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Record

July 23, 2004

Volume 29 No. 1



Washington University in St. Louis

Sun rises on University's North Campus

By Andy Clendennen

In the past few years, the University acquired the former Angelica Uniform Factory and adjacent property formerly owned by Radiant Products in St. Louis City.

Now that property is becoming the newest University campus, known as North Campus.

Located north of Delmar Boulevard behind The Pageant and adjacent to the MetroLink stop in that area, North Campus will house several University departments and can be reached via the University shuttle's green line.

The Office of Parking and Transportation Services, ROTC, Top Care Lawn Service, Huntleigh Shuttle Operations and Campus Mail Services are all moving to the new location. Other departments may move in the future, depending on space.

Although Campus Mail Services is moving to North Campus, the campus post office will continue to sell stamps and other U.S. Postal Service products from its current location.

Students, faculty and staff might be most interested in the move of the parking office, which will be at 700 Rosedale Ave.

The office will retain the same phone number and expects to be open for business in the new location Aug. 9. To help facilitate the move, parking and transportation services will be closed Aug. 6.

"All business will be conducted out of the new office," said Lisa Underwood, manager of parking and transportation services. "We will plan to operate remotely from the old South 40 office during student move-in to make it easier for students to visit us. This will be from 10 a.m.-2 p.m. Aug. 26-29.

"The Campus Store will continue to offer daily passes, and we are looking at other ways to make daily passes available to the com-

See **Campus**, Page 6



MetroLink construction at Skinker Boulevard and Forest Park Parkway — as seen above, looking south from the roof of the 276 N. Skinker Building — has continued this summer, as it has at numerous other St. Louis-area sites. Already served by a MetroLink station at the Medical Campus, the University will further benefit from three new stations: at Skinker and the parkway; at Big Bend Boulevard and the parkway; and at West Campus, at the parkway and Forsyth Boulevard.

Skinker Blvd. will close for 2.5 days for installation of temporary bridges

By Andy Clendennen

From 9 p.m. July 30 to 6 a.m. Aug. 2, Skinker Boulevard will be closed to traffic at Forest Park Parkway.

Only local traffic will be permitted on Skinker between Clayton Road and Lindell Boulevard and between Delmar Boulevard and Pershing Avenue. There will be a traffic barricade that prevents vehicles from traveling south of Pershing and north of Lindell, and a project staff person will prevent any pedestrian traffic through the construction site.

Additionally, the parkway will be closed at the same time Skinker is closed. Local traffic accessing the University will need to use alternate entrances.

The roadway closures are necessary for the installation of the temporary bridges that will carry traffic over tunnel construction beneath the intersection of Skinker and the parkway.

The dates and times could change in the event of bad weather or unforeseen conditions.

No pedestrians will be permitted through the intersection of Skinker and the parkway during this

closure. Northbound pedestrian traffic will be diverted to east on Lindell, north on Des Peres Avenue, west on Pershing and then north on Skinker.

Southbound pedestrian traffic will travel east on Pershing, south on Des Peres, west on Lindell and then south on Skinker.

The pedestrian detours are non-negotiable. There will be no safe path through the intersection during this weekend.

Kayak's Coffee will be accessible by foot or car, and people can still get to Lindell and Brookings Drive.

Motorists traveling south on Skinker will detour east on Delmar, south on Kingshighway Boulevard, west on Interstate 64 (Highway 40) and then south where Skinker becomes McCausland Avenue.

Northbound motorists will detour east on Interstate 64, north on Kingshighway, west on Delmar, and north on Skinker.

For more information about the MetroLink extension, including road closure and construction information, go online to crosscounty.org or call the project hotline at 923-3050.

Animal tissue transplants could treat organ failure

Newly grown kidneys shown to sustain life

By Michael C. Purdy

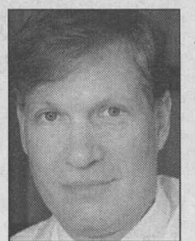
Growing new organs to take the place of damaged or diseased ones is moving from science fiction to reality, according to University researchers.

Scientists have previously shown that embryonic tissue transplants can be used to grow new kidneys inside rats.

