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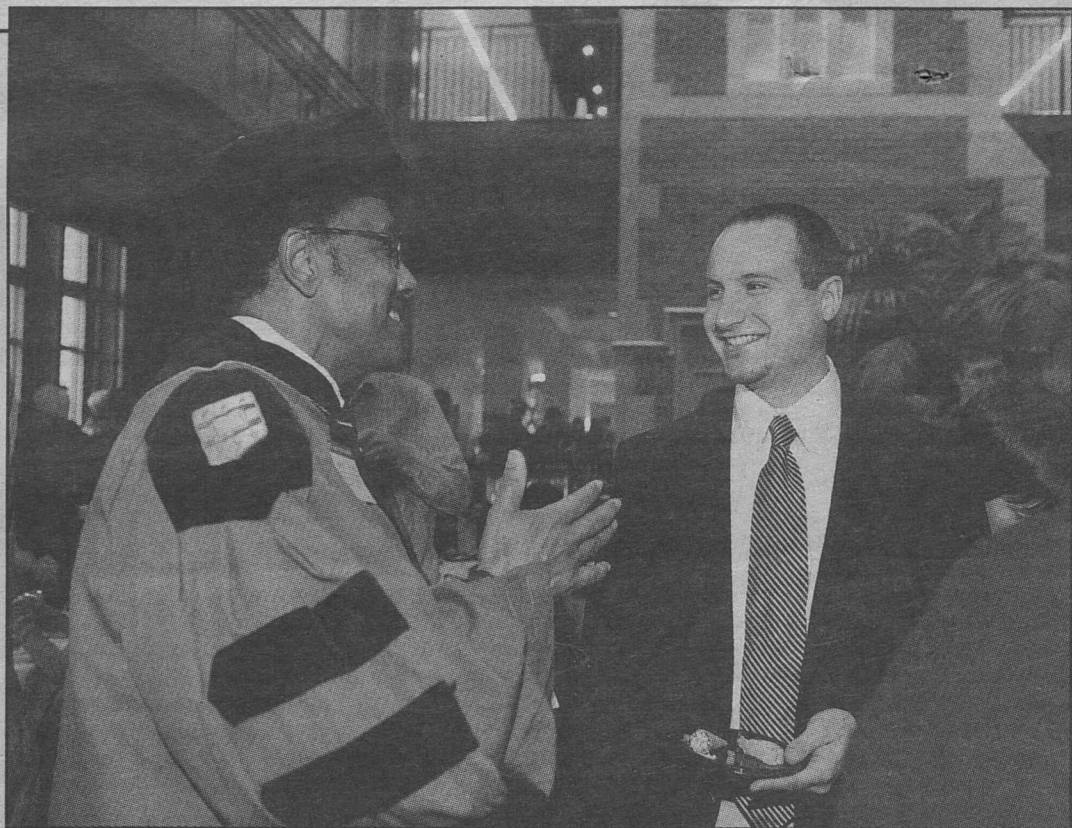
Record



Washington University in St. Louis

Dec. 11, 2008

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December recognition James E. McLeod (left), vice chancellor for students and dean of the College of Arts & Sciences, visits with Juan Pablo Sandoval at a Dec. 6 reception in the Danforth University Center following the December Degree Candidate Recognition Ceremony in Graham Chapel. Sandoval is a master's in construction management candidate and is among 707 December degree candidates. Chancellor Mark S. Wrighton and Christine A. Chadwick, executive director of FOCUS St. Louis, delivered remarks during the event. Assisting Wrighton in recognizing the candidates were McLeod and Richard J. Smith, Ph.D., dean of the Graduate School of Arts & Sciences.

WUSTL program in national spotlight

By RACHEL SCHULMAN

Washington University is in the spotlight for its pivotal role in the Genomics Education Partnership (GEP), a collaborative effort to provide research experience in genomics to undergraduate classrooms across the country.

Genomics, the study of an organism's entire genome (collection of DNA), is an exciting area in which students get involved in research.

The GEP consists of more than 40 faculty members from a variety of colleges and universities, including historically black and Hispanic-serving institutions and schools with a high proportion of first-generation college students.

By making it easy for under-

graduate institutions to incorporate research into their regular, academic-year curricula, the GEP can reach underserved students who otherwise have limited opportunities to learn to think like scientists.



Elgin

and professor of biology and of education in Arts & Sciences as well as professor of biochemistry and molecular biophysics and of genetics in the School of Medicine.

In 2002, Elgin was one of 20 professors awarded \$1 million from the Howard Hughes Medical Institute (HHMI) to bring research into the undergraduate classroom. Over the next four years, Elgin and her colleagues developed and implemented a research-based genomics course for juniors and seniors at WUSTL to polish and interpret their own portion of raw DNA sequence.

The course, "Research Explorations in Genomics," is a collaborative effort. Elgin co-teaches with Elaine Mardis, Ph.D., as-sociate professor of genetics and co-director of the Genome Sequencing Center, and Jeremy Buhler, Ph.D., associate professor of computer science and engineering. Several

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Danforth Foundation donates \$10 million for neurodegenerative research

By MICHAEL C. PURDY

The Danforth Foundation has granted the Hope Center for Neurological Disorders at the School of Medicine a \$10 million endowed gift for research into a range of conditions that cause injury and impairment to the brain and central nervous system.

The funds will be used to support innovative and groundbreaking new ideas for research with clear potential to improve diagnosis and treatment of patients with amyotrophic lateral sclerosis (ALS), Parkinson's disease, stroke, Huntington's disease, multiple sclerosis, cerebral palsy and other disorders.

The endowment created by the gift will be named for the late Donald Danforth Jr., a 1955 graduate of the Olin Business School who was executive vice president of Ralston-Purina Co. Danforth was the brother of Chancellor Emeritus William H. Danforth, M.D., former U.S. Senator John Danforth and St. Louisan Dorothy Danforth Miller.

WUSTL and Hope Happens have committed to

raising additional matching endowed funds of \$10 million for the same research programs over the next five years. The Hope Center was created in 2004 as a partnership between WUSTL and Hope Happens, a public charity started by Christopher Hobler, who lost his life to ALS in 2005.

"This gift is an outstanding example of how Washington University, Hope Happens and the St. Louis community continue to benefit from the generosity and leadership of the Danforths and the Danforth Foundation," Chancellor Mark S. Wrighton said. "As science develops a new generation of treatments for some of society's most devastating disorders, this donation and the mandate for additional fundraising that comes with it help ensure that Washington University and the Hope Center remain at the forefront of the field in research that will alleviate suffering and find solutions for earlier diagnosis and treatment."

"The support of the Danforth family has been at

See Gift, Page 6

Other ailments can affect survival of head and neck cancer

By GWEN ERICSON

Current estimates for head and neck cancer survival are largely inaccurate because they widely disregard many of the most common diseases such patients have in addition to their primary cancer, said Jay Piccirillo, M.D., a head and neck specialist at the School of Medicine, the Siteman Cancer Center and Barnes-Jewish Hospital.

This highlights a broader problem with cancer survival statistics, which generally don't take into account the effect of coexisting conditions or comorbidities, Piccirillo said.

In a recent study, Piccirillo, professor of otolaryngology and director of the Clinical Outcomes Research Office at the School of Medicine, showed that the risk of death increased up to sevenfold when patients with head and neck cancer developed new or more severe coexisting ailments such as heart problems, diabetes or lung disorders after cancer diagnosis.

The study, published in the October issue of the Archives of Otolaryngology, Head and Neck Surgery, is the first to look at comorbidities in head and neck cancer patients in the period following diagnosis.

"For decades, we have used a cancer-staging system based on tumor size, lymph node involvement and whether cancer has spread to other parts of the body when estimating a patient's survival while mostly ignoring how sick patients are from other diseases," Piccirillo said. "In fact, national databases used to estimate cancer survival don't account for comorbidities, and, as a result, we don't have very accurate

estimates of how long patients are likely to survive their cancers."

Some past studies of head and neck cancer have investigated the effect of comorbidities present at diagnosis, but this study shows that comorbidities grow in severity and frequency in about a third of head and neck cancer patients after their primary cancer treatment is complete.

The outcomes for patients with head and neck cancer who survive the initial period after diagnosis and treatment may be more dependent on their comorbidities than on their initial malignant tumor, Piccirillo said.

Survival estimates have an impact on the care of cancer patients such as selection of

initial treatment and evaluation of treatment effectiveness. They also affect funding for cancer research, coverage of cancer care by insurance agencies and other health-policy decisions.

Inaccurate statistics undermine physicians' ability to give patients a

true prognosis, which prevents patients from deciding how best to spend their future time.

"There are a lot of reasons an accurate prognosis is valuable to patients," Piccirillo said. "Do you start thinking about palliative care? Do you retire to spend more time with family? Do you make changes in your behavior such as exercising more, eating better or quitting smoking?"

In the United States, an estimated 35,310 new cases of oral cavity and throat cancer are expected in 2008. People with head and neck cancer have nearly the highest rate of comorbidities — only lung and colorectal cancer patients have more concurrent health problems.

See Cancer, Page 6



Piccirillo

Board names Brauer chair

New members appointed at winter meeting

The Board of Trustees named Stephen F. Brauer chair of the Board, effective July 1, 2009, and elected six new trustees, Chancellor Mark S. Wrighton announced at the Board's winter meeting Dec. 5.

Brauer joined the Board in 1991 and has been the chair of the School of Engineering & Applied Science's national council. He has championed the goal of accelerating Washington University's ascent among the world's premier universities and building a leading engineering school. In late October, ground was broken for the Stephen F. &

Camilla T. Brauer Hall, which will house the Department of Energy, Environmental & Chemical Engineering and the International Center for Advanced Renewable Energy & Sustainability (I-CARES). He currently serves as vice chair of the Board.

Brauer, former U.S. ambassador to Belgium, is chairman of Hunter Engineering Co., a leading manufacturer of computer-based, automotive service equipment for the global market, headquartered in St. Louis.

