

Washington University School of Medicine

**Digital Commons@Becker**

---

Washington University Record

Washington University Publications

---

9-2-2005

## Washington University Record, September 2, 2005

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

---

### Recommended Citation

Washington University Record, September 2, 2005. Bernard Becker Medical Library Archives.  
<https://digitalcommons.wustl.edu/record/1045>.

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



# Record

Sept. 2, 2005

Volume 30 No. 4



Washington University in St. Louis

## Brain activity in youth could give rise to Alzheimer's disease

Using five different medical imaging techniques to study the brain activity of 764 people, including those with Alzheimer's disease, those on the brink of dementia, and healthy individuals, University researchers have found that the areas of the brain that young, healthy people use when daydreaming are the same areas that fail in people who have Alzheimer's disease.

On the basis of their data, the researchers are proposing a hypothesis that Alzheimer's disease may be due to abnormalities in the regions of the brain that operate the "default state." This is the term used to describe the cognitive state people

because they could help scientists and clinicians identify and understand the beginnings of what is probably a cascade of events that ultimately leads to Alzheimer's.

The most common form of dementia among older people, Alzheimer's is characterized outwardly by the erosion of language, thought and memory. Within the brains of people with Alzheimer's, abnormal clumps of plaque and tangled bundles of fibers form and characterize the physical manifestation of the disease, which may affect as many as 4.5 million Americans.

The disease most frequently manifests itself after age 60, but its causes are unknown.

The availability of powerful imaging techniques and the ability to merge different sets of imaging data through new bioinformatics and statistical methods enabled Buckner and his team to construct a picture of Alzheimer's from molecular changes to the structural and functional manifestations of the disease.

In the process, the team unexpectedly observed that the regions of the brain that light up when humans slip into comfortable patterns of thought are the same as those that, later in life, exhibit the disabling clumps of plaque characteristic of Alzheimer's.

That remarkable correlation, Buckner said, suggests that dementia may be a consequence of the everyday function of the brain.

"It may be the normal cognitive function of the brain that leads to Alzheimer's later in life," said Buckner, who also holds joint appointments with the

See Alzheimer's, Page 6

### More inside

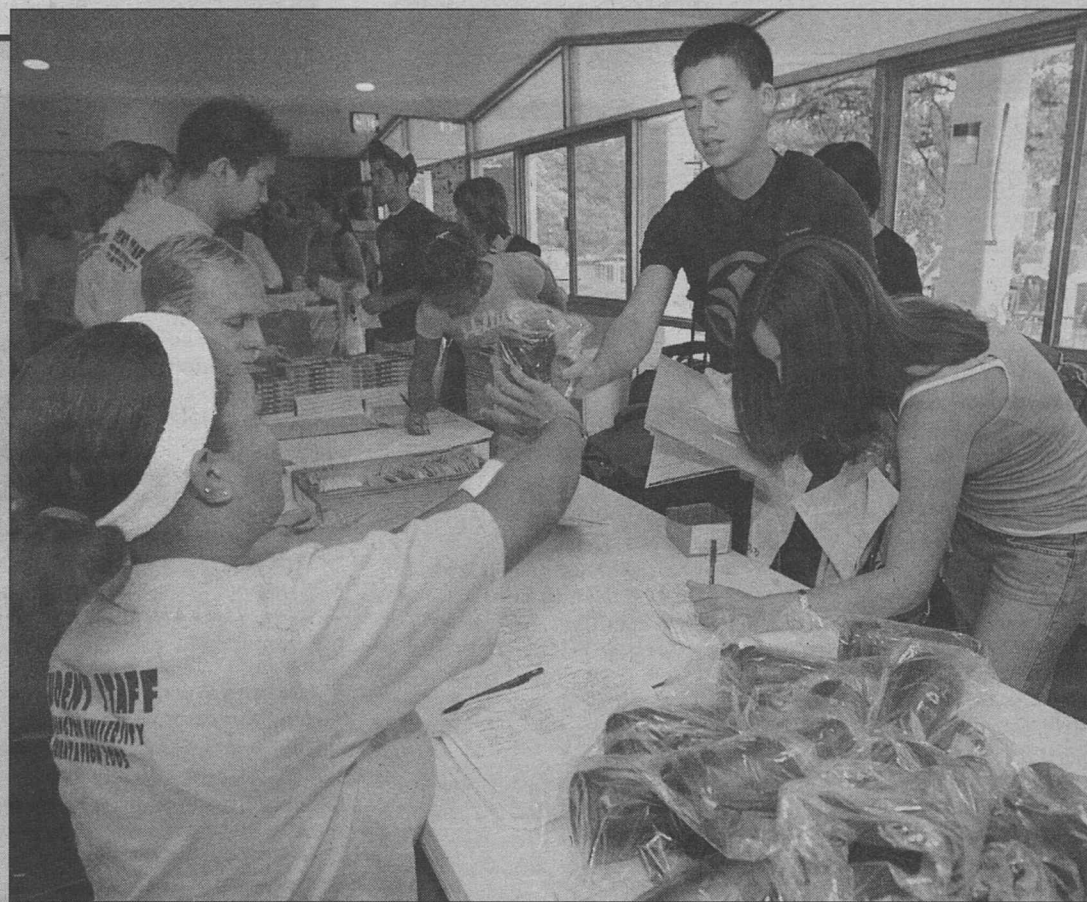
Creative WUSTL collaboration leads to breakthrough. Page 6

Neuroscience, the researchers state that "the default activity patterns of the brain may, over many years, augment a metabolic- or activity-dependent cascade that participates in Alzheimer's disease pathology."

"The regions of the brain we tend to use in our default state when we are young are very similar to the regions where plaques form in older people with Alzheimer's disease," said the study's lead author, Randy L. Buckner, associate professor of psychology in Arts & Sciences and a Howard Hughes Medical Institute (HHMI) investigator at WUSTL.

"This is quite a remarkable convergence that we did not expect."

The findings are important



**Welcome!** Freshmen Sara Reynolds (far right) and Theodore Shum receive packets of information from Patti Jo Jaiyeola, student orientation director, during freshman move-in Aug. 25 in Lee House. Nearly 1,400 first-year students from 47 states and 19 countries are on campus to begin their first year of undergraduate studies. For more information on the incoming class, and for more scenes from the freshmen's first days on campus, see Page 5.

## Protein may provide new diabetes therapies

By GWEN ERICSON

Opening the possibility of new therapies for type 2 diabetes, School of Medicine researchers have found that a protein called Sirt1 enhances the secretion of insulin in mice and allows them to better control blood glucose levels.

The study was published in the Aug. 17 issue of *Cell Metabolism*.

According to senior author Shin-ichiro Imai, M.D., the finding suggests therapies that increase the activity of Sirt1 could be of benefit in type 2 diabetes.

"We are especially interested in how we can activate Sirt1 in a natural way," said Imai, assistant professor of molecular biology and pharmacology. "One option we are investigating is increasing the body's synthesis of NAD, a necessary cofactor for Sirt1's function. Because vitamin B3, often called niacin, is a building block of NAD, it has interesting potential."

Sirt1 is referred to as Sir2 in lower organisms, in which it has previously proven to be a key to aging and longevity. Increasing the amount of Sir2 dramatically extends life spans in experimental yeast, worms and flies.

"Researchers such as myself who study aging are enthusiastically investigating Sir2," Imai said. "In 2000, I found that Sir2 responds to the level of energy in the form of NAD available in cells. Further research has shown that Sir2 connects nutrient status and longevity."

In mammals, scientists have shown that restricting calories can extend life span and also leads to an increase in Sirt1, the mammalian version of Sir2. Sirt1 reacts to changes in nutrient availability in a wide variety of tissues.

Uptake of the basic nutrient glucose is controlled by insulin, and Imai's research group found that the

See Protein, Page 5

## La Russa bats leadoff for fall Assembly Series

By BARBARA REA

The Assembly Series will have an unusual start to its fall schedule with a talk by Cardinals manager Tony La Russa at 11 a.m. Sept. 7 in Graham Chapel.

The rest of the series will feature speakers on a wide range of topics such as politics, economics, writing, history, religion, medicine, literature, evolution, space exploration, social justice and the Holocaust.

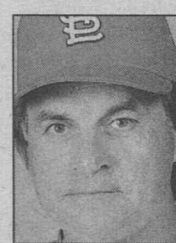
Assembly Series lectures are held at 11 a.m. Wednesdays in Graham Chapel, unless otherwise noted. They are free and open to the public; however, due to the popularity of some speakers, there may be limited seating available for the public.

For the most current information, go online to [assemblyseries.wustl.edu](http://assemblyseries.wustl.edu) or call 935-5285.

La Russa is one of baseball's greatest managers, ranking third on the all-time Major League

Baseball managerial wins list.

Now in his 10th season at the Cardinals' helm, he has taken them to five postseason appearances, including last year's World Series. He is the leader in career wins among active managers and ranks third all-time on the Cardinals' managerial wins list.



La Russa

In 2002, he was named National League Manager of the Year. La Russa began his managing career in 1978 with Knoxville, Tenn., in the Class AA Southern League. He took his first major-league managing job in 1979 with the Chicago White Sox.

In 1983, he led Chicago to the American League West title and finished with the best record in the major leagues that year. He

has also received honors from the *Sporting News*, The Associated Press and the Baseball Writers' Association of America.

In 1986 he took over the Oakland Athletics, won the Manager of the Year award in 1988 and guided the A's to the 1989 World Series title. In 1992, he earned another Manager of the Year award.

Considered by many to be the shrewdest mind in the game today, La Russa's intellectual, strategically adept style of managing shines through in Buzz Bissinger's current best-seller, *Three Nights in August: Strategy, Heartbreak, and Joy Inside the Mind of a Manager*, which takes readers into the minds and hearts of La Russa and his team during a three-game series in 2003 between the Cards and the Cubs.

A book-signing will be held at 9:45 a.m. at the Campus Store in Mallinckrodt Student Center.

Before his managerial career, See Assembly, Page 6

## Lokken appointed vice chancellor for government and community relations

By ANDY CLENDENNEN

Pamela S. Lokken has been appointed vice chancellor for government and community relations, Chancellor Mark S. Wrighton announced.

Lokken has served as director of government and community relations since 1993.

"Pam Lokken is a leader in the country in strengthening relations between higher education and the federal government, and it is wonderful to have her in an expanded leadership role here at Washington University," Wrighton said. "We face many issues at the local, state and federal levels, and Pam will be a key contributor to the growing impact of our uni-

versity at all levels.

"I value very much the opportunity to work with her in these areas and know that she will serve well as a University officer."

Lokken, a Wisconsin native, came to WUSTL in 1991 after several years at the National Institutes of Health in Bethesda, Md.

She first served as assistant director, a position she held for two years as Bob Blackburn — then the director of government and community relations — mentored her in both the job and the University.