In their latest study, the researchers put the new kidneys to an unprecedented and critical test, by removing the rat's original kidneys and placing the new kidneys in position to take over.

The new kidneys were able to successfully sustain the rats for a short time.

"We want to figure out how to grow new kidneys in humans, and this is a very important first step," said Marc R. Hammerman, M.D., the Chromalloy Professor of Renal Diseases and leader of



Hammerman

the study. "These rats lived seven to eight days after their original kidneys were removed — long enough for us to know that their new kidneys worked."

The study was published in the July/August issue of *Organogenesis*.

Hammerman is a leader in the burgeoning field of organogenesis, which focuses on growing organs from stem cells and other embryonic cell clusters known as organ primordia.

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'The essence of a science career' STARS program provides key experience

By Tony Fitzpatrick

A 17-year-old student from John Burroughs School spent a good portion of this summer working with a University mentor to develop a program that someday will make a gamer "rage against the machine."

Steven Anderson of Creve Coeur, Mo., spent six weeks working with Stan Kwasny, Ph.D., research associate in computer science and engineering, on developing a computer program that can play a human in the extremely challenging game of Arimaa, a board game similar to chess but more difficult for a computer to beat.

Inspired by IBM's Deep Blue, which beat chess world champion Garry Kasparov in 1997, computer programmer Omar Syed invented the game and then offered a challenge: a \$10,000 award to anyone who can create a program that

can beat a human at Arimaa before 2020.

Anderson has keen sights on getting a start to do just that.

For six weeks, Anderson, using artificial intelligence (A.I.) approaches, developed a program that prunes from tens of thousands of potential Arimaa moves to focus on about 100 moves for serious consideration, all the while learning the program language JAVA, writing a 15-page research paper and taking notes for a 10-minute oral presentation.

He is one of 48 academically talented high-school juniors and seniors who partook in the Pfizer Inc. and Solutia Inc. 2004 Students and Teachers as Research Scientists (STARS) program. It pairs students and teachers with research mentors from the University of Missouri-St. Louis, Saint Louis University and Washington University.

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Steven Anderson (right) of Creve Coeur, Mo., a John Burroughs School senior, and Stan Kwasny, Ph.D., research associate in computer science and engineering, remove chess pieces to simulate a game called Arimaa, which is similar to chess but more difficult for a computer to beat. Kwasny worked with Anderson as his mentor in the STARS program for six weeks to help devise a computer program that can play a human in the game.



Garrett A. Duncan, Ph.D., associate professor of education, of African and Afro-American Studies and of American Culture Studies, all in Arts & Sciences, leads a recent on-campus training session for St. Louis public-school teachers participating in the federally funded "Teaching American History" program. Duncan's discussion centered on "Brown v. Board of Education: How Did We Get There? Where Have We Been? And, Where Are We Going?"

Public-school history education bolstered by University project

BY GERRY EVERDING

Arts & Sciences faculty in history, education and American Culture Studies have completed the first phase of a collaborative community program designed to improve the teaching of American history in the St. Louis public school system.

The project gives public-school teachers an opportunity to return to the classroom, to become students once again and to re-experience the passion of American history as told through primary sources.

The ultimate goal is to have teachers bring this fresh perspective back to the public-school students they teach, to spark new approaches and innovations in the American history curriculum offered in the St. Louis public schools.

David T. Konig, Ph.D., professor of history and of law, co-directs the grant program along with Linda Riekes and Olivia White of the St. Louis public schools. Margaret Finders, Ph.D., associate professor of education, is leading a related summer workshop designed to help teachers develop new history curricula based on material covered in the program.

Konig's other collaborators see the project as a model for school districts around the nation.

"Our goal is to assist in the revival of the St. Louis public schools as a vibrant educational enterprise, emblematic of the city as a whole," Konig said.

"We've seen that we have two great assets to build on in this project — the renewed enthusiasm for historical research among the teachers, and the fact that some of the most significant episodes in American history took place here in St. Louis, in the same communities where these schools are located."

Supported by a three-year award from the U.S. Department of Education, the first phase of the

"Teaching American History" program involved bringing 28 St. Louis public-middle-school teachers back into the classroom for five daylong training sessions on key aspects of American history. When classes resume this fall, new curricula developed in the program will be implemented into St. Louis public-school classrooms, and a second cohort of teachers will begin the next cycle.