Wrighton recognized and

See Board, Page 6

Xia becomes first McKelvey Professor

McDonnell gift honors former engineering dean

By BARBARA REA

Younan Xia, Ph.D., professor of biomedical engineering, was installed as the inaugural James M. McKelvey Professor in the School of Engineering & Applied Science in a Sept. 2 ceremony in Uncas A. Whitaker Hall.

The McKelvey professorship is named in honor of the school's dean from 1964-1991 and is one of three professorships established in 2003 by a gift from the JSM Charitable Trust and from John F. McDonnell to support the Center for Materials Innovation (CMI).

CMI is a community of Washington University scholars whose work extends beyond discipline boundaries to enhance intellectual opportunities and research options. It operates as a catalyst to bring together students and faculty in the College of Arts & Sciences, the School of Engineering & Applied Science and the School of Medicine.

"Washington University is fortunate to have an abundance of great friends, and among the most notable of these is John McDonnell," Chancellor Mark S. Wrighton said. "His support for endowed professorships encourages leading faculty to be engaged in the interdisciplinary research of the Center for Materials Innovation. This extraordinary gift to the center demonstrates his strong commitment to the great promise for advancing materials research at Washington University."

Widely recognized as one of the world's preeminent material scientists, Xia has authored more than 300 scholarly articles and holds 10 patents. Among his most distinguished awards are fellowships from the Alfred P. Sloan Foundation and the David and Lucile Packard Foundation and the NIH Director's Pioneer Award in 2006. He serves on the advisory boards for Nano Research, Nano Today, Langmuir, International Journal of Nanoscience, International Journal of Nanotechnology and Advanced Functional Materials. Xia also is

an associate editor of Nano Letters.

Xia and his research group are pursuing cutting-edge research in nanotechnology, materials chemistry and biomaterials. More specifically, they are working on the development of a new class of materials with sizes lesser than 100 nanometers to create innovative technologies, with the ultimate goal of building a scientific base for large-scale production of nanomaterials. These nanomaterials will have major applications in areas such as electronics, photonics, catalysis, information storage, optical sensing and biomedical research.

Xia joined the WUSTL faculty in 2007 with a home appointment in biomedical engineering. Additional appointments are in energy, environmental and chemical engineering in the School of Engineering & Applied Science; chemistry in Arts & Sciences; and biochemistry and molecular biophysics and radiology in the School of Medicine. He also has an appointment in the Division of Biological and Biomedical Sciences.

"Our school is honored three-fold by this professorship," said Salvatore P. Suter, Ph.D., interim dean of the School of Engineering & Applied Science and senior professor of biomedical engineering.

"Professor Xia is a renowned scientist; Jim McKelvey led the school to national prominence in engineering research and education; and John McDonnell shaped one of the greatest aerospace companies in the world," he said. "I'm very proud to have these three remarkable persons associated with the School of Engineering."

McKelvey earned a master's and a doctoral degree in chemical engineering from Washington University in 1952. After a career in industry with DuPont, he began his academic career in 1954 at Johns Hopkins University. He returned to WUSTL in 1957, was named chair of the Department of Chemical Engineering in 1962, and, in 1964, embarked on a 27-year tenure as dean of the engineering school.



Chancellor Mark S. Wrighton presents Younan Xia, Ph.D., professor of biomedical engineering, with a medal Sept. 2 in a ceremony commemorating his installation as the James M. McKelvey Professor in the School of Engineering & Applied Science.

Although officially retired since 1996 after 39 years of service, McKelvey continued teaching in the chemical engineering department through the 2007-08 academic year.

Under his leadership, the school rose to national prominence in engineering education. McKelvey was responsible for many innovations, including the Engineers' Scholarship Program, the Dual Degree Program and the Cooperative Education Program. In addition, he is known for being an early pioneer in the field of polymer processing.

McDonnell is the retired chairman of McDonnell Douglas Corp. After earning bachelor's and master's degrees in aeronautical engineering from Princeton University, he joined McDonnell Douglas in 1962. He led the company through the early 1990s and retired in 1997 after overseeing its merger with Boeing to create the world's largest aerospace company.

McDonnell's long and distinguished relationship with the University began in 1976 as a member of the Board of Trustees. Since then, he has served in many leadership positions, including his current one as vice chair. He also

was founding chair of the Arts & Sciences National Council and now serves on the School of Engineering & Applied Science's National Council. He and his wife, Anne, are Life Members of the William Greenleaf Eliot Society and Sustaining Charter Members of the Society's Danforth Circle.

John McDonnell and the McDonnell family, with their associated foundations, are committed supporters of the University whose generosity extends throughout the Danforth Campus and School of Medicine Campus.

In addition to their strong support for professorships, they

have given substantially for scholarships, academic initiatives and buildings at WUSTL.

In 2005, McDonnell and the Trust made a \$10 million gift to establish the McDonnell International Scholars Academy, creating a global network of partner universities and providing scholars with undergraduate degrees from those institutions the opportunity to earn a graduate degree and experience broad leadership exposure at the University.

Over time, it is anticipated that the graduate scholars will form a network of leaders around the world in many countries and fields of endeavor.

Architecture graduate student wins design prizes

By LIAM OTTEN

Alison M. Lang, a master's candidate in architecture in the Sam Fox School of Design & Visual Arts, was part of a team that recently took two prizes in the Environmental Protection Agency's (EPA) Second Annual Green Building Design Competition.

Open to architects, reuse experts, engineers, designers, planners, contractors, builders, educators, environmental advocates and students from across the United States, the Green Building Design Competition featured judging in three categories.

The Building Category examined the construction of an entire structure, from foundation to roof, while the Innovation Category focused on a particular building component, tool, policy or strategy. The Outstanding Achievement Awards recognized projects in three subcategories: Best Greenhouse Gas Reduction Design, Best School Design and Best Residential Design.

"Reducing construction and demolition debris from our country's waste stream is an important long-term environmental goal," said Jimmy Palmer, EPA regional administrator. "These innovators are creating reusable building components for the green buildings of tomorrow."

Lang's team — which was formed under the auspices of the HOK Intern Program in Chicago — won both the Student Innovation Category and the Best School Design for their proposed "tran/spot: transient awareness center."

Assembled in empty lots across Chicago, the structure would serve as a kind of modular, movable community center. A double-sided media wall and adjacent gathering space could be used for films, presentations, lectures, rallies, protests "or anything else the community requires or desires," the designers noted.

Meanwhile an interactive display board would feature news, events, job openings and other community information, which passersby could access and update through an integrated WiFi zone.

Each center would be built largely from recycled cardboard tubes, which the designers note are lightweight, affordable, easily transported, waterproof, fire resistant, durable and biodegradable. The tubes would be mounted on a grounded track system and connected by thin wiring and recycled aluminum. Covering the surface would be photovoltaic panels, which could adjust to angles of between 19 and 40 degrees, in response to changing seasons, climates or other conditions. The energy produced would power the media wall, with any excess funneled to the city grid.

In addition to Lang, the tran/spot team included students from Harvard's Graduate School of Design, the Illinois Institute of Technology, Kansas State University and the University of Illinois.

The jury was chaired by Brad Guy, president of the Building Materials Reuse Association, which co-sponsored the competition. Other sponsoring partners included the American Institute of Architects, Southface Energy Institute, West Coast Green and StopWaste.org.



An excellent pair Faculty achievement award winners Henry L. "Roddy" Roediger III, Ph.D. (left), the James S. McDonnell Distinguished University Professor in Psychology in Arts & Sciences, and Robert D. Schreiber, Ph.D., the Alumni Endowed Professor of Pathology and Immunology, await the awards ceremony Dec. 5 at the Moore Auditorium of the Farrell Learning and Teaching Center on the Medical Campus. Roediger received the Arthur Holly Compton Award for Faculty Achievement, and Schreiber was presented the Carl and Gerty Cori Award for Faculty Achievement. Both professors received a plaque and \$5,000 honorarium and gave presentations of their scholarly work during the program. The recognition ceremony was followed by the annual Chancellor's Gala at the center's atrium.

School of Medicine Update

Brain cooling prevents cell death in mice exposed to anesthesia

By JIM DRYDEN

New School of Medicine research suggests cooling the brain may prevent the death of nerve cells that has been observed in infant mice exposed to anesthesia.

The effects of anesthesia on human infants and young children have been debated among neuroscientists, but growing evidence suggests exposure to anesthetic drugs during brain development may contribute to behavioral and developmental delays.

The same researchers previously had reported that when young rodents were exposed to alcohol, anesthetics or anticonvulsants, large numbers of their brain cells died through a process known as neuroapoptosis. This latest work suggests such damage may be preventable.

The new findings were reported at Neuroscience 2008, the annual meeting of

the Society for Neuroscience.

"Cooling the brain seems to be quite effective in suppressing nerve cell death after an infant animal has been exposed to an anesthetic drug," said John W. Olney, M.D., the study's senior investigator and the John P. Feighner Professor of Psychiatry. "We don't yet know whether this cooling only temporarily suppresses or whether it permanently prevents this brain damage from occurring. We're working to clarify that."

Olney's research team previously had demonstrated that a small dose of anesthetic drugs, enough to lightly anesthetize an infant mouse for about one hour, was sufficient to trigger neuroapoptosis.

"It has been widely assumed that the benefits of anesthesia can be achieved without adverse consequences," Olney said. "But that assumption has been called into question in recent years by work from our laboratory and others around the world."

In this study, Olney found the anesthetic drugs isoflurane and ketamine increased neuroapoptosis in infant mice at normal or high temperatures. However, hypothermia during exposure to anesthesia blocked neuroapoptosis and also reduced the low level of neuroapoptosis that occurs normally during brain development.

"Some cells fail to make the normal connections that they are supposed to make to become integrated into a neural network," he said. "It's necessary for those cells to die and to be removed from the brain. Cooling the brain also suppresses that process."

