Cheaper ethanol one step closer

By Tony Fitzpatrick

Cheaper ethanol through more efficient production and stronger wood are two possibilities resulting from research by Erik K. Nielsen, Ph.D., adjunct professor of biology in Arts & Sciences. The discovery, published in a recent edition of *The Journal of Cell Biology*, sheds new light on how some complex sugars in plants are formed in the construction of cell walls.

"In plants, light energy is harvested to produce sugars, and some of these are processed into complex polymers for specific uses," Nielsen said. "My team identified a new pathway for some of the complex sugars that are used in the construction of cell walls. This should help us understand our society's use of some of these building blocks of cell walls are de- and how these building blocks are put together." Nielsen's research is the first to identify this pathway, which is involved in the trafficking steps in the deposition of cell wall components — a lightly researched area. His study is important because cotton, wood and other plant fibers that are vital to everyday life rely on the plant cell wall, which gives wood the strength needed for construction and furniture, among other uses, and cotton fibers the elasticity for use in cloth. The research could lead to crops with traits that can be used to produce biofuels more efficiently and with less waste.

The paper's novel scientific observation is the characterization of a membrane trafficking compartment believed to be involved in the polar secretion of cell-wall components in plants.

"In the paper, we describe the identification of a cellular component that is essential for the proper targeting/delivery of secretary cargo to the tips of growing root-hair cells," Nielsen said.

"Root-hair cells are a specific type of epidermal cell in roots that we have been using to monitor secretion pathways in plants. We use root-hair cells because during their development, they undergo a highly polarized expansion, in which deposition of new cell-wall components is restricted to the extreme tip of the growing root tip. Ethanol is produced by fermenting cellulose and other polysaccharides from plant cell walls."

See Ethanol, Page 6

Marshall Scholarship goes to Arts & Sciences senior

By Tony Fitzpatrick

Senior Jeffrey J. Marlow is among 43 young Americans to receive a 2007 Marshall Scholarship, which provides full support for two or three years of study toward a second bachelor's degree or advanced degree at any British university.

Marlow, a graduate of James and Karla Marlow of Englewood, Colo., is pursuing a bachelor's degree in earth and planetary science in Arts & Sciences. The $53,500 project will rebuild I-64 from Spodee Road to east of Kingshighway Boulevard, including rebuilding the pavement, bridges and 12 interchanges in between. In addition, one lane will be added in each direction from west of Spodee Road to Interstate 170.

The project involves rebuilding the I-64/I-170 interchange in 2007, which will result in off-peak-hour closures on I-64 and I-170 and reducing I-170 from three lanes to two at I-64; closing I-64 completely from Ballas Road to Brentwood Boulevard and rebuilding interchanges in that area.

See Highways, Page 6

Women with rare breast conditions need follow-up surgical biopsies

By Caroline Arronas

Women whose mammograms reveal a suspicious lesion need a needle biopsy to confirm or rule out cancer. But if that biopsy reveals only abnormal — not cancerous — cells, is there more extensive evaluation necessary? Yes, according to a new study by School of Medicine physicians. They looked at the medical records of women whose initial core-needle breast biopsies found rare, benign breast conditions: atypical lobular hyperplasia (ALH) or lobular carcinoma-in-situ (LCIS). While these lesions are known to increase a woman's risk of breast cancer, what researchers found was surprising.

Follow-up surgical biopsies in which more breast tissue was removed found that up to 25 percent of the women actually had cancer in addition to their high-risk breast conditions. Most of the cancers were invasive, meaning the tumors had penetrated normal breast tissue and would require treatment. None of the tumors had spread beyond the breast.

"This is very significant because we now know that we can't assume that women with ALH or LCIS are cancer-free," said lead author Julie A. Margenthaler, M.D., assistant professor of surgery and a breast surgeon at the Siteman Cancer Center.

The researchers published their study in the October issue of the *American Journal of Surgery*. ALH and LCIS are known to increase the risk of breast cancer, but neither is considered a precancerous condition. Together, they represent only about 1 percent of all breast lesions, Margenthaler said.