The University assisted the St. Louis public schools in obtaining the Teaching American History grant, and it continues to take the lead role in the program's implementation. Arts & Sciences faculty are leading four of the five teacher training sessions this school year; one session was led by faculty from Saint Louis University.

One objective of the program is to encourage the use of primary historical documents in the teaching of history. For example, during a training session on "Freedom and the Early 19th Century," Konig introduced teachers to original documents from court cases of slaves who sued for freedom in St. Louis during the 1800s.

The "Freedom Suits" are available online through the St. Louis Circuit Court Historical Records Project, another collaboration that involved faculty, staff and students from American Culture Studies.

In March, the middle-school teachers visited WUSTL for a session on "African Americans in the Civil War Era" taught by Leslie Brown, Ph.D., assistant professor of history, of American Culture Studies and of African and Afro-American Studies in Arts & Sciences.

Brown offered the teachers fresh and provocative approaches to teaching slavery, including an examination of Missouri slave narratives, excerpts from the

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Woods give back to WUSTL, establish professorship

BY BARBARA REA

Joyce and Howard Wood, both alumni of the Olin School of Business, have created the Joyce and Howard Wood Distinguished Professorship in Business.

Chancellor Mark S. Wrighton announced the gift of \$1.7 million, which has been augmented with \$300,000 from the University's Sesquicentennial Endowed Professorship Challenge.

William P. Bottom, Ph.D., will be formally installed as the professorship's first holder at a later date.

"One could not ask for more dedicated and generous alumni than Joyce and Howard Wood," Wrighton said. "We are very grateful for their continued involvement with Washington University, and we are honored to have their name associated with us in perpetuity."

Bottom has been a member of the Olin School faculty since 1988, when he joined the University as an assistant professor of organizational behavior. He was promoted to associate professor in 1993 and full professor in 1997.

Bottom served as the first Marcile and James Reid Professor in the Olin School, an award given for teaching excellence among junior faculty.

"Bill Bottom is an outstanding teacher and researcher in his field, and I am delighted that he is being recognized with this distinguished professorship," said Stuart I. Greenbaum, Ph.D., Olin School dean and Bank of America Professor.

In addition to his scholarship, Bottom holds administrative responsibilities as senior associate dean and director of the Ph.D. program in the Olin School.

Bottom's areas of expertise include negotiation, team development, leadership, organizational behavior and organization design. His research has been recognized with grants from the National Science Foundation, the Russell Sage Foundation and the University's Weidenbaum Center on the Economy, Government, and Public Policy.

He has been widely published in scholarly journals in the fields of psychology, political science and management. In addition, he is on the editorial boards of *Organizational Behavior and Human Decision Processes* and the *SSNR Journal on Negotiation and Conflict*.

He recently served as executive director of the International Association for Conflict Management and as a member of the advisory panel for the Decision, Risk and Management Science Program at the National Science Foundation.

In addition to his extensive

teaching and research, Bottom works as a consultant and trainer for companies such as Anheuser-Busch, BJC Health Systems, Charter Communications, Detroit Edison, IBM and Monsanto.

He earned bachelor's, master's and doctoral degrees in psychology from the University of Illinois at Urbana-Champaign.

Howard Wood is a veteran volunteer leader and adviser for the Olin School, having served on the original 1980-81 Business Task Force, which was part of the Commission on the Future of Washington University.

He is a member of the school's national council.

"Joyce and Howard Woods' leadership has made a significant impact on Olin's rise as a leading business school," Greenbaum said. "They have inspired countless fellow alumni to support the school. Their efforts on behalf of their alma mater truly have made a difference."

In 2000, the couple received the Dean's Medal from the Olin School.

Joyce Wood, who graduated with a bachelor's degree in 1976 and a master's degree in 1977, and Howard Wood, who graduated with a bachelor's degree in 1961, have more than their alma mater in common. They both are certified public accountants, they both have enjoyed very successful

careers, and they both credit the education they received from the University as having a major role in their successes.