If Olney's research team can demonstrate cooling the brain only delays that healthy process temporarily, but permanently prevents unhealthy neuroapoptosis due to anesthesia exposure, the technique may be useful someday in preventing cognitive and developmental problems in some children exposed to anesthesia during surgery.

Olney said it's tricky to demonstrate links between developmental deficits and exposure to anesthetic drugs because the type of deficit can vary depending upon the developmental age at which exposure occurs. Different parts of the brain develop at different times, so exposure during one period of development may have a very different effect than exposure earlier or later in brain development.

"We believe there are certain early periods when the damage is not only more likely to be severe, but it's also likely to be more widespread throughout different regions of the brain," he said. "Naturally, if more of the brain is involved and damage to those regions is more severe, it's going to cause more pronounced neural and cognitive consequences."

Olney said it is likely that the protective effects of hypothermia can be achieved either by cooling the entire body or by applying a cooling helmet to the head.

Manary named Roberson Professor of Pediatrics

By BETH MILLER

Mark J. Manary, M.D., has been named the Helene B. Roberson Professor of Pediatrics at the School of Medicine.

"Mark is an internationally recognized expert and advocate for severely malnourished children whose pioneering clinical studies reshape our approach to this profound health issue," said Alan L. Schwartz, Ph.D., M.D., the Harriet B. Spoehrer Professor and head of Pediatrics. "Further, he is an outstanding clinician, educator, citizen of Washington University and colleague."

"Mark Manary is an outstanding choice for the Helene B. Roberson Professor of Pediatrics," Chancellor Mark S. Wrighton said. "Dr. Manary has developed innovative approaches to improving the lives of children in Africa. He is a credit to his field and most deserving of this generous honor supported by an endowment gift from Helene B. Roberson."

"I am very, very honored to receive the Roberson chair," said Manary, professor of pediatrics and a specialist in emergency medicine at St. Louis Children's Hospital. "Mrs. Roberson's vision is about having a better future for children, which is coincident with what we have going on in our Department of Pediatrics as well as the kind of work that I embrace. We want to not only offer the very best to the kids with

whom we have contact everyday, but to those who will never come to our facility or to St. Louis."

Manary has spent several years devoted to researching the effectiveness of a simple yet revolutionary peanut-butter mixture with severely and moderately malnourished young children in the sub-Saharan African country of Malawi, where malnutrition affects 70 percent of children.

After completing a Fulbright Scholarship in Africa, Manary developed improved, peanut-butter based foods to address the malnutrition epidemic in Malawi. The therapeutic feeding program uses the nutrient-rich mixture, called Ready-to-Use Therapeutic Food (RUTF), which contains peanuts, powdered milk, oil, sugar, and added vitamins and minerals. It has been remarkably successful in promoting recovery among severely malnourished children in Malawian clinics in which Manary works.

Manary also is working with plant scientists at the Donald Danforth Plant Science Center to boost the nutrition in cassava, a starchy root that is a diet staple of 200 million of the poorest Africans. The scientists have improved

the protein, iron and Vitamin A content in the cassava, which will soon be tested in fields in Nigeria and Kenya.

Manary earned a medical degree from the School of Medicine in 1982 and completed an internship and residency at St. Louis Children's Hospital. After spending four years as a medical officer in Tanzania and on an Indian reservation in South Dakota, he joined the School of Medicine faculty in 1989 as an instructor.

Since 1994, he has also been a senior lecturer in pediatrics at the Medical College of Malawi, and, in 2001, became an associate professor of pediatrics (voluntary faculty) at the Children's Nutrition Research Center at Baylor College of Medicine in Houston.

A lifelong supporter of the arts, education and health care, Roberson established this professorship in 2000. A native St. Louisan, Roberson graduated from Mary Institute and attended Washington University's School of Art, now the Sam Fox School of Design & Visual Arts. During World War II, she worked for the American Red Cross in the Motor Corps division and as a nurse's aide volunteering at Barnes and Jewish hospitals.

Roberson owned and operated Daytona Budweiser Inc., an Anheuser-Busch wholesaler in Port Orange, Fla., where she served as its chief executive officer and president for more than 35 years before retiring.



Manary

Longer Life Foundation marks 10th anniversary

The Longer Life Foundation (LLF), a cooperative effort between the School of Medicine and the Reinsurance Group of America (RGA), recently celebrated 10 years of independent research into improving methods for predicting long-term mortality from various diseases and promoting quality and quantity of life.

So far, LLF has funded more than 48 research grants, awarding some \$2 million to support studies on topics from cancer treatment and screening to diabetes and nutrition.

"This innovative partnership between Washington University and the RGA is a model of a productive collaboration between academics and industry to advance an important field in science and medicine," said Samuel Klein, M.D., the Danforth Professor of Medicine and Nutritional Science, director of the Center for Human Nutrition and chief of the Division of Geriatrics and Nutritional Science. "The LLF grant program is used to stimulate and facilitate research in identifying prognosticators of disease and longevity, and factors that can prevent disease improve both quality and length of life. RGA support has helped our investigators raise another \$50 million in funding from federal agencies and private foundations to advance this research platform."

Klein said the School of Medicine has invested more than half a million dollars in LLF research projects, and the school's Department of Medicine has made a substantial commitment to the recently established Longevity Research Program, led by John O. Holloszy, M.D., professor of medicine.

The call for grant applications for 2009 will occur in February with a March deadline. For more information, visit longerlife.org.

Employees reach out to neighbors in Forest Park Southeast

By BETH MILLER

About 25 families in the Forest Park Southeast neighborhood adjoining the Medical Campus will have a brighter holiday this year thanks to the generosity of School of Medicine employees.

The Washington University Medical Center Redevelopment Corp. (WUMCRC), which works closely with neighborhood groups in addressing employment, public improvements, home repair and security and public-safety issues, has coordinated a Holiday Outreach Program for nearly 10 years.

The WUMCRC staff work with area social-service providers to identify families who live in the neighborhood and are in immediate need due to loss of a job, an illness or another emergency situation, said Brooks Goedeker, community development specialist for WUMCRC. Once accepted, they are matched with a medical school department, which works to fill the specific needs of each family.

"A lot of these families do not have any means to purchase gifts or even to have a holiday meal," Goedeker said. "This program helps the families stay on their feet and have a wonderful holiday. For a lot of the families, this is just what they need in order to give them the hope and jump-start for the New Year."

Goedeker said the departments do a great job fulfilling these requests.

"The families are always overwhelmed," Goedeker said. "It's really a neat experience."

This year, about 25 departments are participating in the program. In addition to fulfilling material needs, such as gifts, food, clothing, bedding, toys and small appliances, some departments also assist families who are behind on utility bills.

"This program really helps the people in the neighborhood connect to the Medical Campus and lets them know that the campus employees care that their neighbors are doing well," Goedeker said.



(From left) Brooks Goedeker, community development specialist for WUMCRC; Adam Chestnut, warehouse/inventory clerk at the School of Medicine Post Office; Maurice Harris, WUMCRC intern; and Larry Chestnut, support services attendant II at the School of Medicine Post Office, load donated gifts into trucks to be delivered to needy families in the Forest Park Southeast neighborhood last December.

University Events

Civil rights classic 'To Kill a Mockingbird' at Edison Jan. 9-18

By LIAM OTTEN

Since its publication in 1960, Harper Lee's "To Kill a Mockingbird" has become the best-selling novel of all time and is perhaps the most widely read book exploring race in the United States.

In January, Edison Theatre will join forces with Metro Theater Company, St. Louis' foremost professional troupe for young people, to stage an all-ages theatrical production of the civil rights classic.

"As we anticipate our new national leadership and cope with difficult local issues, 'To Kill a Mockingbird' strikes home with renewed relevance," says Charles E. Robin, executive director of Edison Theatre. "It's a story that resonates with ever deeper meaning and strength. Seeing it brought to life on the stage will unlock nuances in a way that only theatre can."

Performances, which take place in Edison Theatre Jan. 9-18, will be held in conjunction with the Big Read, a national program sponsored by the National Endowment for the Arts designed to encourage communities to read and discuss a single book.

Set in 1935 in fictional Maycomb, Ala., "To Kill a Mockingbird" is a coming-of-age tale centering on Jean Louise "Scout" Finch; her older brother, Jem; and their visiting friend, Dill.

Under the watchful eye of Calpurnia, the Finches' African-American housekeeper, the trio spends lazy summer days concocting theories about Boo Radley, a mysterious neighbor. But when Scout's father, the widowed lawyer Atticus Finch, is called to defend a black man falsely accused of raping a white woman, the bonds of family, friendship and even civil society are tested, and Scout learns the true meaning of dignity and tolerance.



Nicholas Kryah as Atticus and Emily Jackoway as Scout in "To Kill a Mockingbird."

"Harper Lee called her book 'a simple love story,'" said Metro Artistic Director Carol North, who directs the cast of 19. "It is that and much, much more. The enduring power of 'To Kill a Mockingbird' is its ability to touch the heart as well as awaken the conscience of readers."

"For me, it's a call to action," North said. "We need only look at our own community to see how social inequity, racism and fear of the 'other' continue to divide us. I'm so grateful for the partnership with Edison Theatre that makes it possible for Metro Theater Company to bring this powerful story to the stage for St. Louis."

The cast is led by Nicholas Kryah as Atticus and Bobbie Williams as Calpurnia. Double cast in the roles of the children are Berklea Going and Emily Jackoway as Scout; Hal Matthews and Jimmy McEvoy as Jem; and Parker Donovan and Drew

Redington as Dill. Dominic Richardson plays Tom Robinson, the young man Atticus defends, while Andrew Keller is Mr. Gilmer, the public prosecutor. Also featured are Susan Arnold Marks as Mayella Ewell, Robinson's accuser, and Greg Johnston as her drunken father, Bob. The mysterious Boo Radley is played by Martin Casey. Musician Sandy Weltman also is featured in the production.

The production is based on the 1970 stage adaptation by Christopher Sergel. Sets and props are by Dunsai Dai and Eric Barnes, respectively, with costumes by

Lou Bird. Lighting and sound are by John Wylie and Amanda Bruggeman, respectively. Bruce Longworth is dialect coach.