Lokken's job includes overseeing federal relations, state relations, local governmental

See Lokken, Page 2



Lokken

WASHINGTON UNIVERSITY MEDICAL LIBRARY

3 2201 20337 2756



## Vice chancellor for research 12-member committee to identify candidates named by Wrighton

BY JIM DRYDEN

Chancellor Mark S. Wrighton has named a 12-member advisory committee to identify candidates to succeed Theodore J. Cicero, Ph.D., vice chancellor for research.

Cicero plans to step down in June after 10 years of leading the University's research enterprise.

The committee to identify a replacement will be chaired by Martin H. Israel, Ph.D., professor of physics in Arts & Sciences.

"I want to thank Marty Israel for agreeing to serve the University by heading this search," Wrighton said. "Professor Israel has been a valuable part of the Washington University community since joining the faculty in 1968."

"In addition to his excellence as a researcher, he is a former dean of the faculty of Arts & Sciences and vice chancellor. He is familiar both with our administration and our research infrastructure, which should serve the committee well in the task ahead."

During Cicero's tenure, the University's research enterprise expanded greatly. In fiscal year 1996, total research funding was just more than \$244 million. Today, that funding has more than doubled, with research support reaching almost \$535 million in fiscal year 2004.

The committee will recommend candidates for the new vice chancellor for research in the next few months.

In addition to Israel, the other members of the committee are:

- **David A. Balota**, Ph.D., professor of psychology in Arts & Sciences;
- **William E. Buhro**, Ph.D.,

professor of chemistry in Arts & Sciences;

- **Christopher I. Byrnes**, Ph.D., dean of the School of Engineering & Applied Science and the Edward H. and Florence G. Skinner Professor in Systems Science and Mathematics;

- **Michael R. Cannon**, J.D., executive vice chancellor and general counsel;

- **Elliot L. Elson**, Ph.D., the Alumni Endowed Professor of Biochemistry and Molecular Biophysics in the School of Medicine;

- **Sally A. Goldman**, Ph.D., professor and assistant chair of the Department of Computer Science and Engineering;

- **Edward F. Lawlor**, Ph.D., dean of the George Warren Brown School of Social Work and the William E. Gordon Professor;

- **Edward S. Macias**, Ph.D., executive vice chancellor, dean of Arts & Sciences and Barbara and the David Thomas Distinguished Professor in Arts & Sciences;

- **Enola K. Proctor**, Ph.D., the Frank J. Bruno Professor of Social Work Research and associate dean for research in the George Warren Brown School of Social Work;

- **Larry J. Shapiro**, M.D., executive vice chancellor for medical affairs and dean of the School of Medicine; and

- **Herbert W. "Skip" Virgin**, M.D., Ph.D., professor of pathology and immunology and of molecular microbiology in the School of Medicine.

"The committee welcomes suggestions from our faculty and staff for names of prospective candidates for this position," Israel said.

He can be reached via e-mail at mhi@wuphys.wustl.edu or at Campus Box 1105.

## Chemistry faculty connected with Manhattan Project to be honored

BY TONY FITZPATRICK

A special feature honoring WUSTL chemistry faculty in Arts & Sciences who participated in the Manhattan Project and an exhibit honoring women in chemistry will be included in the 46th Joseph W. Kennedy Memorial Lecture Sept. 8.

Robert J. Cava, Ph.D., professor and chair of Princeton University's chemistry department, will present a talk on "Water, Triangles, and Superconductivity in Sodium Cobalt Oxides" at 4 p.m. in the Arts & Sciences Laboratory Science Building, Room 300.

After the lecture, at approximately 5:30 p.m., there will be a gala reception in recognition of the impact that WUSTL chemistry professors Lindsay Helmholtz, Joseph Kennedy, David Lipkin, Herbert Potratz, Arthur Wahl and Samuel Weissman made upon the department after serving on the Manhattan Project

at Los Alamos, N.M., during World War II.

Weissman and Wahl, now professors emeriti of chemistry, are the only two surviving members of the group.

The faculty of Arts & Sciences commissioned the painting of individual portraits by local artist Gilbert Early. An unveiling of these six portraits will be held during the reception, and each family will receive a small charcoal portrait.

Attendees will also have the opportunity to view the traveling exhibit from the Chemical Heritage Foundation, *Her Lab in Your Life: Women in Chemistry*. The exhibit, on view from Aug. 1-Sept. 23, is in the Rettner Gallery, also in the Arts & Sciences Laboratory Science Building.

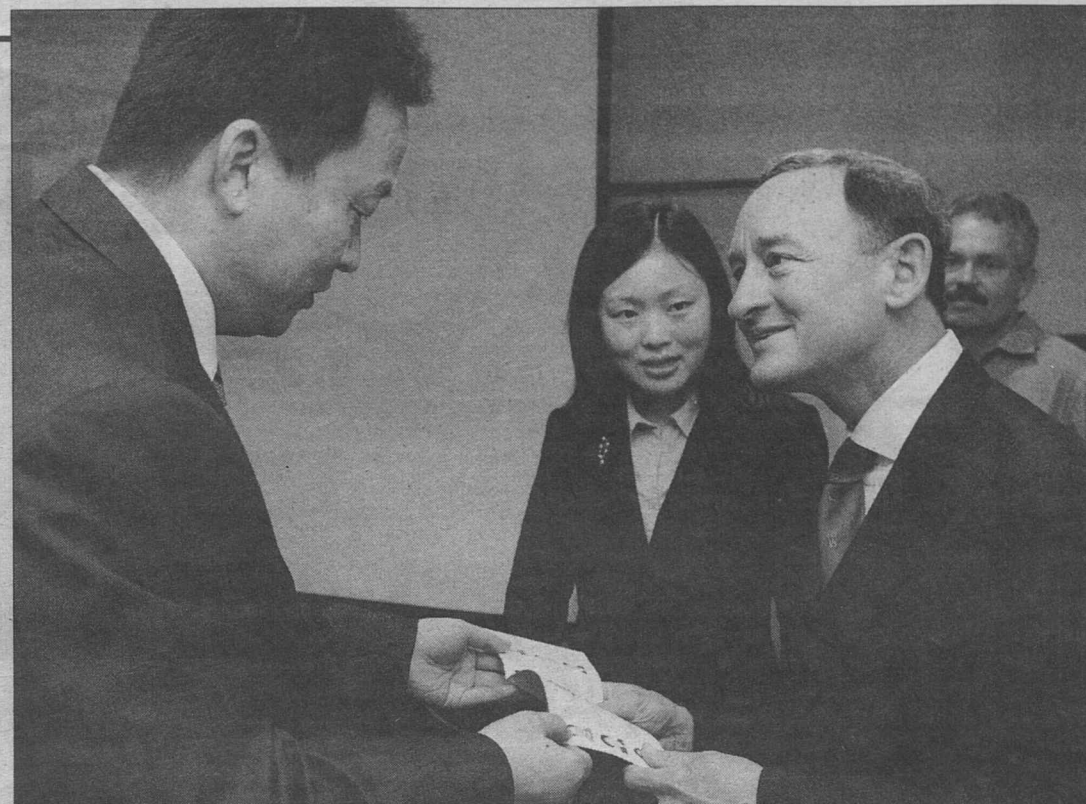
Reservations for the lecture are required; the deadline is today. To make a reservation, contact Karen Klein at 935-6593 or karen@wustl.edu.

and Universities and the American Council on Education.

She also is in regular contact with the NIH, the National Science Foundation, the departments of Defense and Energy, and NASA.

Prior to coming to WUSTL, Lokken was a Presidential Management Fellow at the NIH and subsequently a program analyst for the National Center for Human Genome Research at NIH.

She earned master's degrees in public policy and in political science in 1987, both from the University of Michigan. She earned a bachelor's degree in international studies in 1979 from the University of Wisconsin-Whitewater.



**Distinguished guests** Zhou Naixiang, deputy mayor of Taizhou, China, presents Chancellor Mark S. Wrighton with a booklet and a tie during a reception Aug. 26 in Givens Hall. Zhou was one of 27 Chinese officials taking part in the Fifth Jiangsu Province Mayors Training in Urban Planning and Development, a two-week tour of the United States sponsored by the American Planning Association. The St. Louis stop featured tours of Forest Park and other sites, as well as a presentation by John Hoal, Ph.D. (far right), associate professor of architecture and urban design in the Sam Fox School of Design & Visual Arts, who co-founded the city of St. Louis' first Urban Design Department in 1990.

## Students learn systems biology techniques

BY TONY FITZPATRICK

Four undergraduate students — one from Washington University and three from Colgate University — and a WUSTL graduate student partook in a systems biology summer program this year on the Hilltop Campus.

The students participated in an eight-week course in systems biology concepts and methods, while working in a systems biology laboratory at WUSTL. They also attended a "Frontiers in Integrative Biological Research" (FIBR) workshop, held on June 2-3, prior to the course and research experience.

The FIBR workshop was led by Himadri Pakrasi, Ph.D., professor of biology in Arts & Sciences, and FIBR collaborators Rajeev Aurora, Ph.D., of Saint Louis University; Kenneth D. Belanger, Ph.D., professor of biology at Colgate University; Bijoy Ghosh, Ph.D., WUSTL professor of electrical and systems engineering; and Ralph S. Quatrano, Ph.D., the Spencer T. Olin Professor and chair of the WUSTL Department of Biology.

Quatrano, an alum of Colgate University, has maintained close ties with his alma mater and Belanger.

"It was wonderful to see undergraduates from Colgate, my alma mater, here working in our laboratories this summer along with Washington University students such as Ben Israelow, who worked in my lab on this FIBR project," Quatrano said.

"This interaction, not only of students from different campuses, but from different disciplines and at different levels of education, was very exciting."

Systems biology is the study of complex networks of interactions occurring between and within living organisms. A primary focus of systems biology research at the cellular and molecular level is to examine how a change in conditions — such as a change in environment, introduction of a mutation or exposure to a drug — affects the expression of every gene in a particular cell and to understand what genetic or biochemical interactions stimulate these changes in gene expression.

Because of the large datasets, advanced computational methods, sophisticated technology and complex biological questions involved, systems biology is dependent upon collaborative, interdisciplinary efforts between groups of researchers with expertise in mathematics, computer science,

physics, engineering, statistics, chemistry and biology.

Participants received a stipend, free housing at WUSTL and free travel to St. Louis for the Colgate students.

"The three undergraduate students from Colgate were the first group of visiting students from that institution who have participated in our systems biology endeavor," Pakrasi said.

"Erin Silver, one of the three students, worked in my laboratory with two other undergraduate students, one from Mizzou and the other from the New College in Florida. Their research project was enormously successful and an integral part of our systems-level project on circadian rhythm in photosynthetic organisms."

Jane Hornickel, a junior neuroscience major from Colgate, spent much of her time at WUSTL working in Ghosh's laboratory.

"When I began my work this summer, I had absolutely no computer programming experience," Hornickel said. "After my time in Professor Ghosh's lab, I am proud to say I have learned basic programming skills and I am able to write code in the GENESIS language."

"In Professor Ghosh's lab, I was able to learn a new skill while combining it with my interest in neuroscience. I adapted a model of the turtle visual cortex, created by members of the lab from

experimental data. The members of Professor Ghosh's lab were very supportive and encouraging."