This seems like a small number, but with more than 100,000 core-needle breast biopsies performed in the United States each year, the number of potential cancers missed by not doing a more extensive

See Biopsy, Page 6

Recognizing degree candidates

Jeremiah M. Giles, a master of engineering management degree candidate from the School of Engineering & Applied Science, receives a WUSTL nement in Engineering Management during the December Degree Candidate Recognition Ceremony Dec. 3 in Graham Chapel. A reception for the more than 110 degree candidates who attended the ceremonies, along with their families, friends, faculty and administrators, followed in Mallinckrodt Student Center. Ronald J. Himes, founder and producing director of The St. Louis Black Reper- tory Company, which is celebrating its 30th anniversary, delivered remarks at the ceremony.

Himes, a 1978 graduate of University College in Arts & Sciences, is the University's first Henry E. Hampton, Jr. Artist-in-Residence in Arts & Sciences.

University addresses ways to ease Highway 40 woes

By Betty Miller

The University continues to analyze various strategies to lessen the impact of Highway 40 re-construction project's impact on students, employees and patients following the Missouri Department of Transportation's selection of Gateway Constructors as the design-build contractor.

The $535 million project will rebuild I-64 from Spodee Road to east of Kingshighway Boulevard, including rebuilding the pavement, bridges and 12 interchanges in between. In addition, one lane will be added in each direction from west of Spodee Road to Interstate 170.

The project involves rebuilding the I-64/I-170 interchange in 2007, which will result in off-peak-hour closures on I-64 and I-170 and reducing I-170 from three lanes to two at I-64; closing I-64 completely from Ballas Road to Brentwood Boulevard and rebuilding interchanges in that area.

See Highways, Page 6

WUSTL's Pathfinder Program in Environmental Sustainability and contributed to multiple Mars missions. Since summer 2005, he has been an Athena Team student collaborator on NASA Mars Exploration Rover Mission and has studied boulder hazards at potential landing sites for NASA’s Phoenix Mars Lander.

From summer 2004—05, he worked with NASA scientists to characterize the geology of the northern plains of Mars to investigate geologic processes and pinpoint areas of interest for the Phoenix Lander mission. In 2005, he was a summer research fellow at California Institute of Technology in 2006, he was a summer research student fellow at Woods Hole Oceanographic Institution in Massachusetts. In addition, Marlow has re- searched microbial organisms in extreme environments in an attempt to understand biological adaptations that could be relevant in the search for life beyond Earth. He has co-authored four publications.

Marlow's numerous scholar- ship includes a Barry M. Goldwa- thers Fellowship, the J. B. Holton Compton Scholarships, a J. Step- hen Foster Fellowship and a Ru- bert C. Byrd Scholarship.
Himadri Pakrasi named the Freiberg Professor

WASHINGTON UNIVERSITY IN ST. LOUIS

Himadri B. Pakrasi, Ph.D., has been named the George Willard Pakrasi Professor of Biology in Arts & Sciences. An installation will occur in the 2007-08 academic year, according to Edward S. Masius, Ph.D., executive vice chancellor, dean of Arts & Sciences, Barbara and David Thomas Distinguished Professor in Arts & Sciences, who made the announcement.

"Some of my happiest moments have been recognizing and rewarding outstanding faculty members," Masius said. "Himadri Pakrasi's achievements in biology are outstanding, and he is very successful at bridging to several fields beyond biology and beyond Arts & Sciences." Pakrasi's keen interest in biological differences between the biochemistry and molecular biology of microorganisms found in the endemic enigmas in microbiology. Pakrasi's research involves systems biology, membrane biology, metabolic engineering, and genetics.

Several funding agencies have recognized Pakrasi's work. He leads a Microbial Biology Grand Challenge project to explore scientific frontiers on microorganisms found in the scientific community. Pakrasi has been a partner between the University and the W.R. Wiley Environmental Molecular Sciences Laboratory at the Pacific Northwest National Laboratory of the Department of Energy (DOE) — involving the biology of the microorganisms in ecosystems, important photobiological and microbial energy conversion in the wild. Pakrasi is the first scientist from a university chosen by the DOE to lead a project in a national laboratory.