In addition, Metro and Edison will co-host a postshow reception Jan. 9 and welcome actress Mary Badham, who played Scout in the Academy Award-winning 1962 film. Badham also will participate in postshow Q&A sessions following both the 2 p.m. and 7:30 p.m. performances Jan. 10.

Tickets to the show are \$16, or \$12 for children, students and seniors. Groups of 10 or more can purchase blocks of tickets at \$8 each.

Tickets to the opening-night reception are \$35. Both can be purchased through the Edison Theatre Box Office or at all MetroTix outlets.

For more information, visit metrotheatercompany.org or edisontheatre.wustl.edu or call 935-6543.

Big Read program to focus on 'To Kill a Mockingbird'

By LIAM OTTEN

With its appealing evocation of childhood and powerful call for tolerance and social justice, Harper Lee's "To Kill a Mockingbird" is the rare American novel that can be discovered in adolescence yet rewards adult rereading.

In January, the book will serve as centerpiece of a National Endowment for the Arts' (NEA) Big Read program. Modeled on successful "city read" programs, The Big Read is designed to encourage literary reading by helping communities come together to read and discuss a single book.

"The purpose of The Big Read, like the purpose of literature itself, is pleasure," said NEA Chair Dana Gioia. "Not necessarily an easy pleasure, but a deliciously rich and complex one. A great book combines enlightenment with enchantment. It awakens our imagination and enlarges our humanity."

The St. Louis Big Read — coordinated by WUSTL in partnership with several local organizations — will feature dozens of lectures, readings, art exhibits, theater productions, book discussions, film festivals and other events exploring the themes of Lee's novel. More than two dozen sponsors and partner organizations range from local governments, library districts and school districts to museums, bookstores and arts, literacy and cultural organizations.

"The Big Read provides an opportunity to share University resources with the entire St. Louis community," said Cheryl Adelstein, director of community relations and local government affairs, who is spearheading WUSTL's participation. "Working with our partners and sponsors, we will reach more than 10,000 area students and enrich their study of 'Mockingbird.'"

Adelstein said much of the outreach will be done by WUSTL students. "Brown School students will lead programs for high-school groups," she said, "and both graduate and undergraduate students will lead book discussion throughout the St. Louis community."

Events begin Jan. 6 with a reading and discussion at the Missouri History Museum.

In addition to the theatrical production of "To Kill a Mockingbird" Jan. 9-18, actress Mary Badham will host a trio of film screenings Jan. 10 and 11 at the St. Louis Public Library, Schlafly Branch; the Missouri History Museum; and the University City Public Library.

The Human Race Machine, which allows viewers to envision themselves as a different race, will be installed in the University's Mallinckrodt Student Center Jan. 11-18. Subsequent events will include the Black Repertory Theater of St. Louis' performance of "Stamping, Shouting and Singing Home" at the Missouri History Museum (Jan. 18); the Bias and Bigotry Film Festival, presented by the Anti-Defamation League of League of St. Louis and Cinema St. Louis (Jan. 18-22); and To Kill a Mockingbird Through Art, a family-friendly interactive event exploring racial and social justice issues through the arts, sponsored by Cultural Festivals of St. Louis (Jan. 31).

For a complete calendar of events or to download a reader's guide, visit bigread.wustl.edu or call 935-4407.

In 2007, Washington University sponsored a Big Read focusing on Ray Bradbury's "Fahrenheit 451."

More than 12,000 people participated in dozens of public events and book discussion groups.

Freedom From Smoking • First Glass • Neuronal Migration

"University Events" lists a portion of the activities taking place Dec. 11-Jan. 14 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

"Birth of the Cool: California Art, Design and Culture at Midcentury." Through Jan. 5. Kemper Art Museum, 935-4523.

"First Glass." Student exhibit of glass art through Dec. 16. Third Degree Glass Factory, 5200 Delmar Blvd. 367-4527.

Film

Thursday, Dec. 11

7 p.m. Kemper Art Museum Film Festival. Some Like It Cool Film Series. "North by Northwest." Tivoli Theatre, 6350 Delmar Blvd. 935-4523.

Lectures

Thursday, Dec. 11

Noon. Genetics Seminar. "Lissencephaly: Smooth Brains, Neuronal Migration and Stem Cell Division." Tony Wynshaw-Boris, chief of the div. of medical genetics, U. of Calif., San Francisco. Cori Aud., 4565 McKinley Ave. 362-2139.

4 p.m. Vision Science Seminar Series. "Damage to Brain Connections Causes Strabismus in Infants: Human and Monkey." Lawrence Tychsen, prof. of ophthalmology and visual sciences. Maternity Bldg., Rm. 725. 362-3315.

Friday, Dec. 12

11 a.m. Computer Science and Engineering Colloquium. "Visual Analysis in Computational Medicine: Illumination, Perception and Simulation Applied to the Brain." David C. Brooks, Harvard Neurodiscovery Center. Cupples II Hall, Rm. 220. 935-6160.

11 a.m. Electrical & Systems Engineering Seminar. "Magnetic Resonance Imaging and the Diffusion of Water: Physical Chemistry and Biophysics Meet Radiology." Joseph J. H. Ackerman, prof. of chemistry. Bryan Hall, Rm. 305. 935-5565.

Monday, Dec. 15

4 p.m. Immunology Research Seminar Series. "Plasticity of Regulatory T Cells During Infection." Yasmine Belkaid, National Inst. of Allergy and Infectious Diseases, National Inst. of Health. Moore Aud., 660 S. Euclid Ave. 362-2763.

4 p.m. Vision Science Seminar Series. "Neurodegeneration in Glaucoma: From Brain to Retina." David J. Calkins, assoc.

prof. of ophthalmology and visual sciences, Vanderbilt Medical Center. Maternity Bldg., Rm. 725. 362-3315.

Tuesday, Dec. 16

11 a.m. Electrical & Systems Engineering Seminar. "Detection, Estimation and Beamforming for Adaptive Sensor Arrays: Algorithms and Performance." Christ D. Richmond, technical staff, Lincoln Lab., MIT. Bryan Hall, Rm. 305. 935-5565.

Thursday, Dec. 18

4 p.m. Vision Science Seminar Series. "Functional Specialization of Human Visual Cortex — Insights From Data Mining of the Human Neuroimaging Literature." David Van Essen, prof. of neurobiology. Maternity Bldg., Rm. 725. 362-3315.

Thursday, Jan. 8

3 p.m. Siteman Cancer Center Basic Science Seminar Series. Lynda Chin, researcher, Dana-Farber Cancer Inst. Eric P. Newman Education Center, Seminar B. 454-7029.

4 p.m. Vision Science Seminar Series. "Pias3-Dependent SUMOylation is Essential for Rod Photoreceptor Differentiation." Shiming Chen, assoc. prof. of ophthalmology and visual sciences. Maternity Bldg., Rm. 725. 362-3315.

Tuesday, Jan. 13

4:30 p.m. Freedom From Smoking Class. "Thinking About Quitting." Center for Advanced Medicine, Barnard Health and Cancer Info. Center. To register: 362-7844.

Wednesday, Jan. 14

4 p.m. Biochemistry and Molecular Biophysics Seminar. "Exploring New Roles for Elongation Factor Tu Inside and Outside Translation." Michael Ibbas, assoc. prof. of microbiology, Ohio State U. McDonnell Medical Sciences Bldg., Rm. 264. 362-4152.

And More

Wednesday, Dec. 17

5:30-8 p.m. Siteman Cancer Center Art Showing. "Experience the Journey of Hope." Co-sponsored by MedPIC and the Arts as Healing Program. Duane Reed Gallery, 7513 Forsyth Blvd. To R.S.V.P.: 362-3320.

Thursday, Dec. 18

11:30 a.m. Women's Faculty Reception. Eric P. Newman Education Center, Great Room B. To R.S.V.P.: jilledwards@wustl.edu.

Music

Thursday, Dec. 11

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

Friday, Dec. 12

8 p.m. Concert. Opera Scenes. (Also 8 p.m. Dec. 13.) Umrath Hall Lounge. 935-5566.

On Stage

Friday, Jan. 9

7:30 p.m. OVATIONS! Series. "To Kill a Mockingbird." (Also 7:30 p.m. Jan. 10, 16, 17; 2 p.m. Jan. 10, 11, 17, 18.) Cost: \$16, \$12 for children, students and seniors. Edison Theatre. 935-6543.

Sports

Saturday, Dec. 13

1 p.m. Women's Basketball vs. Fontbonne U. Athletic Complex. 935-4705.

3 p.m. Men's Basketball vs. Fontbonne U. Athletic Complex. 935-4705.

Friday, Jan. 9

6 p.m. Swimming and Diving vs. Lindenwood U. Athletic Complex. 935-4705.

Wednesday, Jan. 14

7 p.m. Men's Swimming and Diving vs. Wabash College. Athletic Complex. 935-4705.

Record hiatus

This is the final issue of the Record this calendar year. We will resume publication Jan. 15, 2009. The Record staff wishes everyone a safe and happy holiday season.

Sports

WUSTL wins another Lopata Classic

The top-ranked men's basketball team won the 25th Annual Lopata Classic with two victories last weekend at home. The Bears have now won 20 straight Lopata Classic games and 10 overall tournament titles.

Five Bears scored in double figures to lead the team to an 85-57 victory over Hamilton College in the first game Dec. 5. Senior Tyler Nading recorded his second double-double of the season with 16 points and 10 rebounds and moved into third place on the all-time steals list with 155. Freshman Dylan Richter pumped in a career-high 11 points, while sophomore Caleb Knepper also added 11 off the bench. Senior Sean Wallis added 10 points, while freshman Alex Toth had career-best 10 points.

In the second game Dec. 6, Nading had a game-high 20 points and added nine rebounds as WUSTL posted a 93-86 victory over No. 13 Illinois Wesleyan University.