Hornickel said that Ghosh felt that all of the lab members should know what everyone else was working on, so everyone took turns presenting their work in lab meetings.

"During the meetings, everyone was ready to offer constructive criticism and ask difficult questions, helping the presenter immeasurably," Hornickel said.

"I really enjoyed working at Washington University and I am grateful for the opportunity to do so."

The WUSTL graduate student was Emma Huang from mathematics in Arts & Sciences. She said she found the systems biology program very interesting.

"Although at first I was a little disoriented by having to work in a field foreign to my own, I was very excited to see how biologists can apply statistical methods," Huang said.

"Collaborating with Professor Nan Lin (WUSTL assistant professor of mathematics), I developed several programs inputting missing values in gene expression profiles, and was able to compare the efficacy of different statistical techniques in biological application."

"My sincere thanks to professors Himadri Pakrasi and Nan Lin for their tremendous contributions to this project."

## Campus Watch

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

On Aug. 29, University Police issued the following alert:

A person reported she was walking toward Skinker Boulevard on the sidewalk in the 6100 block of Waterman Avenue about 11 p.m. Aug. 28 and observed two people seated on some steps.

She reported the subjects started to follow her and then one grabbed her bag. She initially resisted — however, one of the subjects struck her in the face with his hand. She fell to the ground and the subjects took her bag and cell phone. The subjects ran west toward Skinker. The woman was not seriously injured.

### Precautions:

- Avoid walking or jogging

alone and never walk or jog alone after dark;

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

- If you are confronted by a thief, give them what they want and don't chase them as they leave. Report suspicious persons or activity immediately to the police;

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

## Lokken

— from Page 1

relations, community relations and conversations with individual neighbors.

She leads the University's federal advocacy efforts, working closely with the Missouri congressional delegation, research agencies in Washington, D.C., and with a variety of national associations, including the Association of American Universities, which includes the top 62 research-intensive universities in North America, the Association of American Medical Colleges, the National Association of Independent Colleges



## School of Medicine Update

# Thyroid cancer trial will test potential of new drug

By GWEN ERICSON

**A** promising new anti-cancer drug will be tested against several forms of thyroid cancer in a newly opened clinical trial at the Siteman Cancer Center.

Previous research showed that the compound, called 17AAG, has the unusual ability to simultaneously affect multiple proteins implicated in human cancers.

Administered by the Phase II Consortium at the Mayo Clinic — which carries out trials of new anti-cancer drugs and is funded through the National Cancer Institute (NCI) — the trial will be conducted at several centers around the country.

Study head Jeffrey F. Moley, M.D., associate director of clinical investigations at the Siteman Cancer Center and professor of surgery, initiated the clinical trial of 17AAG (17-allylamino, 17-demethoxygeldanamycin) after tests in his laboratory demonstrated the drug inhibited growth of

thyroid tumor cells in culture.

"We contacted the Phase II Consortium and the NCI with our initial results, and they quickly agreed to set up this trial," said Moley, who is well-known for developing pioneering surgical techniques for management of recurrent thyroid cancers and preventing hereditary thyroid cancer. "This is the first and only NCI-funded therapeutic clinical trial for thyroid cancer that I know of."

The clinical trial will have two arms. One will test the ability of 17AAG to reduce metastatic tumors in differentiated thyroid cancers that were not cured by surgery and radiotherapy.

The other arm will examine the drug's effect on metastatic medullary thyroid cancer (MTC), a form that's much harder to treat.

Physicians treat MTC surgically through removal of primary and secondary tumors. More than half of MTC patients treated with surgery will experience a recurrence of the cancer.

"MTC currently has no effective chemotherapy," Moley said. "Unlike other forms of thyroid cancer, MTC tumors don't absorb iodine, so standard therapy with radioactive iodine is of no use against the disease. Similarly, there's no effective chemotherapy for other forms of thyroid cancer once they advance to a stage where they don't take up iodine anymore."

Many thyroid tumors arise from mutations in a gene called RET. The mutations cause cancerous cell growth by turning up the RET protein's activity, so the RET protein is potentially a key target for treating thyroid cancer.

The activity of the RET protein was decreased by 17AAG in studies in Moley's laboratory.

Interestingly, 17AAG doesn't directly affect the RET protein. Instead, it interferes with an abundant chaperone protein that nurses the RET protein through its formative stages.

The fact that the drug influences this important chaperone protein, called heat shock protein 90, has focused much scientific attention on 17AAG.

17AAG is one of the few compounds known to specifically inhibit heat shock protein 90, which oversees the formation of

innumerable proteins that cells need to function.

Cancer cells have higher amounts of heat shock protein 90 and are especially dependent on it for growth and survival.

Because cancer cells have alterations in many cell proteins and signaling pathways, it is thought that the chaperone, with its ability to affect multiple cellular path-

ways, represents a unique point at which to tackle and cripple cancer cells.

17AAG is used in clinical trials against melanoma and ovarian, breast and prostate cancers, in addition to thyroid cancer. It has been shown to have milder side effects than most other types of chemotherapeutic agents.

Its effectiveness as a chemo-

therapeutic agent in these trials has not yet been established.

Patients interested in participating in the clinical trial of 17AAG against metastatic thyroid cancer should call 747-5591.

To be eligible, patients must have thyroid tumors 1 centimeter or larger and be 18 or older.

All participants will receive the drug.

**"Unlike other forms of thyroid cancer, MTC tumors don't absorb iodine, so standard therapy with radioactive iodine is of no use against the disease. Similarly, there's no effective chemotherapy for other forms of thyroid cancer once they advance to a stage where they don't take up iodine anymore."**



JEFFREY F. MOLEY

## Complex regional pain syndrome study needs volunteers to test drug

By JIM DRYDEN

**S**chool of Medicine researchers are seeking volunteers to test an investigational drug for the treatment of complex regional pain syndrome, a chronic nerve disorder that often affects the arms and legs after injuries such as trauma or infection.

Anthony H. Guarino, M.D., instructor of anesthesiology, is joining scientists from around the country to test the drug, called CC-5013.

"These patients can have very severe pain," Guarino said. "The pain often lingers, and although available drugs can help, some evidence suggests that CC-5013 might have more success regulating this difficult-to-treat pain."

The drug is also being tested for treatment of various cancers. Researchers think the drug acts by regulating certain chemicals produced in the body that contribute to pain and inflammation following injury.

To be eligible for the study,

volunteers must be at least 18 and have had pain from the syndrome for at least one year.

Those who qualify will receive a daily dose of either the study medication or an inactive placebo for 12 weeks.

After 12 weeks, all participants will receive the drug. If the drug helps to control pain, volunteers will be able to remain on the drug and in the study for about a year.

Volunteers will receive free study-related physical exams, laboratory tests and investigational study medication.

They will also be compensated for time and travel.

The study requires visits to the University's Pain Management Center, located at 969 N. Mason Road.

Patients will have blood samples drawn and receive electrocardiograms at Barnes-Jewish Hospital West County.

For more information, call study coordinator Martha Cornell at 996-8887.



**Play ball** (From left) Freshman medical student Erica Wise; Larry J. Shapiro, M.D., executive vice chancellor and dean of the School of Medicine; friends Bo Espinoza and Kyle Lombard; and medical students Jaclyn Grentzer and Dan Watson cheer on the Cardinals against the Arizona Diamondbacks Aug. 16 at Busch Stadium. The 123 incoming students of the Class of 2009 and their guests watched the Cards beat the Diamondbacks, 8-2, at the dean's annual welcoming party, hosted by Shapiro.

## Protein helps monitor molecule linked to cancer

By MICHAEL C. PURDY

**S**cientists have used a glowing protein from fireflies to observe the activity of a molecule that is an important target for new drugs to treat cancer, autoimmune diseases and several other disorders.

The target molecule, known as IKK (IKK Kinase), regulates processes that can trigger dramatic changes in cellular physiology. Scientists have linked these changes to many different disorders.

"Our new system allows researchers to monitor whether drugs for these conditions are hitting this exact molecular target in cell culture and laboratory animals," said senior investigator David Piwnica-Worms, M.D., Ph.D., professor of molecular biology and pharmacology and of radiology.

Piwnica-Worms and lead author Shimon Gross, Ph.D., a postdoctoral fellow, measured light from the firefly protein, luciferase, to monitor IKK activity in tumor cells and inflamed liver cells in live mice.

They also showed the technique can greatly reduce the costs of tests that establish the best dosages for drugs that target IKK.

The results appeared in the August issue of *Nature Methods*.

IKK stands at a pivot point in the middle of an important set of linked chain reactions known as the NF-KappaB pathway. The pathway can start at many different receptors on cell surfaces; its finish changes the activity levels of varying genes.

The result, according to Piwnica-Worms, is that the potential reaction patterns in the NF-KappaB pathway form an hourglass-like shape, fanning out among many options at the start, narrowing in the middle, and again fanning out among many options at the end.

"At the waist of that hourglass is IKK," he said. "This appears to put it in a position to be the key regulator of the pathway, and that has made it a subject of great interest both from the perspective of understanding how this pathway works and from that of developing new drugs for conditions that involve this pathway."

Piwnica-Worms' team has previously developed techniques that use luciferase to monitor protein-protein interactions.

Researchers can employ an instrument known as an in-vivo bioluminescence camera to take real-time measurements of light from luciferase in cell cultures

and in cells within live animals.

To use the firefly protein to monitor IKK, Gross altered cell lines to genetically fuse the luciferase protein to IKK (IKK $\alpha$ B), the protein that comes immediately after IKK in the NF-KappaB pathway.

When the pathway is enabled, IKK triggers reactions that lead to the degradation of IKK. In cells with genetically altered IKK, the attached luciferase is broken down too, meaning scientists can detect increased IKK activity via decreased light from the cells.

"This is like doing in-vivo pharmacodynamics and pharmacokinetics," said Piwnica-Worms in reference to the sciences that study the effects, distribution and dissipation of drugs. "Traditionally the only ways we could do those kinds of studies were either to test for levels of the drug in the blood or to label the drug with a radioactive tracer."

"In the case of NF-KappaB, there were also methods that monitored IKK activity via changes in the levels of gene activation at the end of the pathway," he said. "But those took hours to days to deliver results, and our approach works continuously and in real time."

In their study, Gross and Piwnica-Worms tested the technique in live mice by transplanting genetically altered tumor cells and by using a technique that inserted the fused IKK/luciferase protein into liver cells only.

They are working to develop a line of mice with the IKK/luciferase fusion built into its genetic code.

In addition, they showed that the system is not only helpful for learning if a drug is having the desired effect, but it can also be used to fine-tune drug dosage for maximum benefit.

"One of the reviewers of our paper suggested that we use the system to produce a full dose-response curve, which helps establish how to best use a drug," Piwnica-Worms said. "Establishing that normally takes six months and 300 mice. With our monitoring technique, Shimon did it in a five-day period using 30 mice. That's going to lead to tremendous cost savings."