"It's logical for us to want to give back to Washington University," Joyce said. "It's the place we credit for much of our success. We both grew up in families that

believe in giving back to the community."

In 1999, the couple gave back in a major way by establishing the Wood Leadership Fellows Program with a \$6.6 million commitment to the Olin School. The fellowships provide two-year, full-tuition grants to up to 15 incoming master of business administration students.

"We've met many of the Wood Fellows, and they are a wonderful group of people, tremendously talented," Howard said.

After graduation, Joyce joined Arthur Andersen & Co. in St. Louis as a certified public accountant. She is a principal of Wood & Associates, a management consulting firm based in their hometown of Bonne Terre, Mo.

Howard also began his CPA career at Arthur Andersen and rose to the position of partner in charge of the St. Louis office tax division and as regional tax partner.

See Woods, Page 4

Shuttle riders to be required to show identification

Beginning Aug. 16, the University's shuttle system will institute a ridership policy in which all persons will be asked to show a current, valid WUSTL ID or a specially assigned pass provided by the Office of Transportation Services in order to access the system.

This will not affect shuttle use by members of the University community, but may affect non-University riders. Prior to that date, all riders will be notified of the new requirements as they board the shuttles.

The primary reason for requiring IDs and passes is the need to assure transportation providers and insurers that the persons using shuttles are authorized by the institution to do so.

In addition, the University is responding to complaints that some non-University riders on the shuttle system have behaved inappropriately, including panhandling, asking inappropriate and unwelcome questions of other passengers, and making inappropriate comments, as well as following passengers off the shuttles to continue the unwelcome exchange.

Further, in some cases, the shuttles have been used by non-University riders to avoid using the Metro buses — when WUSTL is not authorized to offer competing services to non-University riders.

When the shuttle system was originally developed, attention was focused on University riders, as well as providing a service to the community. That policy continues, and community riders are encouraged to apply for shuttle passes through the Office of Transportation Services (935-5601; parktrans@wustl.edu).

Some have asked how difficult it will be to obtain a pass if they are not a member of the University community. The answer is that persons applying for passes who are willing to provide a valid address, telephone number and photo ID will be granted passes as long as they agree to abide by the University's guidelines expected of all passengers and as long as the requested route does not directly parallel Metro bus lines.

"The University has been pleased to provide services to the members of our community and, within limits, to our neighbors

who may occasionally find the shuttle system a convenient way to get to destinations not served by Metro," said Lisa Underwood, manager of parking and transportation services. "However, occasional overcrowding and instances of inappropriate behavior by non-University persons make it necessary for us to ask non-University riders to follow the same protocol to be used by University students, faculty, staff, and contract employees — carrying and displaying a valid University ID to gain access to University services.

"We believe this approach will better serve our primary riders by reducing the chance of overcrowding on certain routes, and by allowing us to provide more efficient transportation free of any unwanted or unwanted interruptions."

The University expects these changes to improve the quality of service and to provide assurances that shuttles will remain reliable, comfortable and effective ways of transit for the thousands of passengers who use the services each day.



Bottom

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Washington University in St. Louis

School of Medicine Update

Gordon named director of Center for Genome Sciences

BY GILA Z. RECKESS

Jeffrey I. Gordon, M.D., the Dr. Robert J. Glaser Distinguished University Professor, has been appointed director of the University's new Center for Genome Sciences.

The center is an interdepartmental, interdisciplinary and University-wide program strategically located adjacent to the Genome Sequencing Center (GSC).

The new Center for Genome Sciences is the first of three major components to be implemented for BioMed 21, the University's initiative dedicated to using the latest knowledge of the human genetic blueprint to develop new ways to diagnose, treat and ultimately prevent a variety of common human diseases.

"Not only is Jeff one of the University's most valued and esteemed leaders, he also is internationally respected as one of the foremost scientists in his field," said Larry J. Shapiro, M.D., executive vice chancellor for medical affairs and dean of the medical school.

"He has been extremely influential in the exciting new field of translating basic genetic data into clinically relevant research, which embodies the goals of our BioMed 21 initiative."

Based at 4444 Forest Park Ave., the new center will provide space for University faculty and students and bind together research and educational programs in comparative genomics and systems biology.