Nading was 7-of-13 from the field and 5-of-7 from the free-throw line, moving past Jim Barton (1954-57) into 11th on the all-time scoring list with 1,232 career points. Junior Aaron Thompson added 16 points and a career-high 10 assists, while Richter also scored in double figures with a career-high 15 points.

WUSTL shot 56.7 percent (34-60) from the field for the game and hit 47.8 percent (11-23) from three-point range. The Bears outrebounded the Titans, 33-29, after only having 11 boards in the first 20 minutes of action. WUSTL committed a season-low nine turnovers in the victory, including just one in the first half.

The Bears (7-0) host Fontbonne University at 3 p.m. Saturday, Dec. 13, in the WU Field House, then travel to Elmhurst, Ill., Dec. 19-20 to participate in the Elmhurst Bluejay Classic before the holiday break. Their season resumes at 3 p.m. Jan. 5 against Webster University.

Women's basketball drops two on road

The No. 9 women's basketball team dropped a pair of games at the NBC Camps Whit Classic in Spokane, Wash., last weekend.

The Bears fell to tournament host Whitworth University, 73-68, Dec. 5 and then lost to Whitman College, 72-60, Dec. 6.

Senior guard Halsey Ward led WUSTL in the first loss with a season-high 17 points and tied her career-high with four three-point baskets. In the second game, junior Zoe Unruh led the team with a season-high 17 points and was named to the all-tournament team.

The Bears (4-3) return to action at 1 p.m. Saturday, Dec. 13, at the WU Field House, hosting Fontbonne University, and then travel to Hanover, Ind., Dec. 19-20 to play in the Hanover College Eleanor Moyer Classic before the break. Their season resumes at 5:30 p.m. Jan. 5 against Webster University.

Swim teams have productive meet

A total of five school records were broken as the WUSTL men's and women's swim teams both grabbed a second-place finish at the Wheaton Invitational Dec. 5-6 in Wheaton, Ill.

Junior Alex Beyer was the star for the men's team, breaking three school records, setting three automatic NCAA qualifying times and four provisional marks. Freshman Karina Stridh broke a pair of school records for the women's team, also making three NCAA "A" cuts and four provisional marks.

Beyer broke the WUSTL record in the 500-yard freestyle (4:28.73), the 200-yard freestyle (1:38.08) and the 400-yard individual medley (3:57.79).

Stridh's school-record-breaking performances came in the 100-yard freestyle (51.19) and the 50-yard freestyle (23.56). She also set an automatic NCAA time of 57.32 in the 100-yard backstroke.

The final NCAA qualifying tally for the weekend was six automatic times and 30 provisional cuts. Both the men's and women's teams had three automatic qualifying times, with the men posting 19 NCAA "B" cuts and the women submitting 11 provisional marks.

The Wheaton Invitational was the last competition for the fall semester. Both teams return to action Jan. 9, when they host Lindenwood University at the Millstone Pool.



Fun times (From left) junior Mitchell Shanklin, freshman Brian Duddy and junior Matt Barker play Super Smash Brothers Brawl during a video game tournament as part of the grand opening of the Fun Room in the Danforth University Center Dec. 6. Duddy took first place and Shanklin second. More than 30 students took part in the opening-night activities. The Fun Room, located on the building's second floor, features comfortable furniture and several video game consoles that will be accessible to students.

Construction Update

Construction Update is published periodically and provides information about the progress of major building and renovation projects. Information is provided to the Record by facilities management.

Danforth Campus

Brauer Hall

The building will be a LEED gold rating. Monthly LEED meetings will be held.

Busch Hall renovation

Work continues on electrical rough-ins, plumbing, fire protection and the HVAC.

South 40 Umrath House replacement

The reconciliation of the project scope and budget has been concluded. The trench drain was completed in late November. Workers will start building panels in mid-December.

South 40 utilities

The contractor has completed the excavation of the chiller site and is cutting in footings. The north- and west-side footing excavation

was completed in November. Final plans for the chiller plant were issued in November for bid to subcontractors. New boilers are in operation to provide heat to the South 40 residence halls.

Wohl Center replacement

The reconciliation of the project scope and budget has been concluded. Concrete work continues. The LEED team is working to achieve a target silver LEED rating.

GEP

Students gain sense of ownership in research
— from Page 1

other members of the WUSTL community provide guest lectures to illustrate how they have used genomic approaches to answer diverse questions in their own research.

Elgin's course was so successful that she became one of eight professors to have their original HHMI grant funding renewed in 2006. With that support, she set out to make the course available to undergraduates at institutions across the country.

Biology majors at WUSTL often begin their research by spending a summer in the laboratory under the guidance of a faculty, graduate student or postdoctoral research mentor.

However, the privilege of a summer research experience is unusual at many institutions due to inadequate facilities, limited funding, high student-to-faculty ratios and a lack of experienced or research-active mentors.

Elgin's course overcomes these barriers by providing students with computer-based research opportunities.

This strategy minimizes the cost of research materials because the necessary data is freely available on the Web, and most institutions already possess adequate computer facilities.

Mentoring also is economized by teaching students the same electronic tools and strategies in a

"It makes a huge difference to students when you tell them, 'You're responsible for this. This is going to go in the databases. This is going to be used by different scientists. Do it right.'"

SARAH C.R. ELGIN

group setting and by relying on former students to serve as undergraduate teaching assistants (TAs).

Thus, one dedicated faculty member can provide research opportunities for a much larger number of students than would be possible in traditional, one-on-one mentoring relationships. GEP faculty and TAs learn the relevant software during summer workshops at WUSTL.

"Our GEP faculty is an impressive group," Elgin said. "Each member has taken the basic format and adapted it to the requirements of their institution and the needs of their students. Their energy and enthusiasm are terrific."

The GEP's approach makes offering a research-based course a viable option for a wide variety of institutions. Students in the program are currently working on a comparative genomics problem that focuses on genes in a

heterochromatic, or tightly packed, region of the DNA.

In the future, students might participate in research ranging from regulation of gene expression to the evolution of a species.

To sum up the philosophy of the GEP, Elgin references an ancient Chinese proverb that states, "I hear and I forget; I see and I remember; I do and I understand." In other words, Elgin maintains that students can't truly understand the scientific process until they have conducted their own research.

This assertion is supported by an article recently published in the Oct. 31 issue of *Science* in which Elgin and her colleagues present results from an exit survey of students who participated in the GEP, a course without research or a summer research experience.

The evidence suggests that the GEP provides students with a more comprehensive learning experience than traditional, lecture-based courses.

The results also reveal that the GEP course is comparable to a summer research experience in terms of its capacity to help students prepare for a career in science.

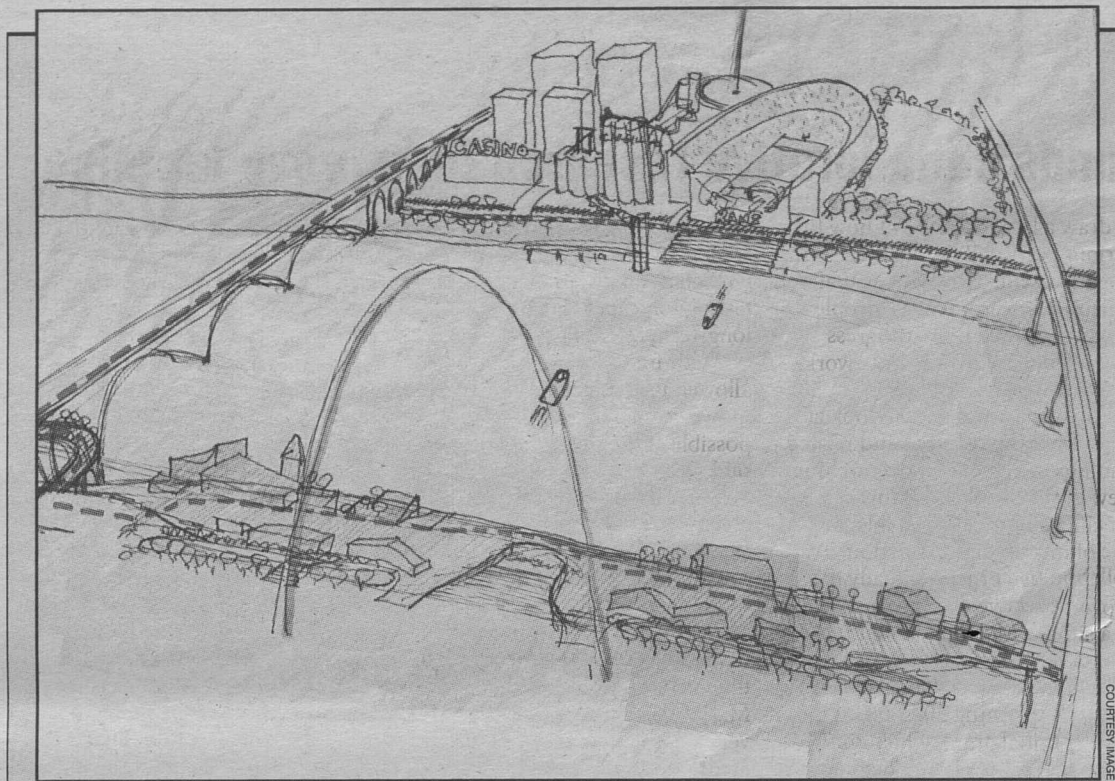
According to Elgin, the success of the GEP can be partially attributed to students' sense of ownership over their research.

"It makes a huge difference to students when you tell them, 'You're responsible for this,'" Elgin said.

"This is going to go in the databases. This is going to be used by different scientists. Do it right," she said.



Tyler Nading helped the Bears win the Lopata Classic last weekend and moved to third on the all-time steals list in the WUSTL record book with 155.