Because the luciferase-based monitoring system allows monitoring in live animals, Gross could perform multiple tests on the same mouse over time.

He was also able to monitor the mice for individual variances that could inappropriately bias the results.



# Access to Justice series begins Sept. 14

By JESSICA MARTIN

The lead counsel for Vice President Al Gore in the 2000 election litigation and the director of the Southern Center for Human Rights are part of the fall lineup for the School of Law's eighth annual Public Interest Law Speakers Series.

Titled "Access to Justice: The Social Responsibility of Lawyers," the series brings to the University outstanding academics and practitioners in areas such as international human rights, the economics of poverty, civil liberties, racial justice, capital punishment, clinical legal education, and government and private public service.

This popular series provides a forum for the School of Law and the wider University community to engage in a discussion of the legal, social and ethical issues that bear upon access to justice.

All of the fall presentations will be held in Anheuser-Busch Hall and are free and open to the public. The schedule is:

**• 11 a.m. Sept. 14 — Marc Galanter**, the John and Rylla Bosshard Professor of Law and South Asian Studies at the University of Wisconsin and the LSE Centennial Professor at the London School of Economics and Political Science, will present "Fewer Trials, More Law, More Jokes."

Galanter is author of a number of highly regarded studies about litigation, dispute resolution, lawyers and legal culture, such as "Why the 'Haves' Come Out Ahead: Speculations on the Limits of Legal Change," and "The Vanishing Trial: An Examination of Trials and Related Matters in State

and Federal Courts."

He also is the co-author of the book *Tournament of Lawyers: The Transformation of the Big Law Firm*, which attempts to explain the growth and transformation of large law firms in the United States.

Galanter's lecture is co-sponsored by the School of Law Alternative Dispute Resolution Program.

**• 4 p.m. Nov. 2 — Stephen B. Bright**, a nationally recognized expert on criminal law and capital punishment, will speak about "Crime, Prison and the Death Penalty: The Influence of Race and Poverty."

Bright is a member of the Commission on Safety and Abuse in America's Prisons and is the director of the Southern Center for Human Rights in Atlanta, a public-interest legal project that provides representation to prisoners in challenges to cruel and unusual conditions of confinement and to persons facing the death penalty.

Bright is a former staff attorney for the Appalachian Research and Defense Fund, and a former trial attorney for the Public Defender Service in Washington, D.C. He has served as a visiting lecturer and clinical teacher at several law schools, including Yale, Harvard, Georgetown and Emory universities.

His address is co-sponsored by the Assembly Series and Student Union and is in conjunction with the Commission on Safety and Abuse in America's Prisons hearings at the School of Law Nov. 1-2.

**• 12 p.m. Nov. 10 — Martha Chamallas**, the Robert J. Lynn Chair in Law at Ohio State

University, will discuss "Civil Rights and Civil Litigation."

Chamallas is a leading scholar in torts law, employment law and legal issues affecting women. She is the author of several articles, including "Civil Rights in Ordinary Tort Cases: Race, Gender and the Calculation of Economic Loss" and "The September 11th Victim Compensation Fund: Rethinking the Damages Element in Injury Law," and the treatise *Introduction to Feminist Legal Theory*.

Her lecture is co-sponsored by the School of Law Women's Law Caucus.

**• 4 p.m. Nov. 15 — David Boies**, Gore's lead counsel during the 2000 election litigation, will present "Judicial Independence and the Rule of Law." Special trial counsel for the U.S. Department of Justice in the Microsoft antitrust lawsuit, Boies is former chief counsel and staff director for the U.S. Senate Antitrust Subcommittee and the U.S. Senate Judiciary Committee.

Boies is the chairman of the law firm Boies, Schiller, and Flexner LLP, and author of *Courting Justice and Public Control of Business*. He will serve as the annual School of Law Tyrrell Williams Lecturer.

The Public Interest Law Speakers Series will continue in the spring with 10 lectures.

Coordinating the series are Karen L. Tokarz, J.D., professor of law and director of clinical education and alternative dispute resolution programs, and Peter J. Wiedenbeck, J.D., associate dean of faculty and the Joseph H. Zumbalen Professor of the Law of Property.

For more information, call 935-4958.

## University Events

## Nuclear Cataracts • Volleyball • Counter-Terrorism

"University Events" lists a portion of the activities taking place Sept. 3-15 at Washington University. Visit the Web for expanded calendars for the Hilltop Campus ([calendar.wustl.edu](http://calendar.wustl.edu)) and the School of Medicine ([medschool.wustl.edu/calendars.html](http://medschool.wustl.edu/calendars.html)).

## Lectures

### Tuesday, Sept. 6

**Noon. Program in Physical Therapy Research Seminar.** "Clinical Trials in a Neuromuscular Disease: Observation to Intervention." Julaine Florence, research assoc. prof. of neurology. 4444 Forest Park Blvd., Lower Lvl., Rm. B108/B109. 286-1404.

**5:30 p.m. Biochemistry & Molecular Biophysics Biophysical Evenings Seminar Series.** "Fundamental Designs and Rigorous Characterization for the Development of Synthetic Nanomaterials." Karen Wooley, prof. of chemistry. Cori Aud., 4565 McKinley Ave. 362-4152.

### Wednesday, Sept. 7

**11 a.m. Assembly Series.** Tony La Russa, manager, St. Louis Cardinals. Graham Chapel. (9:45 a.m. book-signing, Campus Store, Mallinckrodt Student Center.) 935-4620.

### Thursday, Sept. 8

**3 p.m. Siteman Cancer Center Basic Science Seminar Series.** Greg Longmore, assoc. prof. of medicine. Eric P. Newman Education Center. 454-7029.

**4 p.m. Chemistry Seminar.** Joseph W. Kennedy Memorial Lecture. "Water, Triangles and Superconductivity in Sodium Cobalt Oxides." Robert J. Cava, chair & prof. of chemistry, Princeton U. (3:45 p.m. coffee; 5:30 p.m. reception & portrait unveiling.) Lab Sciences Bldg., Rm. 300. For reception, RSVP today to 935-6593.

**4 p.m. Ophthalmology & Visual Sciences Seminar.** "cGMP, Calcium and Cell Death: Lessons From Retinal Degenerative Diseases." Visvanathan Ramamurthy, research asst. prof. of biochemistry, U. of Wa. Maternity Bldg., Rm. 725. 362-1006.

**4:30 p.m. Whitney Harris Institute for Global Legal Studies Seminar.** "Global Perspectives on Counter-Terrorism." Amos N. Guiora, prof. of law, Case Western Reserve U. Anheuser Busch Hall, Rm. 202. 935-7988.

### Friday, Sept. 9

**Noon. Cell Biology & Physiology Seminar.** "The Role of LIM Proteins in Cell Adhesion and Cell Motility." Gregory D. Longmore, assoc. prof. of internal medicine. McDonnell Medical Sciences Bldg., Rm. 426. 362-7437.

**2 p.m. Chemistry Seminar.** Joseph W. Kennedy Memorial Lecture. "Schizophrenic Electrons in Ruthenium-based Oxides." Robert J. Cava, chair & prof. of chemistry, Princeton U. Lab Sciences Bldg., Rm. 250. 935-6593.

### Saturday, Sept. 10

**7:30 a.m.-4:30 p.m. Medical Oncology CME Course.** "Gastrointestinal Cancer Symposium." Cost: \$55. St. Louis Marriott West. To register: 362-6891.

**8 a.m.-1 p.m. Critical Care CME Course.** "Annual St. Louis Critical Care Update." Cost: \$25; \$35 after Sept. 3. Hilton St. Louis Frontenac. To register: 362-6891.

### Monday, Sept. 12

**8:30 a.m.-4:30 p.m. Center for the Application of Information Technology Two-day Workshop.** "Marketing the IT Organization Internally." (Continues 8:30 a.m.-4:30 p.m. Sept. 13.) Cost: \$1,195; reduced fees available for CAIT member organizations. CAIT, 5 N. Jackson Ave. 935-4444.

**3 p.m. Neuro-Oncology Research Group Seminar Series.** "Targeting CXCR4 in the Treatment of Brain Tumors." Joshua Rubin, asst. prof. of pediatrics. McDonnell Medical Sciences Bldg., Rm. 928. 454-8981.

**5:30 p.m. Cardiac Bioelectricity and Arrhythmia Center Seminar Series.** "ATP-Dependent K Channels and Cardiac Rhythm: Surprising Findings From Transgenic Animals." Colin Nichols, prof. of cell biology & physiology. (5 p.m. reception.) Whitaker Hall, Rm. 218. 935-7887.

### Wednesday, Sept. 14

**11 a.m. School of Law "Access to Justice" Public Interest Law Speakers Series.** "Fewer Trials, More Law, More Jokes." Marc Galanter, John and Rylla Bosshard Professor of Law and South Asian Studies, U. of Wisc. Anheuser-Busch Hall. 935-4958.

## How to submit 'University Events'

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

(1) e-mail — [recordcalendar@wustl.edu](mailto:recordcalendar@wustl.edu);

(2) campus mail — Campus Box 1070; or

(3) fax — 935-4259.

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

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

**Noon. Radiology Seminar.** Annual G. Leland Nelson Visiting Professorship and Lecture. "Mesenteric Ischemia: Imaging Evaluation." W. Dennis Foley, prof. of radiology, Medical College of Wis. Scarpellino Aud., 510 S. Kingshighway Blvd. 362-2866.

**4 p.m. Chemistry Seminar.** "The Folding of Single Polymer Chains in Dilute Solutions." Chi Wu, Chinese U. of Hong Kong. McMillen Lab., Rm. 311. 935-6530.

**4:30 p.m. Program in Physical Therapy Professional Conclave.** 4444 Forest Park Blvd. 286-1406.

### Thursday, Sept. 15

**4 p.m. Chemistry Seminar.** "Supramolecular Chemistry and Pattern Recognition, a Complementary Match." Eric Astyn, Norman Hackerman Professor of Chemistry, U. of Texas. McMillen Lab., Rm. 311. 935-6530.

**4 p.m. Ophthalmology & Visual Sciences Seminar Series.** "The Cause and Prevention of Nuclear Cataracts." David C. Beebe, Janet and Bernard Becker Professor of Ophthalmology & Visual Sciences. Maternity Bldg., Rm. 725. 362-1006.

## Sports

### Saturday, Sept. 3

**10 a.m. Volleyball vs. Rhodes College.** Washington University Classic. Athletic Complex. 935-4705.

**2:30 p.m. Volleyball vs. Ill. Wesleyan U.** Washington University Classic. Athletic Complex. 935-4705.

### Tuesday, Sept. 6

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

### Wednesday, Sept. 7

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

### Friday, Sept. 9

**5:30 p.m. Volleyball vs. Wittenberg U.** Washington University National Invitational. Athletic Complex. 935-4705.

**8 p.m. Volleyball vs. Central College.** Washington University National Invitational. Athletic Complex. 935-4705.

### Saturday, Sept. 10

**10 a.m. Volleyball vs. Ohio Northern U.** Washington University National Invitational. Athletic Complex. 935-4705.

**3 p.m. Volleyball vs. College of Mount St. Joseph.** Washington University National Invitational. Athletic Complex. 935-4705.