Pakrasi is a member of Integrative Biological Research program at the University. The Foundation awarded a $2.5 million, five-year grant titled "A Systems Approach to Study Redox Regulation of Functions of Photosynthetic Organisms." Pakrasi is the project's principal investigator.

Pakrasi's international recognition includes serving as an Alexander von Humboldt fellow at Munich University in Germany, a Distinguished Fellow at the Biocenosis Institute of Nagoya University in Japan, and the Lady Davis Visiting Professor at Hebrew University in Jerusalem.

He is a fellow of the American Society for the Advancement of Science and a member of the American Society for Biochemistry and Molecular Biology, the American Society of Plant Biologists, and the American Society for Microbiology. He is on the editorial board of the Journal of Chemical Ecology.

Pakrasi has served on various experimental and University-wide committees. Chancellor Mark S. Wrighton appointed him to the McDonnell International Scholars Academy as an associate professor in 1993 and to professor in 1997. Pakrasi earned a doctorate in biology from the University of Missoula-Columbia in 1984. He earned a master's in physics from the University of California in 1976 and a master's in biophysics from the University of British Columbia in 1980. He earned a bachelor's degree in physics from New York College in 1975. The George William and Irene Koechig Freiberg Professor of Biology was established in 1998 to honor a faculty member distinguished in the field of biology who has demonstrated leadership in research and teaching.

Pakrasi has contributed to the University's effort to develop academic prominence within the community of scholars, service and dedication to the betterment of the University and respected accomplishment in teaching. The awards include a $5,000 honorarium. For more information, e-mail gbgq@groups.wustl.edu.

Holiday thanks thanks to University community

By NEL SCHNEIDER

This holiday season is brighter for many needy St. Louis-area families thanks to the generosity of the University community.

Through the yearly Give Thanks Give Back campaign, University students, faculty and staff sponsored 171 families and collected several thousand gifts in November. Give Thanks Give Back supports a group called "100 Neediest Cases," a joint project of the St. Louis Legal Aid Society, the Dispatch and the Unit. The 100 Neediest Cases actually identifies families and single individuals financially struggling area residents.

At noon Thanksgiving Day, the newspaper published the personal stories of 100 Neediest Cases in the newspaper. Families and single individuals are "adopted" by individuals or groups who buy gifts for the families or single individuals or other requested items for the family.

"Give Thanks Give Back supports students struggling to overcome poverty during the holiday season," said Arts & Sciences senior Katie Lombardi, chair of this year's event. "Give Thanks Give Back has always aimed to provide a venue for all members of the University community to make a positive impact on the lives of the St. Louis community. This year, there were 90 different student, faculty and staff participating families. Give Thanks Give Back's goal is to gift-wrap parties occurring in early November, similarly brings together various members of the University community."

The University's Office of Student Activities became involved in the program this year, with members adopting a single family. By early November, a campus-wide program called Give Thanks Give Back, in 2006, the University community adopted 68 families. In each of the past four years, Give Thanks Give Back has adopted more than 100. For more information, e-mail gbgq@groups.wustl.edu.

Faculty achievement

Emil H. Unanue, M.D. (left), the Paul and Ellen Lacy Professor of Pathology at the School of Medicine, and Alexander von Humboldt, chancellor, dean of Arts & Sciences, Barbara and David Thomas Distinguished Professor in Arts & Sciences, the Board of Trustees meet, elects Philpott member

WASHINGTON UNIVERSITY IN ST. LOUIS

A meeting Dec. 1, the Board of Trustees elected Gordon W. Philpott, M.D., emeritus professor of surgery at the School of Medicine, a member, according to Chancellor Mark S. Wrighton. A recipient of the 2006 Distinguished Alumni Award, Philpott graduated summa cum laude from the medical school in 1961, after earning a bachelor's in 1957 from Yale University. He joined the surgery faculty in 1964, focusing his efforts on teaching basic courses as well as colorectal cancer.