These emerging fields combine computational science with quantitative experimental biology to examine the origin, structure and function of the complex networks of genes and gene products that regulate cellular behavior.

Information gained through

this research promises to lead to key insights about the basis of human health and disease.

"The new center represents a community of scientists with a broad range of research expertise who have come together to create an environment in which people can address fundamental questions in comparative genomics and systems biology," Gordon said.

In addition to Gordon, other founding members of the center are: Mark Johnston, Ph.D., professor and interim head of the Department of Genetics; Sean R. Eddy, Ph.D., the Alvin Goldfarb Distinguished Professor of Computational Biology; Robi Mitra, Ph.D., assistant professor of genetics; and Barak Cohen, Ph.D., assistant professor of genetics.

Later this year, three other faculty members from the Medical and Hilltop campuses will join the five founding members.

Center members will provide new tools to GSC researchers to help interpret the vast amount of information being generated from ongoing sequencing projects.

Gordon joined the University faculty in 1981 and served as head of the Department of Molecular Biology and Pharmacology from 1991-2004.

He was also director of the University's Division of Biology and Biomedical Sciences, which oversees graduate student education in the biological and biomedical sciences, from 1994-2003.

Gordon and his colleagues plan to take advantage of the center's interdisciplinary environment to develop new ways to educate graduate and undergraduate students from multiple schools in the University and to promote career development of faculty.



Gordon



An innovative approach Jan Brunstrom, M.D., assistant professor of neurology and instructor of pediatrics, and cerebral palsy patient Emma Price demonstrate martial arts moves at "Building the Road to Independence," a national seminar led by Brunstrom that highlights a highly effective approach to managing cerebral palsy with sports and other physical and educational activities. Charlie Walton, a karate instructor with Gateway Defensive Systems, looks on at the July 10 seminar held at the Eric P. Newman Education Center. Brunstrom received the highest honor from the United Cerebral Palsy Association Women's Board in 2001 for her clinical work and for the martial arts program she designed for kids with disabilities.

Lack of protein prevents lupus-like condition

BY MICHAEL C. PURDY

Removal of an immune system signaling protein prevents the development of a lupus-like condition in mice, according to University and National Institutes of Health researchers.

If additional studies in other animal models and humans confirm that SLAM-associated protein (SAP) is a primary contributor to lupus, it may be an ideal target for the development of new drug treatments, scientists said.

"What's perhaps most exciting is that normal immune system functions were still largely intact in the experimental mice that lacked SAP," said Stanford Peng, M.D., Ph.D., assistant professor of medicine in rheumatology and of pathology and immunology and lead investigator for the study.

"Other immune system proteins are potential targets for autoimmune disease treatments, but they affect large portions of the immune system, making weakened immune function a potential side effect of any new drug. Targeting SAP for treatment may avoid that risk."

Scientists have used several animal models to study the immunological underpinnings of human lupus, a condition that afflicts approximately 1.5 million Americans with arthritis, prolonged fatigue, skin rashes, kidney damage, anemia and breathing pain.

In one of these models, exposing mice to a hydrocarbon oil

known as pristane causes mice to develop a condition with many similarities to human lupus, including kidney disease and arthritis.

But in the new study, reported in the July 15 issue of the *Journal of Experimental Medicine*, a genetically modified line of mice lacking the SAP gene continued to be fit even after pristane exposure.

"The mice appear to be generally healthy," Peng said. "They have none of the lupus-like symptoms of the control group, and their immune systems generally respond to vaccinations like those of normal mice."

SAP affects the activity of surface molecules on immune system cells known as lymphocytes. Earlier research had shown that higher SAP levels were present in animals with autoimmune conditions.

Instead of disabling whole groups of immune system cells, SAP's removal seems to disrupt communication between two different types of immune cells, T and B cells.

Scientists have long known that T cells help B cells produce antibodies meticulously customized to destroy the last scattered remnants of a persistent invader. But they've had a hard time determining the details of how those interactions take place.

"We know a lot of molecules that are important to the activation of T and B cells, but we have never understood what was important for their interaction," Peng said. "SAP may give us an

important first insight into how these interactions occur."