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

### Sunday, Sept. 11

**11 a.m. Women's Soccer vs. Wheaton College.** Francis Field. 935-4705.

## And more...

### Wednesday, Sept. 7

**11 a.m.-1 p.m. Siteman Cancer Center Gynecologic Wellness Booth.** North Bldg., outside cafeteria. 605-2916.

## Sports

### Volleyball again ranked preseason No. 1

For the third straight year, the volleyball team was voted No. 1 in the 2005 CSTV/American Volleyball Coaches Association (AVCA) Preseason Coaches Poll, as announced by the AVCA.

It marks the fifth straight year and the 13th time in the previous 16 years that WUSTL has earned the No. 1 ranking at some point in a season.

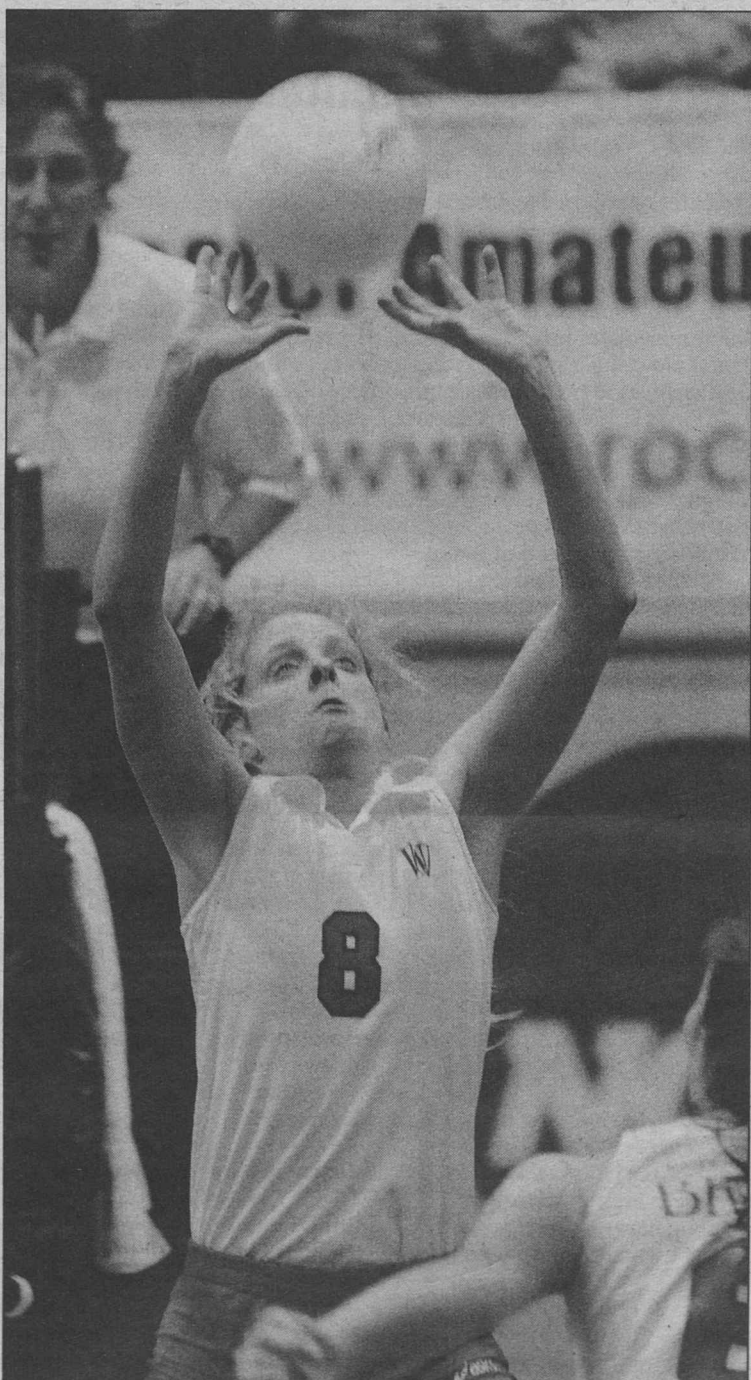
WUSTL tallied 584 total points in the poll, including eight first-place votes, putting it five points ahead of Juniata College (579), the 2004 national champion. University Athletic Association rivals New York University (third, 519 points) and Emory University (fifth, 471 points) give the conference three teams in the top five. Wittenberg University (485 points) checks in at No. 4.

The Bears finished the 2004 season with a 32-7 record, advancing to the national championship match for the 11th time in school history and third straight year. The Bears, who finished the year ranked second in the country, were also crowned UAA champions for the 16th consecutive year after posting a 7-0 conference mark in regular-season play and a 5-0 record in championship play.

WUSTL, which is scheduled to play eight of the nine other preseason top-10 teams, opens 2005 by hosting the WUSTL Classic today and Sept. 3. The Bears play Dominican University at 5:15 p.m. today at the Field House to kick off a season-opening string of 11 straight home matches.

### On the Web

For complete sports schedules and results, go to [bearsports.wustl.edu](http://bearsports.wustl.edu).



Kara Liefer is one of three seniors returning to lead the top-ranked volleyball squad this year. Last season, Liefer posted 1,505 assists, good for second in the University Athletic Association.

FILE PHOTO — JOE ANGELES



## Protein

Researchers continue to track mice's progress — from Page 1

cells responsible for secreting insulin — beta cells in the pancreas — also produce Sirt1.

So the researchers investigated the effects of increasing the amount of Sirt1 in pancreatic Beta cells in mice to better understand the link between Sirt1 and glucose metabolism.

They designed transgenic mice with a genetic switch that turned up the gene that makes Sirt1 in beta cells.

"We confirmed that the mice overexpress Sirt1 proteins specifically in pancreatic beta cells, not in other kinds of pancreatic cells, and not in brain, liver, kidney, fat or muscle," said Kathryn Moynihan, a graduate research assistant.

Compared with wild-type mice, the transgenic mice had the same levels of blood glucose and insulin both when well-fed and during fasting. They were of similar weights and their pancreatic cells looked very similar in size and structure.

But when the two sets of mice were given a large dose of glucose, a difference became apparent. The transgenic mice produced more insulin and cleared glucose from their blood streams significantly faster than did wild-type mice.

Challenging the mice's systems with glucose in this manner mimics the glucose tolerance tests used to check for diabetes in human patients. Diabetic patients clear glucose more slowly than do nondiabetics in these tests.

"If your system reacted like that of these transgenic mice, you could process sugar more quickly and much more efficiently after eating sweets," Imai said.

The research group found that the transgenic mice retained their unique beta cell function as they aged from 3 months to 8 months, the equivalent of middle age in humans. The researchers are continuing to track the progress of the mice, which are now about 20 months old.

An analysis of the activity of genes in the beta cells showed that several genes linked to insulin secretion were affected by the increased expression of Sirt1. Most prominently, Sirt1 turned down the activity of a gene that decreases insulin secretion.

"The gene makes uncoupling protein 2, which is intimately connected to ATP production," Imai said. "ATP is a fundamental source of energy for metabolism, and by down-regulating uncoupling protein 2, Sirt1 not only enhances insulin secretion, but also increases ATP energy."

"This is a further indication of the connection between Sirt1 and energy status."

Imai feels that Sirt1 is probably a very important regulator that integrates cellular response to different types of nutrients, such as glucose, amino acids and fatty acids.

Continued research in the lab will use the transgenic mice to further investigate Sirt1's role in this response.

**"By down-regulating uncoupling protein 2, Sirt1 not only enhances insulin secretion, but also increases ATP energy. This is a further indication of the connection between Sirt1 and energy status."**

SHIN-ICHIRO IMAI

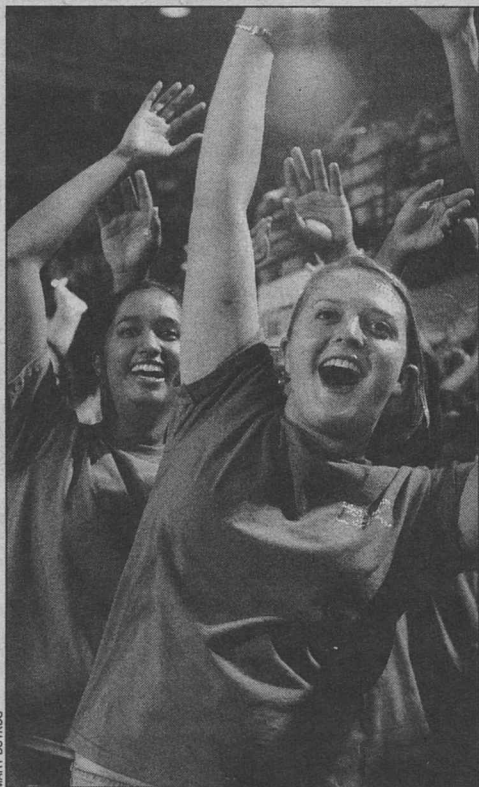
## Simon says ... Welcome to WUSTL



A large group of freshmen — 994 to be exact — gathered in the Athletic Complex Aug. 29 in an attempt to set a world record for the largest number of people to play Simon Says. The students, along with the game's caller, Chancellor Mark S. Wrighton (bottom), succeeded in shattering the old record of 598 set by schoolchildren in China. The new record is still unofficial until documentation and videotape of the event can be verified by officials from Guinness World Records.



Anne and Brian Hanrick unload a car full of supplies Aug. 25 for their daughter Cassie's (right) freshman year. Cassie is living in Umrath House.



UPPER LEFT: Freshmen cheer during Convocation in the Athletic Complex Aug. 25.

UPPER RIGHT: Freshman Tammy Greene carries boxes into her new home away from home: Danforth House.

LEFT: Two members of the University's club ice hockey team make their pitch to recruit a new member during student group sign-ups in the Athletic Complex.

### Class of 2009 descends on Hilltop Campus in impressive numbers

BY ANDY CLENDENNEN

If it's true that there is strength in numbers, then the numbers show that the incoming freshman class — the Class of 2009 — is nothing if not strong.

The approximately 1,390 first-year students hail from all over the world and represent approximately 19 countries, 47 states, the District of Columbia, Puerto Rico and Guam.

They arrived Aug. 25 and have been busy unpacking, learning their way around the Hilltop Campus and gearing up for the fall semester, which began Aug. 31.

Many in the select group were academic leaders, officers in student government and participants in extracurricular activities and athletics in high school. Collectively, the incoming class has received more than 2,200 special awards and recognitions.

In addition:

- 872 students are National Honor Society members;
- 171 were senior class officers, and 460 were officers in service organizations;
- Many served as editors — 91 of yearbooks and 137 of newspapers;
- 356 were members of their school bands or orchestras and 207 were members of a choir or chorus, and;
- In athletics, 424 were team captains.