In his report to the trustees, Wrighton congratulated the Department of Athletics on another winning season, highlighted by the women's volleyball team — including Duke, Harvard, Yale, Stanford — finishing No. 2 in the nation in the NCAA national championships. The women's soccer team finished 17-3-1, and was ranked No. 6 in the nation, while the women's cross-country team finished No. 4 in the NCAA national championships.

In other action, the trustees received reports from the following committees: audit, development, educational policy, nominating, University finance, medical illness, research, graduate affairs, undergraduate life, and the Alumni Board of Governors. About Philpott

Gordon W. Philpott, M.D., began teaching at the medical school as soon as he completed a surgical internship and surgical residency at Barnes Hospital, joining the faculty as an instructor in surgery in 1968. He served as assistant dean for curriculum from 1974-76 and was named the Harry Edwards Professor of Surgery and as chief of surgery at Jewish Hospital from 1989-91. He was named the associate director of the hospital's Department of Surgery in 1999. In 1994, he became a professor of radiology. Philpott is a member of the Medicine National Council, the Danforth Circle Eliot Membership Committee, the Alumni Board of Governors and the Siteman Community Advisory Board. He is chairman of the Medicine Capital Review Committee.

Last month, Philpott received the 2006-07 Distinguished Alumni Award at the Founders Day celebration.

Philpott is a surgeon highly regarded for his interest in issues related to patient care and physician education and his active support of the University and the medical school. Before retiring in July 1999, he dedicated himself to developing the Breast Health Center at Barnes-Jewish Hospital.

The Philpott family, who are native St. Louisians, established in 1999 a foundation at the medical school to provide a student with financial support. In addition, the Philpott family previously established the Philpott Family Challenge Fund to encourage alumni and only students to the medical school.

Board of Trustees meets, elects Philpott member

This is the final issue of the Record this calendar year. We will resume publication Jan. 18, 2007. The Record staff wishes everyone a safe and happy holiday season.
Anti-inflammatory boosts liver damage in mice with mutant gene

By Gwyn Erickson

A 2-antitrypsin (AT) deficiency isn’t a term that rolls off the tongue, but people diagnosed with this genetic disorder learn its potential effects fast. They know they shouldn’t smoke or be around smokers because they are at increased risk for developing emphysema at a young age. In addition, some patients with alpha-1-antitrypsin deficiency can develop serious liver disease, but it is not yet possible to predict who is at risk.

Now, School of Medicine researchers shed light on the mechanisms that contribute to liver disease in alpha-1-AT deficiency patients. Using a quantitative mouse model of emphysema, the researchers investigated the effects of a nonsteroidal anti-inflammatory drug (NSAID) on liver injury. An estimated 15 million to 20 million people in the United States take NSAIDs such as ibuprofen and naproxen on a long-term basis.

The findings, published in a recent issue of the Journal of Clinical Investigation, show that the NSAID indomethacin may not be safe for patients with alpha-1-AT deficiency. They also revealed that the mechanism for liver injury in alpha-1-AT deficiency is different than previously thought.

“Previously, we have shown that patients with alpha-1-AT deficiency have an increased risk of developing liver disease, but the mechanisms by which these drugs affect the liver are not yet known,” said Rudnick, a pediatric gastroenterologist at St. Louis Children’s Hospital. “The drugs that induce liver injury in these patients include not only classic NSAIDs like aspirin but also the newer, more potent drugs. We wanted to see if we could find a way to predict how these drugs would affect the liver.”

The results of the study show that the NSAID indomethacin increases liver injury in mice with alpha-1-AT deficiency. Rudnick noted that the NSAID treatment “caused increased protein and DNA levels in liver tissue, but it did not cause liver fibrosis, which is a hallmark of liver disease.”

“Alpha-1-AT deficiency is the most common form of liver disease in adults with inflammatory diseases,” said Rudnick. “We have shown that alpha-1-AT deficiency is associated with increased liver injury in mice treated with indomethacin.”