Peng and his colleagues plan to test if SAP is present at unusually high levels in human patients with lupus and to study how SAP removal or suppression affects other animal models of lupus.

"It's going to be very interesting to see if this is a finding that can apply to lupus generally or if it is limited to a subset of lupus," Peng said.

Based on how thoroughly SAP's removal appears to disrupt T and B cell interactions, which are essential to producing the pathogenic antibodies seen in lupus, Peng suspects the finding will be generally relevant.

Peng also wants to explore potential connections between SAP and other autoimmune diseases, including allergies and myasthenia gravis, in which the immune system produces antibodies closely customized to attack inappropriate targets.

Medical School Bulletin online

The *Medical School Bulletin* is now available on the school's Web site rather than in printed form.

The site, at bulletinoftheschoolofmedicine.wustl.edu, features search capabilities and faculty listings that are updated daily.

Asthma study needs volunteers

BY GILA Z. RECKESS

A School of Medicine study comparing the effectiveness of three asthma drugs needs volunteers.

The trial is part of a national study sponsored by the American Lung Association's Asthma Clinical Research Center.

Adults and children over 6 years old who qualify will be assigned to receive one of three drugs — Flovent, Singulair and Advair— already approved by the

U.S. Food and Drug Administration.

Volunteers will receive seven health assessments and free study medication, and they will be compensated for their time. Participants can also keep the peak-flow meter used during the study, which can be used to closely track asthma symptoms.

The University's team is led by Mario Castro, M.D., associate professor of medicine and of pediatrics. For more information, call 362-8696.

Siteman Cancer Center receives grant from May Co., Edward Jones

BY DIANE DUKE WILLIAMS

The May Department Stores Foundation and Edward Jones each have pledged \$1 million toward the Siteman Cancer Center's Emerson-Busch challenge grant.

The challenge grant, a \$10 million gift from Emerson's Charitable Trust and the Anheuser-Busch Foundation, will expand research space at Siteman and support and help ensure that patients have access to the most advanced cancer treatments.

This gift is being used as a challenge to generate \$20 million in additional matching support.

"These gifts from May and

Edward Jones will benefit efforts to lessen the burden of cancer on communities in the St. Louis area, the Midwest and beyond for years to come," Chancellor Mark S. Wrighton said.

"We extend our gratitude for their support of the Siteman Cancer Center."

Emerson's Charitable Trust and the Anheuser-Busch Foundation are contributing \$6 million and \$4 million respectively.

The challenge grant will further St. Louis' role as home to a nationally recognized cancer research and treatment program.

"The Siteman Cancer Center is a tremendous resource for the St. Louis community and the

nation," said Gene Kahn, chairman of the board and chief executive officer of The May Department Stores Co. and University trustee.

"The center is quickly becoming an international leader in patient care, cancer research, prevention and education.

"We feel honored to be among its major supporters and are very proud that our pledge is the first commitment toward the \$10 million challenge grant funded by Emerson and Anheuser-Busch."

First priority for funding through the Emerson-Busch challenge grant is expansion of cancer research space and programs in a new cancer research facility.

The basic and applied research supported by this gift are crucial in finding new treatments and diagnostic techniques for cancer patients.

"We are excited to be helping this well-known leader in cancer care by supporting its cutting-edge cancer research efforts and helping to ensure the best possible patient care programs are available for members of our community, our region and beyond," said Douglas E. Hill, managing partner of Edward Jones.

"And we are pleased to continue our partnership with the Siteman Cancer Center through this new commitment."

Based in St. Louis, The May Department Stores Co. is one of the country's leading department store retailers.

May operates more than 440 department stores and 680 Bridal Group stores in 46 states, the District of Columbia and Puerto Rico.

Edward Jones, also headquartered in St. Louis, is one of the fastest-growing financial services firms in the nation.

It serves more than 6 million clients from more than 9,000 offices in the United States and through its affiliates in Canada and the United Kingdom, offering a variety of investment services.

Hilltop, Medical campuses among best commuter workplaces

By ANDY CLENDENEN

According to numbers released by the Environmental Protection Agency (EPA), cars in St. Louis release 247,000 pounds of pollution each day into the air. And a typical household spends nearly 18 percent of its income in driving costs — more than it spends on food.