"It is a delight to have such a talented and diverse freshman class on campus," said Nanette H. Tarbouni, director of undergraduate admissions. "We encourage everyone to extend a warm welcome to them."

In addition to accumulating impressive statistics during their high-school years, the freshmen were chosen from a record number of applicants — more than 21,000.

"We are excited that so many students chose to come to Washington University," Tarbouni said. "That is quite a compliment to the Washington University community."



## Alzheimer's

— from Page 1

Mallinckrodt Institute of Radiology and the Department of Anatomy and Neurobiology in the School of Medicine. "This was not a relationship that we had even considered.

"The hypothesis is that the cascade of events that leads to Alzheimer's begins at young adulthood."

Scientists have long known that when the mind is not concentrated on a task — reading, engaging in conversation or solving a math problem, for example — it switches to a default mode, a state of mind where we may muse, daydream or retrieve pleasant memories. When a young person is asked to concentrate on a specific task, they are easily able to shut off the default mode — and the corresponding regions of the brain that run this mode.

With the help of powerful imaging technologies such as positron emission tomography and magnetic resonance imaging, scientists, including Buckner's HHMI team, have begun to map the activity of the brain in its different states, including the default state. Among the observations they are making is that when a person who has clinical Alzheimer's disease is asked to concentrate on a specific task, the default mode actually becomes more active — rather than showing less activity, as it would in a young, healthy adult.

The default state, according to Buckner, is characterized by metabolic activity in specific regions of the brain, notably the posterior and cortical regions.

"These regions were active in the default states in young adults and also showed amyloid (plaque) deposition in older adults with Alzheimer's disease," the researchers wrote.

"The key insight is that brain activity and metabolism are not uniform across the brain," Buckner said. "When we looked at people on the cusp of dementia, we saw a loss of brain tissue in the regions we predicted it would occur," based on their observations of metabolism.

Insight from the study may help explain why the memory systems of the human brain are vulnerable.

"We appear to use memory systems often in our default states," Buckner said. "This may help us to plan and solve problems. Maybe it helps us be creative. But it may also have metabolic consequences."

The newfound correlation may also have future clinical implications, because Alzheimer's is typically diagnosed when it is too late to intervene. To develop and administer effective treatments, clinicians will need to figure out ways to detect the disease in its earliest

## Interdisciplinary collaboration fosters Alzheimer's insight

**R**andy L. Buckner, Ph.D., lead author of the potentially paradigm-shifting paper on Alzheimer's disease in the Aug. 24 issue of the *Journal of Neuroscience*, credits the breakthrough to the close-knit and creative collaboration of researchers in array of cognitive science specializations at Washington University.

Buckner, an associate professor of psychology in Arts & Sciences, also holds joint appointments with the Mallinckrodt Institute of Radiology and the Department of Anatomy and Neurobiology in the School of Medicine.

"The work stems from major involvement of the Alzheimer's Disease Research Center in the Department of Neurology," Buckner said. "It also relies heavily on novel imaging methods spearheaded by Mark Mintun in radiology and visualized using methods and software developed by David Van Essen in neurobiology."

His School of Medicine collaborators on this study include:

- **Anthony P. Fotenos**, a doctoral student in the Medical Scientist Training Program and the Division of Biology and Biomedical Sciences;

- **Gina LaRossa**, a medical student;

- **Mintun**, M.D., professor of radiology and of psychiatry with the Mallinckrodt Institute of Radiology;

- **John C. Morris**, M.D., the Harvey A. and Dorismae Hacker Friedman Distinguished Professor of Neurology, professor of pathology and immu-

nology and of physical therapy, and director of the Alzheimer's Disease Research Center;

- **Rimmon Sachs**, senior programmer analyst with the Mallinckrodt Institute of Radiology;

- **Benjamin J. Shannon**, a graduate student in the Neuroscience Program of the Division of Biology and Biomedical Sciences;

- **Yvette I. Sheline**, M.D., associate professor of psychiatry, of radiology and of neurology with the Mallinckrodt Institute of Radiology; and

- **Abraham Z. Snyder**, Ph.D., M.D., with the Mallinckrodt Institute of Radiology and the Department of Radiology.

"This provocative study reflects the commitment of the Alzheimer Disease Research Center (ADRC) in exploring novel methods to better understand this terrible disease," Morris said.

"The ADRC fosters multidisciplinary neuroimaging studies of healthy aging and Alzheimer's disease and has benefited from the remarkable talents of investigators such as Drs. Buckner and Mintun, among many others, at Washington University and from a very productive collaboration with Drs. (William E.) Klunk and (Chester) Mathis at the University of Pittsburgh.

"By shedding new light on how the brain functions, Dr. Buckner's elegant study brings us closer to identifying the basic causes of Alzheimer's."

— Gerry Everding

stages, said William E. Klunk, M.D., Ph.D., associate professor of psychiatry at the University of Pittsburgh and a co-author of the *Journal of Neuroscience* paper.

"You have to get to this pathology before it has its biggest effect, before it has done its damage," said Klunk, who has developed techniques for imaging the amyloid plaques in Alzheimer's patients.

Klunk said the findings suggest there is now the potential to begin to trace the patterns of the disease and develop methods to detect it before the clinical symptoms set in.

Buckner emphasized that the notion of a causative relationship between everyday metabolic functions of the brain and Alzheimer's remains a hypothesis. However, new studies may help "show if amyloid (plaque) deposition is really dependent on metabolism. Can we find a biologically plausible reason for how

metabolism causes Alzheimer's disease?"

Moreover, looking to see if the phenomenon varies or is the same among many individuals will be required to firm up the link between brain metabolism in early life and Alzheimer's pathology later in life.

Understanding variation may also help explain why some people are at high risk for Alzheimer's.

"We are very interested in exploring these new observations to understand who is at risk and who is protected from Alzheimer's," Buckner said.

In addition to Buckner and Klunk, the study authors include Abraham Z. Snyder, Benjamin J. Shannon, Gina LaRossa, Rimmon Sachs, Anthony P. Fotenos, Yvette I. Sheline, John C. Morris and Mark A. Mintun, all of Washington University; and Chester Mathis of the University of Pittsburgh.

## Assembly

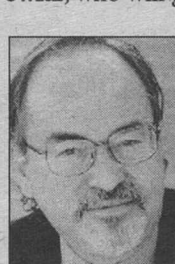
**Richard Burkhardt to give Thomas Hall Lecture**  
— from Page 1

La Russa played as an infielder with the Kansas City Athletics in 1962, then with the Oakland A's. He concluded his big-league playing career with stints with the Atlanta Braves and Chicago Cubs.

La Russa earned a bachelor's degree in industrial management from the University of South Florida and a law degree from Florida State University.

He is the founder and chair of Animal Rescue Foundation and is active in the Cardinals' community foundation, Cardinals Care.

On Sept. 14, the Assembly Series will present political commentator and critic **David Horowitz**, who will give a talk on



Horowitz

"Academic Freedom and the War on Terror."

Author of the controversial *Academic Bill of Rights*, Horowitz is calling for colleges to voluntarily encour-

age a diversity of political and religious viewpoints. Among his books is *Left Illusions: An Intellectual Odyssey*, which charts his evolution from a liberal to a conservative.

On Monday, Sept. 19, the dedication ceremony for the Richard A. Gephardt Institute for Public Service will include a lecture by global economic guru **Hernando de Soto** at 4 p.m. in Graham Chapel.

De Soto's ideas for creating wealth in developing countries have made him a favorite consultant to many struggling nations. He is the president of the world-renowned Institute for Liberty and Democracy.

Gephardt will open the program, and a reception will follow in Holmes Lounge.

Best-selling novelist **Lorenzo Carcaterra** has several crime thrillers under his belt; he also writes for television and the big screen.



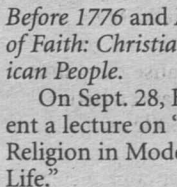
Carcaterra

In a Sept. 21 conversation with Jeff Smith, Ph.D., director of the Film and Media Studies Program in Arts & Sciences and associate

professor, Carcaterra will talk about his craft and the difference between writing a novel like *Sleepers* and writing for the television series *Law & Order*.

Deeply embedded in American history is the question of religion and the role it has played and continues to play in our modern democracy.

**Jon Butler** is a distinguished professor of American studies, history and religion at Yale University. He has published several books, including *Religion in American Life: A Short History, Becoming America: The Revolution*



Butler

*Before 1776 and Awash in a Sea of Faith: Christianizing the American People.*

On Sept. 28, Butler will present a lecture on "The Miracle of Religion in Modern American Life."

UCLA medical professor and internist **Pamela Nagami**, M.D., has seen the worst assaults on the human body by infections. In *The Woman With a Worm in Her Head & Other True Stories of In-*

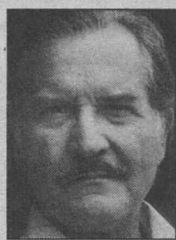
fectious Disease and Maneater and Other True Stories of a Life in Infectious Disease, she brings readers into her world of deadly bites and stings.



Nagami

Nagami's talk, "Science Is Important but It Isn't Everything," will be Oct. 5.

Arguably the leading figure of contemporary Latin American literature, **Carlos Fuentes** has explored an entire continent through his novels and nonfiction. Fuentes' more than 15 novels explore the identity of Latin America and especially Mexico, its internal conflicts with its complex heritage, and its contentious relationship with the United States.



Fuentes

On Oct. 12, Fuentes will give a talk on "Celebrating Cervantes and Don Quixote."

**Richard Burkhardt** will deliver the Thomas Hall Lecture at 4 p.m., Tuesday, Oct. 25, in Rebstock Hall. Burkhardt specializes in the study of the history of biology, with an emphasis on evolutionary theory and the biological study of behavior.

The title of his talk is "Konrad Lorenz and Niko Tinbergen: The Science and Politics of the Founding of Ethology, 1930-1973."

**Mae Jemison** made history when she boarded the space shuttle *Endeavor* in 1992, becoming the first female African-American astronaut in space. Her story is an inspiring one that underscores the importance of science education and the advancement of women and minorities in science and technology.

Jemison's talk, "Exploring the Frontiers of Science and Human Potential," will be Oct. 26.

As head of the Southern Center for Human Rights, **Stephen Bright** has dedicated his career to advocating for an end to the death penalty in America and to defending the poor and neglected on death row.



Bright

At 4 p.m. Nov. 2 in Anheuser-Busch Hall's Bryan Cave Moot Courtroom, he will talk on "Crime, Prison and the Death Penalty: The Influence of Race and Poverty."

**Christopher Browning**, considered by many to be the pre-eminent scholar on the Holocaust, will give this year's Holocaust Memorial Lecture Nov. 9. His talk, "Holocaust Denial in the Courtroom: The Historian as Expert Witness," will touch on his experiences as an expert witness in recent famous court cases involving Holocaust deniers.



Browning

After Browning's address, the Assembly Series will resume Jan. 25.