The findings suggest that patients with alpha-1-AT deficiency should be monitored closely for liver injury when treated with NSAIDs. “We need to do more research to understand the mechanisms by which NSAIDs affect the liver and how to prevent liver injury in patients with alpha-1-AT deficiency,” Rudnick said.

Top notch Marc J. Bernstein, M.D. (left), instructor in clinical medicine, receives the Stanley Lang Lecturer of the Year Award from Wale Adeniran, president of the School of Medicine Class of 2006. The medical school Classes of 2007, 2008 and 2009 awarded nearly 50 Distinguished Service Teaching Awards to faculty at the Eric P. Newman Education Center.

Scientific American’ honors 3 Alzheimer’s disease researchers

By Michael C. Purdy

Three Alzheimer’s disease researchers at the School of Medicine have been named to the 2006 Scientific American 50, an honorary list of the year’s “prime movers” in a variety of scientific disciplines. The magazine’s board of editors chose David Holtzman, M.D., the Andrew B. and Gretchen P. Jones Professor of Medicine; John P. Atkinson, M.D., the Samuel and Enid Stein Professor of Medicine; and John W. Cirrito, Ph.D., a postdoctoral researcher.

The study’s results may help explain why specific genetic factors contribute to liver disease in patients with alpha-1-AT deficiency.

“We know the more severe the infection is, the more likely a patient is to develop asthma later. We want to know at the cell level what determines the severity of the infection and how we can intervene to prevent asthma.”

Michael J. Holtzman

“We will be able to take what we find in the mice and immediately translate that into what we study in patients,” Holtzman said. In addition to Holtzman, key investigators in the center include John P. Atkinson, M.D., the Samuel and Enid Stein Professor of Medicine and professor of molecular microbiology; Jonathan M. Green, M.D., associate professor of medicine and director of the Division of Pulmonary and Critical Care Medicine; and Kenneth W. Murphy, M.D., Ph.D., professor of medicine and allergy.

“We want to know what determines the severity of the infection and how we can intervene to prevent asthma.”

Michael J. Holtzman

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“We want to know what determines the severity of the infection and how we can intervene to prevent asthma.”

Michael J. Holtzman
In March 2000, a child’s suitcase became the birthing and birth date of Hana Brady arrived at the Jake and Rosekolz Holocaust Education Resource Center. Painted across the battered luggage was the German word “Hana.”

With these few clues, a determination was made by Japanese schoolchildren led by their teacher, Fumiko Ishioka, to uncover Hana’s identity. Their story, intertwined with that of young Hana, became the subject of Hana’s Suitcase (2002), Karen Levine’s acclaimed book, which has been translated into 27 languages and won numerous awards in Canada, the United States and abroad.

At 7:30 p.m. Jan. 11, Edison Theatre will present the U.S. premiere of a stage adaptation of Hana’s Suitcase by the playwright Emil Sher. The play, which runs through Jan. 21, is jointly produced by Edison Theatre and the Metro Theater Company.


Monday, Dec. 11
12:30-3 p.m. Center for the Application of Molecular Modeling. ‘MOF-DRAM: A Novel Technique for Modeling Molecular Dynamics.’ Connor Aud. 362-2763.

11 a.m. Biomedical Science Seminar Series. ‘The Regulation of Glycogen Synthesis in Tissues.’ Donatello Aragona, director of the Laboratory of Metabolism, U. of Calif., Irvine.

4 p.m. Immunology Research Seminar Series. ‘Adaptive Tracking of Bacteria.’ Armin Zomorodian, PhD, guest lecturer. Erlanger Aud. 286-0432.

1 p.m. Molecular & Cell Biology. ‘Excitatory and Inhibitory Synaptic Activation of Cardiac K Channels.’ Michael Sanguinetti, professor of physiology, U. of Calif.