Better connections Forty-eight students in art, architecture, landscape design and transportation engineering — representing five Missouri and Illinois universities — gathered in St. Louis Nov. 6-9 for the Downtown/Riverfront Student Design Charrette. Working in teams of six, the students brainstormed ideas for revitalizing the riverfront. The above proposal, co-authored by Glenn Timmons, a graduate student in the Sam Fox School of Design & Visual Arts, suggests an open-air stadium on the Mississippi's eastern bank as well as a new ferry system and an elevated river walk. The charrette was organized by the St. Louis Chapter of the American Institute of Architects and by the Transportation Engineering Association of Metropolitan St. Louis. All proposals will be on view next spring in the Steinberg Gallery in conjunction with the Mildred Lane Kemper Art Museum's Eero Saarinen retrospective, which opens Jan. 30.

Board

Kemper, McDonnell named vice chairs

— from Page 1

thanked David W. Kemper for his outstanding service to the University as Board chair. Kemper was appointed vice chair, and John F. McDonnell was reappointed vice chair.

The Washington University Libraries Plan for Excellence was presented to the Board by the chair of the Libraries National Council, Jack E. Thomas, and by Shirley K. Baker, vice chancellor for scholarly resources and dean of University Libraries. Wrighton also provided an overview of several University-wide initiatives and centers' Plans for Excellence.

In his report, Wrighton updated trustees on construction of the BJC Institute of Health at Washington University, noting that the facility's structural steel was expected to "top out" this month and that exterior closure and the installation of building systems were under way. The completion date for this LEED-certified project is December 2009.

Wrighton described the new Consortium for Clean Coal Utilization, which is being established through \$12 million in support from Arch Coal, Peabody Energy and Ameren. WUSTL has committed more than \$60 million during the past year to advance education and research related to energy, environment and sustainability.

Through the new consortium, the University and its partners hope to make St. Louis an international center for clean coal initiatives.

Wrighton also reported that applications for admissions to the undergraduate programs are strong and that the academic indicators are up again among the applicants in the early-decision pool.

He described an important landmark in cancer research at the School of Medicine in which faculty members for the first time decoded the complete DNA of a cancer patient and traced her leukemia to its genetic roots.

In recapping some high points in athletics, Wrighton noted that the women's volleyball team captured its eighth University Athletic Association championship Nov. 8, the women's soccer

team advanced to the sectional semifinal, where it lost to defending national champion Wheaton College, and the men's basketball team remains undefeated and is ranked No. 1 nationally.

Six trustees named, 10 others re-elected

Six new members were elected to the Board.

George P. Bauer is president and chief executive officer of GPB Group Ltd., an investment-banking firm based in New Canaan, Conn. Previously, Bauer spent 31 years with IBM Corp., holding executive positions in marketing, finance and business systems, including chief financial officer positions of several IBM divisions. He also held leadership positions in IBM's European operations. After his retirement in 1987, he became executive professor of management information systems at Georgia State University. Bauer earned bachelor's and master's degrees in engineering from Washington University in 1953 and '58, respectively.

Gregory H. Boyce is chairman and chief executive officer of St. Louis-based Peabody Energy, the world's largest private-sector coal company. Previously, Boyce was chief executive officer-energy for Rio Tinto mining company in London. Prior to that, he was president and chief executive officer of Kennecott Energy Co., which grew to the nation's second-largest coal company during his tenure. He also has served as president of Kennecott Minerals Co. and as executive assistant to the vice chairman of Standard Oil of Ohio. He earned a bachelor's degree in mining engineering from the University of Arizona and an advanced management program degree from Harvard University's Graduate School of Business.

John F. Dains is the chief executive officer of Helm Financial Corp., a San Francisco-based, privately held company providing lease options for freight rail cars and locomotives to railroads and shippers throughout North America. In late 2007, Dains relinquished his role as president. Prior to that, he served as the company's chief financial officer. He also has worked in various financial marketing distribution positions with Petrolite Corp. in St. Louis and IC Industries in Chicago.

Steven F. Leer is chairman and chief executive officer of Arch

Coal Inc. He was president and chief executive officer from the time the company was formed in 1997 to 2006. Prior to the launch of Arch Coal, he was president and chief executive officer of Arch Mineral Corp., one of Arch Coal's predecessor companies. He also has held executive positions with the Valvoline Co., Ashland Inc. and Ashland Coal Inc. Leer earned a master's of business administration degree from the Olin Business School in 1977. He holds a bachelor's degree in electrical engineering from the University of the Pacific, which also awarded him an honorary doctorate.

George Paz is president and chief executive officer of St. Louis-based Express Scripts Inc., one of the largest pharmacy benefits management companies in North America with more than 50 million members. Paz joined Express Scripts in 1998 as senior vice president and chief financial officer. He became president in 2003 and chief executive in 2005. Previously, he was a partner at Coopers and Lybrand, managing the firm's Midwest insurance practice, and was executive vice president and chief financial officer for Life Partners Group. He earned a bachelor's degree from the University of Missouri.

Harry Seigle is the founder of The Elgin Co. in Elgin, Ill., a company involved in real estate acquisition and management, private investing and philanthropy. Previously, he was chairman and president of Seigle's Inc., an Elgin, Ill.-based, family-owned building supply company that was sold to Stock Building Supply in 2005. After earning a bachelor's degree from WUSTL in 1968 and a law degree from Northwestern University in 1971, he worked for Chapman and Cutler LLP in Chicago before joining his family's business, then known as Elgin Lumber Co., founded in 1881.

Seven eligible regular-term trustees were re-elected to the Board:

John W. Bachmann, George W. Couch III, Andrew E. Newman, Craig D. Schnuck, Andrew C. Taylor, Ronald L. Thompson and John D. Weil.

David V. Habif Jr., W. Patrick McGinnis and Mary Ann Van Lokeren are former regular-term trustees who were elected to the Board.

The Board executive committee for 2009-2010 was appointed and is composed of chair Stephen F. Brauer, vice chair David W. Kemper, vice chair John F. McDonnell,

Cancer

Alcohol, tobacco use increase risk

— from Page 1

The use of smoke and smokeless tobacco products and excessive consumption of alcohol increases a person's chances of head and neck cancer, and some studies show that together smoking and alcohol use increases risk by more than 30 times. Recently, head and neck cancer specialists have noticed that cancers of the tonsil and back of the throat are increasingly linked to human papilloma virus, the same virus responsible for nearly all cervical cancers.

The researchers reviewed the medical records of 183 patients with squamous cell carcinoma of the oral cavity, throat and larynx who were treated in 1997 and '98 at Barnes-Jewish Hospital.

Comorbid ailments in these patients included heart attack, coronary artery disease, tumors other than the primary tumor, psychiatric disease, lung disease, stroke, diabetes and alcohol abuse.

Many of these disorders can be traced to smoking or alcohol consumption — the same behaviors that may contribute to the occurrence of head and neck

cancer, said Piccirillo.

The study showed that 33 percent of the head and neck cancer patients developed new comorbidities or a worsening of existing comorbid ailments in the time following their initial diagnosis and treatment. Patients with severe comorbidities during the follow-up period on average had a 6.7 times greater risk of dying.

The most common comorbidities that developed or worsened after diagnosis were malignant tumors unrelated to the original tumor and psychiatric illnesses. The type of treatment patients received, whether it was chemotherapy, radiation therapy, surgery or some combination of these, made no difference in the number or severity of comorbidities.

The added risk of comorbid ailments is very important to the 11 million U.S. residents who have been treated for cancer and have survived.

"We are getting better at curing cancer, so we have an exponential increase in the numbers of cancer survivors," Piccirillo said. "Survivors have begun recognizing that the medical profession has not paid enough attention to the consequences of cancer and of cancer treatment."

Maxine Clark, William H. Danforth, John P. Dubinsky, Sam Fox, Lee M. Liberman, Andrew E. Newman, James V. O'Donnell, Craig D. Schnuck, Andrew C. Taylor, Lawrence E. Thomas and Howard L. Wood.

In other Board action, two new emeritus trustees were appointed, John H. Biggs and Floyd E. Bloom.

A new ex-officio position was designated for the chief executive officer of BJC HealthCare. Steven

H. Lipstein, who has been a member of the Board and is CEO of BJC HealthCare, was reappointed to the Board ex-officio. Washington University's affiliated teaching hospitals, Barnes-Jewish Hospital and St. Louis Children's Hospital, are members of BJC HealthCare.

The Board also heard reports from its committees on development, educational policy, University finance, governance, and research-graduate affairs.

Gift

Bench-to-bedside research model 'best hope'

— from Page 1

the center of so much that is good at Washington University," said Mark P. Goldberg, M.D., professor of neurology, of neurobiology and of biomedical engineering and director of the Hope Center. "In particular, the family has been enthusiastic supporters of the Hope Center since its beginning. This new gift will be incredibly helpful in advancing one of our primary missions: funding innovative new directions in diagnosis and treatment of neurological disorders."

"As a physician, William Danforth knows what an important front these terrible conditions present in the battle for improved

health and longevity," said Larry J. Shapiro, M.D., executive vice chancellor of medical affairs and dean of the School of Medicine. "The Danforth Foundation's generous new gift recognizes the bench-to-bedside research model we've fostered here at the School of Medicine through our BioMed 21 program as one of the best hopes for new treatments and cures for these disorders."

"This gift in honor of my brother, Don, means a lot to the family," said William H. Danforth, who is a member of the foundation board. "We all have great hopes that the discoveries of the wonderful scientific leaders of the Hope Center will help halt and prevent ALS and similar devastating diseases."

The Hope Center helps support the studies of more than 70 faculty and 500 scientists with shared research facilities and annual distribution of seed grants.

Record

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Notables

Introducing new faculty members

The following are among the new faculty members at the University. Others will be introduced periodically in this space.

Kelly Bishop, Ph.D., joins the Olin Business School as assistant professor of economics. Bishop earned a doctorate from Duke University after completing an undergraduate degree at Barnard College at Columbia University and a graduate degree at University College Dublin. Her research interests include environmental economics, public economics, labor economics and applied econometrics.

Chad Larson, Ph.D., joins Olin Business School as assistant professor of accounting. Larson earned bachelor's and master's degrees from Brigham Young University's Marriott School of Management before pursuing a doctorate at the University of Michigan. His research interests range from accounting misstatements, manipulations and fraud to institutional investors, earnings announcements and financial statement analysis.