### Assembly Series

Assembly Series lectures are held at 11 a.m. Wednesdays in Graham Chapel, unless otherwise noted. They are free and open to the public; however, due to the popularity of some speakers, there may be limited seating available for the public. For the most current information, go online to [assemblyseries.wustl.edu](http://assemblyseries.wustl.edu) or call 935-5285.

## Employment

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

### Hilltop Campus

For the most current listing of Hilltop Campus position openings and the Hilltop Campus application process, go online to [hr.wustl.edu](http://hr.wustl.edu). For more information, call 935-5906 to reach the Human Resources Employment Office at West Campus.

Asst. Dir. for Disability Resources 050099  
Software Developer 050104  
Coord. Of Experimental Computing 050186  
Curator 050226  
Data Manager and Analyst 050234

Exec. Dir. Regional Development Progs. 050248

Islamic Studies Catalog/Subject Librarian 050260

Reference/Web Services Librarian 050261

Assoc. Dir. MBA Career Advising 050278

Network Security Analyst 060008

User Services Supervisor 060009

Senior Dir. of Capital Projects 060012

Deputized Police Officer 060014

Dir., Lifelong Learning Institute 060016

School Accountant—Business & Law 060017

Administrative Asst. 060019

Student Financial Service Rep. 060020

Project Leader/IS 060021

Administrative Secretary 060022

Assoc. Dir. of Alumni Relations 060024

Assoc. Dir. of Development, En. & App. Sci. 060027

Administrative Asst. 060028

Hazardous Materials Tech II 060029

CFU Accountant (Reporting) 060030

Application Design Manager/Business Analyst 060031

Senior Compliance Auditor 060032

Administrative Asst. 060034

Programmer Analyst III 060037

University Safety Officer 060038

Career Development Specialist 060041

Regional Dir. of Development 060045

Communications Coordinator 060046

University GIS Coordinator 060048

**Medical Campus**

This is a partial list of positions in the School of Medicine.

Employees: Contact the medical school's Office of Human Resources at 362-7196. External candidates: Submit

résumés to the Office of Human Resources, 4480 Clayton Ave., Campus Box 8002, St. Louis, MO 63110, or call 362-7196.

RN Staff Nurse — Part Time 060028

Public Safety Officer 060097

Professional Rater III 060138

Staff Scientist 060152

Custodian/Housekeeper 060156

Public Safety Officer 060162

Research Technician I 060171

Analyst, Quality Control/Training 060172

Senior Departmental Accounting Asst. 060174

Residency Coord. 060175

User Support Asst. 060176

Systems Manager 060177

Executive Secretary 060178

Data Assistant 060180

Research Patient Coord. 060181

Supervisor, Clinical Trials 060183

Secretary II 060185

Patient Billing Services Rep. I 060187

Coordinator: Clinical Lab/Res/Office/Education 060190

User Support Asst. 060192

Research Technician I 060193



## Notables

### Of note

The Alpha Iota chapter of the **Beta Theta Pi** fraternity recently won its second Francis H. Sisson Award and fourth Campus Involvement Award at the fraternity's 166th general convention. The Sisson Award is given to only a handful of outstanding chapters whose eligibility is based on 19 areas, including scholarship, philanthropy, alumni affairs and public relations. The Campus Involvement Award recognizes chapters with outstanding involvement in campus life, student organizations and leadership positions. ...

**Amanda Moore McBride**, Ph.D., assistant professor at the George Warren Brown School of Social Work and research director of the Center for Social Development (CSD), and **Margaret S. Sherraden**, Ph.D., research professor of social work, organized "International Service in the Context of Globalization: A Research Conference," May 25-27 in London. The conference, hosted by the CSD and the Institute for Volunteering Research in the United Kingdom, in partnership with the Center for International Studies at the University of Missouri-St. Louis, convened 35 researchers and leading practitioners in international service, representing 15 countries.

McBride also presented "A Continuum of Voluntary Action: Informing Policy, Practice, and Research" at the International Roundtable on Service and Volunteerism on Aug. 3 in Washington, D.C. CSD hosted the roundtable in conjunction with the Corporation for National and Community Service and the Points of Light Foundation's National Conference on Volunteering and Service. ...

**Kenneth F. Kelton**, Ph.D., professor of physics in Arts & Sciences, has received a three-year, \$375,000 grant from the Department of the Air Force for research titled "Nucleation and Microalloying for Control of Nanostructure Refinement." ...

**James Wang**, a junior in Arts & Sciences with a major in biology and minors in international and area studies and psychology, was recently named to the 2005 All-USA College Academic Team. ...

**Jonathan Silva**, a doctoral student advised by Yoram Rudy, Ph.D., the Fred Saigh Distinguished Professor of Engineering, won first place in the research competition at the Gordon Research Conference on Cardiac Arrhythmia Mechanisms, held Feb. 20-25 in Buellton, Calif. The title of his poster was "Molecular Interactions Determine Effects of Iks on the Cardiac Action Potential: Modulation by KCNE1 and Chromanol 293b." Other bio-

medical engineering students from the Cardiac Bioelectricity and Arrhythmia Center received recognition in this meeting, including Crystal Ripplinger (Igor Efimov lab; second place) and Subham Ghosh (Rudy lab; third place). ...

**Frank G. Gilliam**, M.D., associate professor of neurologic surgery, has received a five-year, \$667,565 grant from the National Institute of Neurological Disorders and Stroke for research titled "Clinical Research in Epilepsy and Associated Disorders." ...

**Edwin B. Fisher**, Ph.D., research professor of psychology in medicine, has received a five-year, \$657,891 grant from The Robert Wood Johnson Foundation for research titled "Building Community Supports for Diabetes Care, and Advancing Diabetes Self-Management." ...

**John H. Yang**, M.D., instructor in medicine, has received a five-year, \$613,120 grant from the National Heart, Lung, and Blood Institute for research titled "Bc13 Signaling in the Cardiac Metabolic Stress Response." ...

**Mark E. Warchol**, Ph.D., research associate professor of otolaryngology, has received a one-year, \$112,997 grant from NASA for research titled "Patterning of the Vestibular Sensory Organs."

### Hurricane relief meeting today

The Community Service Program, the Richard A. Gephardt Institute for Public Service and the Campus Y will host an open meeting for representatives of student groups, offices and departments

wishing to develop and participate in a collective effort in response to Hurricane Katrina and its aftermath.

The meeting will be from 1-3 p.m. today in McMillan Café.



**Social work service day** Second-year master of social work student Kelly Miller paints a fence at the Grace Hill Settlement House as part of Community Service Day, an annual event during the George Warren Brown School of Social Work's orientation. More than 60 social work students participated in service projects Aug. 27 at a number of sites throughout St. Louis.

## Campus Authors

Michael MacCambridge, adjunct professor in University College in Arts & Sciences

### America's Game: The Epic Story of How Pro Football Captured a Nation

(Random House, 2004)

On December 28, 1958, the NFL's championship game pitted the Baltimore Colts against the New York Giants.

In a game that is firmly entrenched as one of the best championship games ever played, the Colts prevailed, 23-17, in overtime on Alan Ameche's goal-line plunge.

In the nearly half-century since that epic battle, football in general — and the NFL more specifically — has risen from a mere afterthought in the sporting world to a place of prominence.

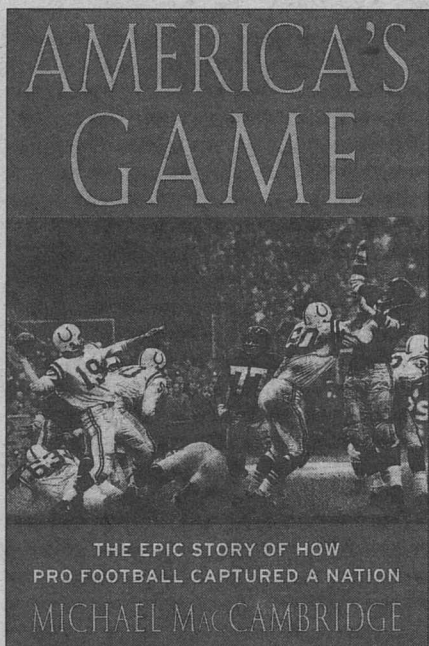
Indeed, many people think football is now the Sport of America, surpassing baseball, which has been around for nearly 150 years.

In his book *America's Game* (published in 2004 with the paperback edition slated for an Oct. 1 release), Michael MacCambridge tracks the rise in popularity of the NFL since that title game in 1958.

"I realized that pro football had been America's unquestioned most popular sport for more than a generation, yet I'd never read a good account of how it got to be that way, how it eclipsed baseball, the unchallenged 'national pastime,' as the nation's favorite spectator sport," said MacCambridge, adjunct professor in University College in Arts & Sciences, whose courses include "Intro to Mass Media" and "Sports, Media and Society."

"That's the story I set out to tell. I wrote the proposal in 1999 and the book was published in the fall of 2004, so it took me five years from start to finish."

The reasons are numerous for the other sports' dwindling



popularity among Americans. Pick up any sports page and you'll read stories about steroid use and escalating salaries in baseball; the lockout in hockey; and any one of a number of transgressions in the NBA.

But far from being the beneficiary of other sports' problems, football also supplanted baseball by doing things the right way.

"Pro football has suffered fewer self-inflicted wounds than the other sports in the past decade, which is why its position at the top has solidified," MacCambridge said. "But when it rose to the top, it was because the game was more exciting and a better reflection of the modern age than baseball, and because it was structured intelligently, under the egalitarian principle that every club, whether based in New York or Green Bay, should have a fair shot at competing."

MacCambridge admits that

baseball is ingrained in the national culture, and as such, at some level is "impervious to its bad publicity."

But everything in life is cyclical, and while he doesn't think that any of the current major sports will eclipse the popularity of football, MacCambridge could see another sport on the horizon giving the pigskin a run for its money. Soccer.

"(Right now), football is a more contemporary, more broadly popular and quite simply a better-run game," he said. "I don't think football will lose its primacy to the other major team sports of today."

"What I could see happening, maybe not in my lifetime but sometime in the distant future, is the changing demographic patterns in America, as well as the widespread popularity of little-league soccer, allowing the world's most popular sport to become a major force in American popular culture."

"Whether it would ever challenge the NFL remains to be seen, but soccer is already becoming a presence on the American sporting landscape. Wait until you see the kind of coverage and following the U.S.A. enjoys in the 2006 World Cup."

"That, in many ways, could be the future of sports in America."

MacCambridge's most recent book, the *ESPN College Football Encyclopedia*, which he conceived of and edited, was released Sept. 1.

— Andy Clendennen

### Record wins three national awards

The *Washington University Record* was recently recognized with three national awards from Ragan Communications, an organization for corporate communications and public relations professionals.

The Oct. 15, 2004, *Record* — a full-color, 12-page edition that featured extensive coverage of the Oct. 8 presidential debate hosted by the University — won an "Award of Excellence," Ragan's highest honor, in the "Specialty Publication" category.

In the "Best Personality Profile/Interview" category, Medical Editor Kim Leydig's Oct. 29, 2004, *Washington People* profile of Keith E. Brandt, M.D., associate professor of plastic and reconstructive surgery, also won an Award of Excellence.