10 a.m. Developmental & Cell Biology. ‘A Stage Adaptation of Hana’s Suitcase'.
Sing-along and concerts round out the year

By EAM ONFEN

The Department of Music in

Major ("Gypsy Rondo") (1795),
The concert begins

— will celebrate the 250th an-

portions of three 20th-century

ging the 150th ann-

Carlin, instructor in harpsichord

semble — directed by Maryse

Lounge. The program will include

record.wustl.edu

The inspection includes a

free vehicle inspections

wipers, headlights and taillights.

Towing, are offering the service to

Free vehicle inspections

Park University, 58-34. Sophomore

Dec. 3, the Bears rolled past North

3, the Bears rolled past Nebraska.

Field House. Washington U.

Men’s hoops wins 23rd

goals (12), and fourth in goals

safety. Watts enters the spring

The volleyball team — which fell to

Watts earned the honor of all-

Men’s tennis ranked

eight in Division III

its fall season with a series of

She was named to the 2006

On Days 1, the men recorded seven

Field House. Washington U.

Men and women’s

from the fall Division III

in the CAA Classic single game record.

Fowler-Finn was named second team.

Fowler-Finn earned the Robert L. Burnes

Men and women’s

on the CIAA Fall Championship.

itself to earn Academic All-

Watts enters the spring with a

Of the 27 seniors, four members

four members of the 2006 CIAA

Watts entered the spring with a 10-2 record in singles.

Men and women’s

Fowler-Finn named

women’s soccer all-America selection

Men and women’s

in the UAA.

Watts entered the spring with a 10-2 record in singles. Wofford's senior was named third-team hononors.

Washington University, Campus Box 1070,

One Brookings Drive, St. Louis, MO 63130.

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Senior defensive lineman Drew Waddington capped his fourth-year career by being named the UAA Defensive Player of the Year, an award announced by the conference office.

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Highway

Metro, RideFinders offer commuters options – from Page 1

In 2008 and closing 1-44 completely from Hanley Road east to Kingshighway and rebuilding interchanges in that area in 2009. By Dec. 31, 2009, all lanes on I-44 and I-170 are expected to be completed and open, with final work complete by July 31, 2010. Landscaping should be complete by the end of October 2010. To help ease traffic on alternate routes, MoDOT will stripe temporary lanes or modes of transportation.

University faculty, staff, students and patients need to start thinking now about alternative routes or modes of transportation. Benefits-eligible employees and full-time students can renew the Metro Universal Pass for the spring semester, which provides free access to the Metrolink and Metrolibus services. Those interested in obtaining a spring pass can apply online at the Parking and Transportation Services Web site at parking.wustl.edu.

A Metro system map, scheduled to be distributed to staff and students in April, is updated online at gatewayguide.com. In addition, employees and students can use the RideFinders regional rideshare program, carpool with co-workers or bicyclists to the two campuses.

James P. Crane, M.D., associate vice chancellor for clinical affairs, chief executive officer of the Faculty Practice Plan and leader of the Medgene II-B/C joint venture addressing the highway shutdown said the task force will continue working with MoDOT, academic and clinical partners to provide visitors and patients with information to make their trips to both campuses and physicians' offices as smooth as possible.

Gateway Constructors, a group of about 10 contractors, and MoDOT have put in place several measures to assist motorists during the construction, which is scheduled to begin in early 2007.

The project web site, www.thenewi64.org, is updated regularly and allows motorists to sign up for e-mail updates on the construction schedule.

Once the project begins, the site will have an interactive map that will allow motorists to enter their starting point and destination to get alternate routes.

In addition, once the contract with Gateway Constructors is finalized, the group plans to hold informational open houses for the public to ask questions and see construction maps.

The Gateway Guide cameras, sensors and message boards will go online to help motorists navigate the I-64 loop at all times, providing travel times and a list of different travel states. These are available online at gatewayguide.com.

The team also plans to set up a 511 telephone number for motorists to get traffic updates and travel times and to maintain electronic street signs, traffic signals and highways that will provide traffic advisories.
Flynn named a Missouri Nurse of the Year

By BETTY MILLER

Patrick Flynn, clinical research nurse coordinator in the Department of Psychiatry, has been named Missouri Nurse of the Year by the Missouri Nurses Association's Third District. Flynn, a 1978 graduate of Saint Louis University, has worked in the area of psychiatric research for four years. He was named Nurse of the Year by the Missouri Nurses Association’s Third District in 2003. Flynn received his Master of Science in Nursing from Saint Louis University in 2005.