Obituary

Barry, first-year student in Arts & Sciences, 19

Elizabeth K. Barry, a first-year student in Arts & Sciences, died Dec. 8 in her room in Rubelmann House residence hall. Barry, of Homewood, Ill., was 19.

The St. Louis County Medical Examiner told the University that examinations performed Dec. 9 were inconclusive but said there were no signs of foul play and no signs of meningitis or other life-threatening infectious diseases. Further tests will be performed, and it may take up to six weeks for a final determination.

Barry, a 2008 graduate of Homewood-Flossmoor Community High School, was a member of the University crew team and had participated in Leadership Through Service, a program that involves community service, leadership training and workshops. She recently signed up to take part in sorority recruitment.

"The University extends its deepest sympathies to her family, friends and classmates," said James E. McLeod, vice chancellor for students and dean of the College of Arts & Sciences. "The death of a member of the University community is a tragic loss, and the University is offering personal counseling to those affected by her passing."

For assistance, students may contact their resident adviser or may call the University's Habif Health and Wellness Center during daytime hours at 935-6695.

Visitation for Barry will be from 3-9 p.m. Friday, Dec. 12, at Ryan Funeral Home, 18022 Dixie Highway, Homewood, Ill., 60430. A funeral mass will be held at 10:30 a.m. on Saturday, Dec. 13, at St. Joseph's Church, 17951 Dixie Highway, in Homewood.

In lieu of flowers, the family requests memorials to "Operation Snowball," care of Homewood-Flossmoor Community High School, 999 Kedzie Ave., Flossmoor, Ill., 60422.

Washington University will hold a memorial service on campus when students return in January.

McDonnell grant funds collaborative research to improve learning

By GERRY EVERDING

Using what cognitive psychologists are discovering in the laboratory to improve learning in the classroom is the goal of a \$6.47 million collaborative activity grant to Washington University from the James S. McDonnell Foundation (JSMF).

"The aim of the grant is to take the knowledge that cognitive psychologists have gained about learning and memory from laboratory experimentation and to develop techniques to improve learning in the classrooms," said Henry L. "Roddy" Roediger III, Ph.D., principal investigator on the grant and the James S. McDonnell Distinguished University Professor in Arts & Sciences.

The five-year grant will fund experimental research on a variety of strategies and tactics for improving education from primary grades through college, including investigations by three of Roediger's colleagues in Arts & Sciences: Larry L. Jacoby, Ph.D., professor of psychology; Mark A. McDaniel, Ph.D., professor of psychology; and Kathleen B. McDermott, Ph.D., associate professor of psychology.

In addition, the grant includes collaborations with seven other investigators at five other universities — Columbia University, Duke University, Kent State University, the University of California, Los Angeles (UCLA), and the University of California, San Diego.

The McDonnell collaborative activity grants are unique, Roediger said, because they require investigators to "step back and look at the bigger picture."

In most investigator-driven research, the investigator attempts to do research on one fairly circumscribed problem. There may be a larger goal involved, but the researcher is focused on a relatively small part of it. In a collaborative activity grant, the investigators meet twice a year to share results and ideas from their programs of research and to plan for future research, he said.

"Collaborations spring up naturally at these meetings, and we seek

to draw a larger picture of how the various parts will fit together," Roediger said. "The hope is that a collaborative group of 11 people will make much more progress than would 11 investigators working in relative isolation."

The group also tries to look at the sum of the research and related findings to achieve an overarching view of the problem, in this case specific, empirically testable, methods of improving instruction. This collaborative process already has proven effective during the course of a similar McDonnell Foundation grant that Roediger and Washington University received to cover research spanning 2003-08.

The initial grant, which funded education research by Roediger, McDaniel, McDermott and several graduate students as well as investigators at Duke and UCLA, has generated a wealth of research linking cognitive findings and

classroom practices, including a recent study published in the journal *Science* on the value of repeated testing for improving students' long-term retention.

"Our first McDonnell grant allowed us to make more progress in five years than any of us thought possible at the outset," Roediger said.

"This grant — just the most recent of many generous gifts to Washington University from the James S. McDonnell Foundation — gives our researchers the resources to make major contributions to the advancement of teaching in the classroom," Chancellor Mark S. Wrighton said. "We are very proud of the progress our faculty and their colleagues are making on the educational front and extremely grateful to the foundation for their support of this initiative. With this grant, the foundation is supporting educational

progress at its most basic and its most effective level."

The collaborative activity grants are part of the foundation's 21st Century Science Initiative, which has awarded more than \$90 million to promote learning and research since its inception in 2000.

Founded in 1950 by the late aerospace pioneer and founder of the McDonnell Douglas Corp., the James S. McDonnell Foundation is dedicated to the belief that science and technology gives mankind the power to shape knowledge for the future.

"Splendid opportunities arise by weaving individual projects into a fabric of cooperative problem solving," said Susan M. Fitzpatrick, Ph.D., vice president of the foundation. "We hope researchers in JSMF-funded collaboratives will achieve more by working together than each investigator could by working individually."



A moment of fellowship Adrienne Davis, J.D. (left), laughs with John Drobak, J.D., the George Alexander Madill Professor of Law, during a reception celebrating her installation as the William M. Van Cleave Professor of Law Nov. 11 in the Crowder Courtyard of Anheuser-Busch Hall. The professorship recognizes Davis' outstanding teaching and scholarship. Her research focuses on the gendered and private law dimensions of American slavery. She also does work on race and feminist theory.

Campus Author

Murray Weidenbaum, Ph.D., the Edward Mallinckrodt Distinguished University Professor

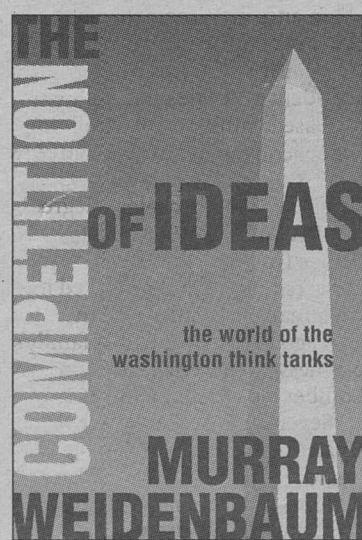
The Competition of Ideas: the World of the Washington Think Tanks

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As President-elect Barack Obama continues to fill key cabinet positions from the ranks of Washington, D.C.-based public policy think tanks, a new book by longtime policy adviser Murray Weidenbaum, Ph.D., examines how the nation's top think tanks came to play such critical roles in U.S. politics.

Suggesting that America's leading policy think tanks are often more "tank" than "think," Weidenbaum, the Edward Mallinckrodt Distinguished University Professor, argues in his book, "The Competition of Ideas: the World of the Washington Think Tanks," that organizations such as the Heritage Foundation and the American Enterprise Institute are often far better at analyzing society's shortcomings than those of their own operations.

Weidenbaum, the first chairman of the Council of Economic Advisers to Ronald Reagan and a member of Reagan's Economic Policy Advisory Board, draws heavily



on his several decades of experience working both with and within leading American think tanks.

He argues that public policy think tanks should be held to a high standard, not only because of their tax-exempt status but also because of the importance of their activities. His book criticizes the management of these policy shops for failures of "quality control,"

suggesting that think tanks are often too predictable in the positions they take on public issues.

A member of the Department of Economics in Arts & Sciences since 1964, Weidenbaum has been a visiting scholar at the American Enterprise Institute and the Center for Strategic and International Studies and a speaker at the Brookings Institution, the Cato Institute and the Heritage Foundation. He has written for their publications and reviewed their studies.

His book offers an insider's view of all five of these vital public policy institutions, highlighting their accomplishments as well as shortcomings.

"The Competition of Ideas" is a fair-minded and well-informed comparative assessment of a vital but oft-misunderstood Washington institution — the major public policy think tanks," said Thomas D. Hopkins, Ph.D., a former high-level government official who is now a professor of economics at the Rochester Institute of Technology.

Generally, Weidenbaum's analysis finds think-tank staffers are mostly activists and scholars; that they are not made up of totally conservative or totally liberal members; and that they do make a special contribution to public policy.

Society would be better served by think tanks, he contends, if think tanks spent less time reacting to the controversial policy issue of the moment and more time focusing on the serious, long-term concerns of the citizenry, acting as sensitive and lucid synthesizers of relevant research and analysis.

Future intellectual competition among the major think tanks, he adds, should be centered not on achieving greater visibility for the think tanks and their pundits but on developing comprehensive responses to critical economic, environmental and national security problems — finding practical solutions that are likely to be adopted and carried out.

— Gerry Everding

Washington People

Salvatore P. Sutura, Ph.D., interim dean of the School of Engineering & Applied Science and senior professor of biomedical engineering, began his long, distinguished career at Washington University as chair of mechanical engineering in August 1968.

As the nation raged with revolutionary fury that month, Sutura, sitting in the tranquility of his office in Cupples II Hall, could have had little inkling that, 40 years later, he would be heading the school that brought him from Brown University to establish a research linkage between mechanical engineering and the WUSTL School of Medicine.

In those 40 years, Sutura has done that and much more, serving the University in a variety of capacities and making important contributions to biomedical engineering and the entire School of Engineering.

"When I came here, I was working on some fluid mechanics problems related to blood flow in the capillaries that I'd started at Brown, which then didn't have a medical school," Sutura says.