Earning an honorable mention in the category of "Best Feature Article" was medical writer Nicole Vines' May 7, 2004, story on the INDEPENDENCE iBOT wheelchair and David Gray, Ph.D., associate professor of neurology and of occupational therapy.

## Record

Founded in 1905  
Washington University community news

Associate Vice Chancellor Judith Jasper Leicht  
Executive Editor Susan Killenberg McGinn  
Editor Kevin M. Kiley  
Associate Editor Andy Clendennen  
Assistant Editor Neil Schoenherr  
Medical News Editor Kim Leydig  
Calendar Coordinator Genevieve Podleski  
Print Production Carl Jacobs  
Online Production Alice Marre  
**News & Comments**  
(314) 935-6603  
Campus Box 1070  
kiley@wustl.edu  
**Medical News**  
(314) 286-0119  
Campus Box 8508  
leydig@wustl.edu  
**Calendar Submissions**  
Fax: (314) 935-4259  
Campus Box 1070  
recordcalendar@wustl.edu

*Record* (USPS 600-430; ISSN 1043-0520), Volume 30, Number 4/Sept. 2, 2005. Published for the faculty, staff and friends of Washington University. Produced weekly during the school year, except school holidays, and monthly during June, July and August by the Office of Public Affairs, Washington University, Campus Box 1070, One Brookings Drive, St. Louis, MO 63130. Periodicals postage paid at St. Louis, MO.

#### Where to send address changes

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

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



Washington University in St. Louis



## Washington People

**J**ames B. Lowe III, M.D., chief of the Section of Cosmetic Surgery, admits he's obsessed with detail. "When I'm in the operating room, every millimeter and every second counts," he says. "It's so important to be 100 percent focused in the OR. I go into this zone and nothing can distract me."

With every procedure — whether it's extensive facial plastic surgery, Botox injections or traumatic hand reconstruction — the field of plastic and reconstructive surgery offers Lowe an amazing artistic opportunity to rejuvenate patients and make a profound difference in their lives.

"Plastic and reconstructive surgery is an art," Lowe explains. "My goal is to achieve a harmonious balance between form and function. It offers me a chance to drastically improve my patients' lives by using my artistic abilities and creative problem-solving skills."

For the past three years, Jennifer Smith has been coming to Lowe for minor cosmetic procedures, so when she decided to undergo more extensive plastic surgery she knew she was in great hands.



(From left) James B. Lowe III, M.D., and medical assistant Tammie Newhouse consult with patient Doris Raines about cosmetic procedures at Lowe's clinic in the Center for Advanced Medicine. "My philosophy is simple: Cosmetic surgery is creative problem solving," he says. "I analyze all the options, explain the risks involved and then strive for the optimal aesthetic result. With every procedure, I have the chance to dramatically improve my patients' lives — and that's incredibly rewarding."

# The art of medicine

A passion for detail defines Jim Lowe as a plastic and reconstructive surgeon

BY KIM LEYDIG

"Dr. Lowe is so talented — he aims for perfection," says Smith, who thoroughly researched the region's top plastic surgeons via news stories, medical journals and online patient experiences before choosing a doctor.

"Deciding to have major plastic surgery can be a daunting decision, but Dr. Lowe is so incredibly skilled, I felt completely safe and confident that my results would be amazing. I can't even begin to count how many of my friends I've recommended him to. He is one of the best plastic surgeons in the nation."

Lowe admits it's impossible to achieve perfection, but his colleagues say that'll never stop him from striving for it.

"Jim has a very keen eye for aesthetic detail and is a perfectionist," says Keith E. Brandt, M.D., associate professor of surgery. "These two aspects are a perfect match for an aesthetic surgeon. Jim sets very high standards for himself and his practice, which benefits both his patients and the residents who train with him."

Lowe explains that his primary goal with all his patients is to provide excellent clinical results along with a high level of patient care and service.

"Jim has a tremendous passion for providing the best care for his patients," says Susan E. Mackinnon, M.D., the Sydney M. Jr. and Robert H. Shoenberg Professor of Plastic and Reconstructive Surgery and head of the division. "He is sensitive to their needs and works with the individual to achieve the best outcome. He provides the same level of care for people who suffer massive trauma as well as those who seek improvement through cosmetics."

"He is rapidly becoming one of the top plastic surgeons in the nation — he's a gifted surgical technician with an artistic eye."

### Faces of beauty

As director of the University's Cosmetic Surgery Center, Lowe develops innovative mid-face surgical techniques and leads groundbreaking research on facial plastic surgery.

Repeatedly sought by the national media for his

expertise in facial plastic surgery, Lowe, also an assistant professor of surgery, explains that what draws him to academic medicine is the opportunity to leave his "footprint on the field" by developing innovative techniques and leading groundbreaking research.

Lowe and his team are among only a handful of scientists worldwide studying how to preserve ethnicity in plastic surgery.

By measuring and studying the positions of facial features — lips, brows, cheek bones, noses — in African-Americans, Middle Easterners, Hispanics and Native Americans, along with a breakdown of Asian subcultures, Lowe aims to define "a standard of beauty" for major ethnic groups.

"Today, beauty transcends race and color and is truly dependent on the harmonious relationship of a person's facial features," he says. "Our goal is to probe the depths of what is aesthetically pleasing for each group."

A recent study by the American Academy of Facial Plastic and Reconstructive Surgery reveals that cosmetic and reconstructive surgery increased exponentially among minorities from 1999-2001 — more than quadrupling among Asian-Americans and African-Americans and tripling among Hispanics.

As the number of ethnic patients seeking plastic surgery continues to rise, understanding how to preserve ethnicity is critical to creating an attractive and natural look.

"Caucasian beauty is pretty well-defined in our culture, so we know what's acceptable," Lowe says. "We also ought to know what's acceptable for other ethnic groups. What's attractive for Caucasians isn't necessarily beautiful for everyone."

For the past three years, Lowe and his team have been researching aesthetic attractiveness for different ethnic groups. By measuring the position of facial features, such as the lips, brow lines, cheekbones and noses, of people from different ethnic groups ages 18-65, the researchers are determining attractive facial features for each group.

Lowe's study includes African-Americans, Middle Easterners, Hispanics and Native Americans along with a breakdown of Asian subcultures into Chinese, Japanese, Vietnamese and Hawaiian.

"The goal of plastic surgeons

should be to enhance or rejuvenate the patient's natural features," Lowe says. "But we can't make someone look 'natural' if we don't know what 'natural' is for them. Our goal is to really get to the depths of what is aesthetically acceptable and beautiful for each group."

For the study, Lowe and his team are also analyzing and taking measurements of ethnic models in magazines to further define the aesthetic for major ethnic groups.

"Patients want to look their best, but within their own ethnic group," Lowe says. "The goal is to achieve a natural look that brings individual facial features into a harmonious balance while maintaining ethnic traits."

The extensive study helps Lowe treat patients like Lucille Harris, a 60-year-old African-American elementary school teacher who came to Lowe because she wanted to rejuvenate her face.

"I felt like I was 25 inside, but I looked 60 on the outside," she says. "I wanted to look as good as I feel."

Harris had been considering having a face- and brow-lift for years, but she was afraid of the pain and concerned about the cost. In the early '90s, Lucille Harris' mother elected to have a face-lift at the School of Medicine and became one of the first older African-American women to have facial plastic surgery in the region.

Her mother was so ecstatic with the results that she encouraged Lucille to have plastic surgery. "This was something I really wanted to do for myself," she says. "And I'm thrilled with the outcome, now I look as great as I feel."

Patients like Harris and Smith explain that another reason they hold Lowe in such high regard is that he stresses plastic surgery is something you want — not something you need.

"If I had to sum up his bedside manner in one word, it would be honest," Smith says. "He's very honest about what a procedure will and won't do. He wants patients to have realistic expectations, and he wants to ensure they're having the procedure for the right reason."

"A face lift isn't going to save a failing marriage or get you a raise, but it can improve your appearance and self-confidence. And thanks to Dr. Lowe, I smile a lot more when I look in the mirror."

### On the cutting edge

While Lowe's research and clinical practice focuses on face and mid-face rejuvenating procedures, he also specializes in hand and wrist

reconstructive surgery, liposuction, tissue fillers and breast augmentation.

Lowe's expertise is backed by two residencies — one in general surgery from the University of Texas Health Science Center and one in plastic reconstructive surgery from the University of Texas Southwestern Medical Center.

He then went on to complete a hand, nerve and microsurgical fellowship at Washington University and joined the School of Medicine faculty in 2000. He also earned an M.B.A. in health sciences management at the Olin School of Business in 2002.

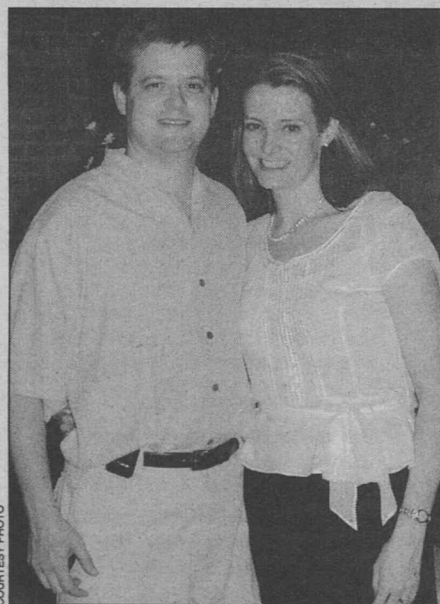
Lowe is also board-certified by the American Board of Surgery and the American Board of Plastic Surgery.

"Jim's skills are exemplary as he develops advanced techniques," Mackinnon says. "He's a dynamic asset to the University and an excellent academician. He has been the driving force in creating an outstanding cosmetic surgery section at the University."

Lowe and his team also publish *New Horizons*, an educational newsletter — featured on [drjl Lowe.com](http://drjl Lowe.com) — that informs patients about exciting developments in plastic and reconstructive surgery and provides patients cutting-edge information on the latest procedures.

"My philosophy is simple: Cosmetic surgery is creative problem solving," Lowe says. "I analyze all the options, explain the risks involved and then strive for the optimal aesthetic result."

"With every procedure, I have the chance to dramatically improve my patients' lives — and that's incredibly rewarding."



Lowe with his wife, Julie, M.D., who finished a dermatology residency at the School of Medicine and Barnes-Jewish Hospital in July. The couple has two sons.

### James B. Lowe III

**University titles:** Chief of the Section of Cosmetic Surgery and assistant professor of surgery

**Family:** Wife, Julie, M.D., who recently finished a dermatology residency at the School of Medicine; and two sons

**Hometown:** Oklahoma City, Okla.

**Recent awards:** National Plastic Surgery Education Foundation 2002 Basic Science Essay Award and the 1999 Clinical Essay Award; The Paul Weeks Resident Teaching Award, Washington University, 2003; Resident Research Award, University of Texas Southwestern, 1999

**Alternative occupation:** Sculptor or carpenter