*Obituaries*

Chilson, professor emeritus of biology, 73

Jane P. Chilson, Ph.D., adjunct instructor and professor emeritus of biology in Arts & Sciences, died Wednesday, Nov. 22, 2006, after a brief illness. She was 73.

Chilson was a native of Little Rock, Ark. She earned a bachelor's degree from Florida State University. She earned a bachelor's degree from the Arkansas State Teacher's College and a master's from the University of Arkansas. She did postdoctoral work at Brandeis University in 1980.

Chilson joined the Department of Biology in 1983 and chaired the department twice during his tenure. He was chair of the department of biology in 1983 and chair from Jan. 1, 1981 to Dec. 31, 1983. He was a faculty member from Jan. 1, 1981 to Dec. 31, 1983. His research was in enzymology and protein structure. He was especially interested in the in-

WUSTL, SIUE combine to host research exposition

By ANDY CLENDENNING

In a unique joint effort, the Multipurpose Research Laboratory at St. Louis University and the College of Arts & Sciences at Southern Illinois University Edwardsville are partnering to host the Metropolitan St. Louis Guam Conference on Jan. 10-11.

The conference will focus on studies of research that are conducted in the area, including evidence-based research, and interdisciplinary research.

"We find that our students, both full-time and part-time, are driven to crosscutting research that de- monstrates the potential and effective collaborations across the campus and the world," said Mary V. Killoran, Ph.D., director of WUSTL's Research Office. "We hope that the kind of event will spark ideas and conversations that lead to great research partners and future publications.""Washington University will host the conference in Whitaker Hall. Chancellors Mark S. Schlissel and Quintin L. Morris, Jr. will deliver opening remarks, and Samuel L. Kantor, M.D., vice chancellor for research, will introduce the day's first session and deliver closing remarks at the end of the day.

Barbara A. Schaal, Ph.D., the Spencer T. Olin Professor in Arts & Sciences and biology in vice president of the National Academy of Sciences, will be one of three presenters in the Forster Symposium, which will be an all-day concurrent session on Day 1.

In another session, Marty Minzel, foundation relations director at WUSTL, will moderate the panel "Raising the Bar: Raising the Bar: The Role of Private Foundation Delegates and Institutional Scholars in the Future.""Another encouraging spon-

Promotion with tenure

Hether Gorconor, to associate professor of medicine

Michael Diamond, to associate professor of biochemistry and molecular biology.

Katherine B. McDermott, as associate professor of biology.


Scott Saunders, to associate professor of pediatrics

Ray Veint, to associate professor of pharmacology

Jeffrey M. Zacks, to associate professor of psychology

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When Keith S. Garcia was a boy, he wanted to be a pilot. He probably wasn’t the only one in his neighborhood, either, growing up in Houston, the home of the Johnson Space Center and Mission Control for the Apollo moon flights of the late 1960s and early 1970s.

He was an engineer, and Keith liked science, but his dreams focused on applied science rather than medicine. Although his ma-
terformalgraddad had been a sur-
tor, Garcia never really thought about becoming a doctor himself. “My first exposure to biology was really unpleasant,” he says.

But that changed in high school when a chemistry teacher got him interested in biochemistry. Later, as an undergraduate at Rice University, he planned to get a doctorate in biology and use that degree as a basic, biological scientist.

Garcia spends most of his time in the clinic, seeing patients eight to 10 hours each day. He also spends a lot of time teaching medical

Keith S. Garcia, M.D., Ph.D., reviews a chart of a candidate for transcranial magnetic stimulation with Patricia Sharp, administrative coordinator. “Keith’s background in neuroscience, physiology and psychiatry really matches up well with this type of clinical research,” says Charles F. Zorumski, M.D.