By TONY FITZPATRICK

'Perfect knight'

Sutura's leadership lifts engineering to new levels

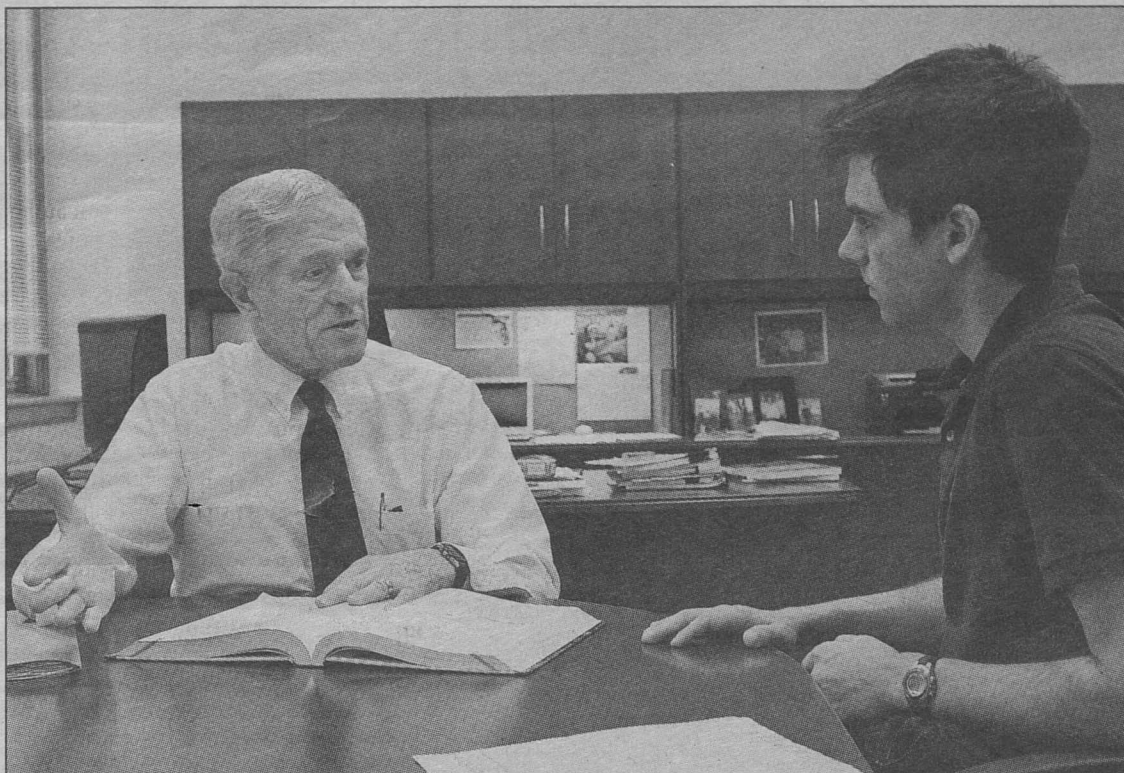
"Washington University was very attractive to me because of its fine medical school. It wasn't long after arriving here that I was part of joint grants with professors in chemical engineering and cardiothoracic surgery. Later on, I found great collaborators in hematology, internal medicine and pathology.

"I enjoyed a really good, long, 25-year run in research funded mostly by the National Institutes of Health," he says. "Most of my collaborators are now retired from research, as am I, but now I'm keeping active as an administrator."

Sutura retired from the duties of chair of mechanical engineering in 1982, but, after a hiatus of three years, he returned as permanent chair in 1985. He remained in that capacity until 1996; that made a total of 25 years in that post.

When the announcement was made of the formation of the new Department of Biomedical Engineering in 1996, Sutura served as acting chair of that department. At the same time, he ran the search committee for a permanent chair. The committee's quest was successful and short. In the summer of 1997, the current chair, Frank C. P. Yin, M.D., Ph.D., took over and was soon installed as the Stephen F. and Camilla T. Brauer Distinguished Professor of Biomedical Engineering.

Sutura has long been recognized for his work in biomechanics, with particular emphasis on the degradation of blood in artificial organs, including flow-induced thrombosis and the patho-



Salvatore P. Sutura, Ph.D., interim dean of the School of Engineering & Applied Science and senior professor of biomedical engineering, talks with senior biomedical engineering major Lee Cordova. Sutura, who has been at WUSTL for 40 years, says life as a dean is challenging and exhilarating and that he is "enjoying getting to know so many distinguished and interesting people, colleagues, alumni and, of course, so many talented students and their parents."

physiology of red blood cells and platelets. Before becoming attracted to problems of blood flow, Sutura's research interests dealt with fluid drag reduction by boundary-layer control and the effects of turbulence on heat transfer, among other topics.

Before coming to WUSTL, Sutura was a member of the Brown University engineering faculty from 1960-68. During his last two years at Brown, he was executive officer of its Division of Engineering.

Sutura had several industrial experiences from 1953-57, including the Glen L. Martin Co., Baltimore; North American Aviation, Downey, Calif.; E.I. duPont de Nemours & Co., Newark, N.J., and Wilmington, Del.; and Electro-Optical Systems Inc., Pasadena, Calif.

He earned a bachelor's degree in mechanical engineering in 1954 from Johns Hopkins University and a master's degree and doctorate in mechanical engineering from the California Institute of Technology in 1955 and 1960, respectively.

Planting the seed

A native of Baltimore, Sutura credits his education at the Baltimore Polytechnic Institute, a highly competitive engineering prep school, with getting him off to a good start in academia.

"Baltimore Poly had an accelerated curriculum that challenged me," he says. "If you did well in four years there, schools like Johns Hopkins would admit you directly as a sophomore. So, I finished my bachelor's in just three years."

Sutura is the older son of Philip and Anna Sutura. His father emigrated from Sicily in 1918, and his mother was born in Baltimore. He was the first Sutura to attend college. At Hopkins, he met a couple of professors who had degrees from the California Institute of Technology, and they got him interested in the famous school.

"Working on my master's degree, I met a professor who became my dissertation mentor, and he got me involved in biological questions and planted the first seed," Sutura says.

His stint at DuPont put him in contact with many researchers who had earned doctorates, and they inspired him to go back to Cal Tech in 1957. His doctoral research focused on the optical properties of flowing suspensions of macromolecules, in particular tobacco mosaic virus. From there, it was a small jump upscale to blood cells.

While many lay people struggle

to see a connection between mechanical engineering and medicine, Sutura found it all logical.

"One of the traditional areas of mechanical engineering is fluid flow," he says.

"There are lots of fluids circulating in the body," he continues. "I became fascinated by the movement of red blood cells through capillary vessels whose internal diameters were often narrower than the diameter of the red cells. Further down the road, I worked on mechanical devices, like artificial heart valves, blood pumps and blood oxygenators, all of these manmade devices where blood cells can be damaged or activated in adverse ways. Fluid mechanics was the connection for me between mechanical engineering and biomechanics."

The right time

At WUSTL, Sutura was on the ground floor to establish a biomedical engineering department from the beginning, but he says it took a long time before serious consideration was given to the venture.

"Originally, we were very conservative," he says. "We didn't know if industry was ready for biomedical engineers after completion of a four-year curriculum. Instead, we had lots of graduate students writing important dissertations that were actually biomedical based, but they were receiving their degrees from the traditional engineering departments. Finally, in the early 1990s, under the impetus of Project 21, the medical and engineering schools were in agreement that the time was right."

Yin came to Washington University in 1997 to head the department, and, in less than 10 years, it was recognized as one of the best in the nation.

"As interim dean, I plan to be around for one or two years, but I am committed to the vision formulated over the past two years, which we call the 'Plan for Excellence,'" Sutura says. "We have a great new building, the Stephen F. and Camilla T. Brauer Hall, under construction."

"In addition to the school's outstanding strengths in biotechnology and information technology, there are a lot of exciting things ahead of us here in alternative energy and sustainability research," he says. "Sustainability is a major new thrust of engineering at Washington University."

David A. Peters, Ph.D., the McDonnell Douglas Professor of Engineering, has known Sutura since 1968, when he was a junior

in mechanical engineering, and he says Sutura encouraged him to become a professor and lured him back to WUSTL.

"He is a gentleman and a scholar, a man who nurtured me when I was a young faculty member, and one who always supported me," Peters says. "He nominated me for awards, even though he knew that (once I received those rewards) this would increase both my visibility and the efforts of other schools to lure me away. He always thought of my career first before worrying about more parochial matters."

"When I found out that he was going to be the dean of engineering, my heart sang within me," Peters says. "I knew that he would be the perfect one to take our school onto new levels. He is that perfect knight."

Italian Francophile

Sutura and his wife, Celia, met at Cal Tech and have three daughters: Marie-Anne, an attorney in Clayton, Mo.; Annette, of Hollywood, Calif., first assistant director for the popular TV drama, "Grey's Anatomy"; and Michelle, a social worker who lives in Ballwin, Mo. Their four grandchildren are all in St. Louis. All of the daughters are WUSTL alumnae.

It can be exciting to have a family member in show business. The Suterases were out visiting Annette some years ago when they were pushed into service as extra cast members of "Chicago Hope," a popular hospital drama of the 1990s. Sutura was instantly transformed into chief of cardiology, white coat and all.

Sutura has interesting hobbies. He paints, though he never had formal training. His No. 1 hobby is the French language and culture. He was president of Saint Louis-Lyon Sister Cities Inc. for eight years, and, during his tenure, he helped establish an adult exchange program with citizens of Lyon, the second city of France. St. Louis members would spend a week being hosted by Lyon members in their homes, and vice versa. He also is a member of the board of the Italian Club of St. Louis.

"I hate to admit it, but my French is a lot better than my Italian right now," Sutura says. "I'm working to improve the latter."

Sutura finds the life of a dean to be challenging, exhilarating and amazingly social.

"Celia and I are enjoying getting to know so many distinguished and interesting people, colleagues, alumni and, of course, so many talented students and their parents," he says.

Salvatore P. Sutura

Family: Wife, Celia, and daughters Marie-Anne Woodruff, Annette Sutura and Michelle Ludwig

Hobbies: Oil painting, French culture and Italian culture

Hometown: Baltimore

Remarkable fact: Sutura has inhabited an office or a lab in each of the School of Engineering's seven buildings.



The Sutura family: (from left) Annette Sutura, Marie-Anne Woodruff, Celia Sutura, Salvatore P. Sutura and Michelle Ludwig.