She was a nurse at St. Luke's Hospital, and her stories about intriguing cases fed her son's interest in medicine.

Warner earned a medical degree from the University of Missouri-Kansas City School of Medicine. He completed his



(From left) Sundeep G. Keswani, M.D., a pediatric surgery fellow; Brad Warner, M.D., a pediatric surgery fellow; tend to patient Orion Decker in the pediatric surgery unit at St. Louis Children's Hospital. "Every facet of the job Brad has touched has changed for the better," says Timothy Eberlein, M.D., the Bixby Professor and chairman of the Department of Surgery. "He's a superb mentor and role model for the students and residents. Many times I wonder how any one human being can do all the things that he does and do them so well. He's made a huge impact on our pediatric surgery program."

surgical residency at the University of Cincinnati under then-surgery department chairman Josef Fischer, M.D.

"He was a rigid, Harvard-trained, academic surgeon," Warner says. "His focus was on patient care, but he made you feel like you weren't giving back if you just did patient care. He really pushed me and others to do research so that we could improve patients' care."

During his surgical residency, Warner found himself especially moved by the children he met in the pediatric rotation.

"Children are very resilient," he says. "They really do want to be better. When I see a child who has had open-heart surgery sitting up in bed the next day licking a popsicle and ready to go back at it — well, it's nothing short of amazing. They have such a positive outlook."

One child, in particular, changed the course of Warner's career. During his fellowship, Warner cared for a young boy with short-bowel syndrome, whose abbreviated intestines couldn't absorb nutrients normally. He came into the clinic wearing a backpack that held a battery-operated feeding pump so he could receive nutrition via a vein.

"The boy was jaundiced from liver failure, and his mother was teary-eyed from seeing her son suffer," Warner says. "He was so small for his age and tried so hard to do the things a normal four-year-old would do."

Warner decided then to focus his research on short-bowel syndrome. Although some children are born with shortened intestines, the condition is more commonly caused by necrotizing enterocolitis, a gastrointestinal illness that primarily affects premature infants. The infection and inflammation that are hallmarks of the condition spread quickly, destroying part or all of the intestines.

"The babies will be feeding well and growing, then all of a sudden, their abdomen becomes distended or they pass blood," Warner says. "In the operating room, we sometimes see that there just is no bowel left. In these cases, there is nothing we can do. It is a heart-

breaker for everyone."

Most of the time, however, surgeons can remove the diseased bowel and sew the healthy parts back together. Interestingly, when a portion of the intestine is surgically removed, the intestine that remains senses this loss and tries to compensate by growing back, a process called adaption.

Warner is investigating this phenomenon in his laboratory. "If we can understand the adaption response better, eventually we may be able to give patients growth factors or other agents to encourage their bowel to grow back after surgery," he says.

A good team

Warner's wife, Barbara Warner, M.D., associate professor of pediatrics and a neonatologist at St. Louis Children's Hospital, also was recruited to the medical school at the same time. The two met while he was a resident and she a medical student. In addition to caring for many of the same patients, they also have a long-running research collaboration that centers on necrotizing enterocolitis.

While the causes of the illness are unknown, the Warners have long suspected that it may be linked to an underlying injury or abnormality in the intestinal lining, which may influence the composition of the microbes that naturally colonize the gut after birth.

Their partnership has explored the critical role of epidermal growth factor in necrotizing enterocolitis. Mice pups that lack the growth factor die soon after birth from a bowel infection that closely mirrors the human illness. The Warners have shown levels of the growth factor are high in breast milk but not in formula. Interestingly, premature babies who are formula-fed have a higher risk of necrotizing enterocolitis than those who are breast-fed. The pair also has found lower levels of the growth factor in babies with the condition.

Brad Warner also specializes in the care of babies born with congenital diaphragmatic hernia, which affects one in every 2,000 U.S.-born babies. The condition occurs when the diaphragm does not fully develop, allowing abdominal organs to grow into the chest cavity. This crowds out the

developing lungs and prevents them from growing normally. Most babies born with the condition must be placed on a heart-lung bypass machine because their weakened lungs can't provide enough oxygen to the body. Nearly half of these babies die before they reach their first birthday.

Two families whose babies recently died of the condition at St. Louis Children's Hospital have joined together to raise funds that support research into new treatments by Warner and others in the division of pediatric surgery.

"Caring for these two babies was a very memorable experience for me because I feel we offered everything possible for them, and it just didn't work," he says.

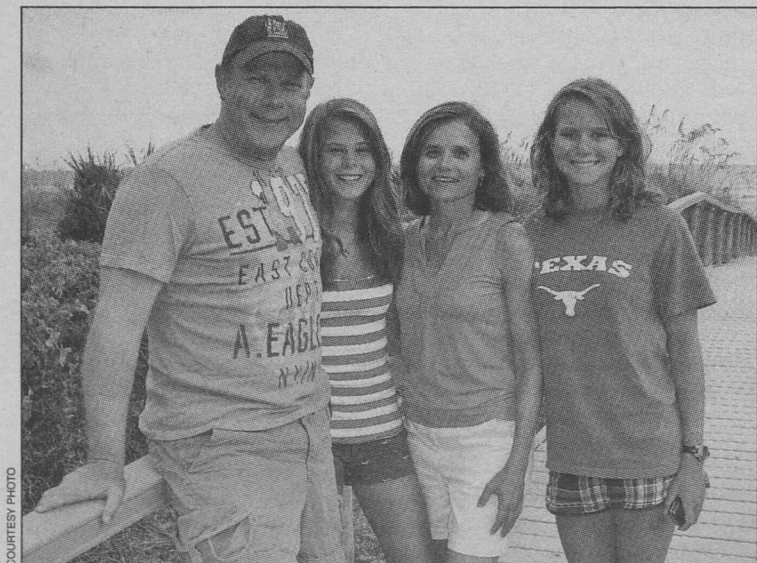
"Dr. Warner is an extraordinary colleague and a tireless advocate for his patients and their families," says F. Sessions Cole, M.D., the Park J. White, M.D., Professor of Pediatrics and assistant vice chancellor for children's health. "Despite his busy clinical, educational, research and administrative responsibilities, he is always available for his patients and their families. His standard of supportive professionalism enhances all of our practices."

Since his arrival, Warner has placed a high priority on strengthening the pediatric surgery training programs. Medical students now rotate through the program, and the program for residents has proven so popular that nine are planning careers in pediatric surgery.

"To me, this is especially gratifying," Warner says.

Warner is highly admired not only by those in St. Louis but by former colleagues in Cincinnati for his generosity of ideas, unquestionable integrity and balance of professional and family life.

"His career serves as a superior example to students, residents and fellows of commitment to superb patient care, cutting-edge research and education," says Frederick C. Ryckman, M.D., professor of surgery/transplantation at Cincinnati Children's Hospital Medical Center. "He has achieved all these professional goals while being hopelessly in love with his wife, Barb, and continuously bewitched by his two beautiful daughters. He is all that so many of us aspire to become."



(From left) Brad, Emily, Barbara and Lauren Warner on Hilton Head Island, S.C.