But Rebecca Green, M.D., Ph.D., instructor in pediatric endocrinology and metabolism, is not a contributor to those numbers.

In her commute to and from work, Green drives as little as she can. She estimates she uses MetroLink or her bicycle to make 85 percent of her trips to St. Louis Children's Hospital.

"I believe that it is critical to care for our environment," Green

said. "As a physician, I view this as part of caring for my patients, as our environment and the damage we do to it affect the health of our children. Using alternate transportation does this."

"And I believe we all need to minimize our use of limited fuel reserves, to leave some for our children and grandchildren. The car that is used by my family for more than 90 percent of our driving is a Toyota Prius, a gas-electric hybrid, which gets 50 miles to the gallon."

Green is just one of thousands who commute to and from both the Hilltop and Medical campuses on a daily basis. University programs such as the Mortgage Forgiveness Program, which allows employees to qualify for up to \$4,000 or 5 percent of the purchase price of the home as an

incentive to live closer to the worksite, make it easier and more economical for people to commute.

Because of this program and other efforts including shuttles, vanpools, carpools and land donation, both the University and the School of Medicine were recognized by an EPA-created program as the St. Louis Region's Best Workplaces for Commuters in a June 30 ceremony at the Eric P. Newman Education Center on the Medical Campus.

"We are strategically located where employees, students and visitors can take advantage of public transportation, and we hope that even more will do so when MetroLink begins to serve the Hilltop and West campuses in 2006," said Steve Hoffner, assistant vice chancellor for students and director of operations. "We are always interested in ways in which we can reduce the demand for parking at all of our campuses."

One of those is MetroLink. Green, an ardent supporter of the expansion, had a sign in her Parkview Neighborhood yard reading "Metro, The Right Way To Go." She estimates that her family has driven to the airport "maybe once" since MetroLink started running.

She has a station less than a mile from her house and another just two blocks from her office. Friends arriving by plane are mailed MetroLink tickets to get

them from the airport to the closest station.

"It is easier for me to manage patient calls when I am not driving, as taking a call during my drive to work or home means I need to find a place to pull over so I can give the patient my full attention," she said. "And as a pediatric diabetes doctor, our calls are quite heavy at meal times, which often overlap with my drive/commute time."

"And I like using the train. I meet people I probably would never have had the opportunity to cross paths with otherwise."

"My family uses the train when ever we can. We have used it to go to the airport, Convention Center, the Arch, Union Station, etc. Basically, if you can get there on the train, we try to use the train."

Best Workplaces for Commuters is a voluntary partnership program created by the EPA and spearheaded locally by Citizens for Modern Transit, RideFinders, the American Lung Association and the St. Louis Regional Clean Air Partnership. It's designed to cut traffic congestion and traffic-related air pollution.

The program recognizes employers who provide environmentally friendly commuter benefits to encourage and help employees to take transit, carpool or vanpool or even telecommute. Employers whose benefits packages help them to qualify for the list are demonstrating they are

truly committed to reducing pollution, commuting costs, traffic congestion, and employee stress caused by single-occupant vehicle commuting.

The University and School of Medicine were among the 26 recognized in the inaugural list.

"We feel honored to receive this award," said Jan Muraski, manager of the Office of Transportation Services at the School of Medicine.

"The University and medical school strive to be good stewards for our community. Both campuses are aware of ozone issues in the area, and we are trying to be part of the solution."

To qualify as one of the St. Louis Region's Best Workplaces for Commuters, employers had to provide at least one primary commuter benefit such as monthly transit or vanpool subsidies of at least \$30; a central point of contact for information, who actively informs employees of available commuter benefits; access to a Guaranteed Ride Home Program, and at least three supporting commuter benefits such as rideshare matching, compressed work schedules and preferred carpool or vanpool parking.

All companies making the list work with Citizens for Modern Transit and/or RideFinders to promote ridesharing benefits and access to their respective Guaranteed Ride Home programs.

Gateway Festival Orchestra concludes summer season

The Gateway Festival Orchestra will conclude its 41st annual season of free summer performances with "Vienna's Masters," a concert emphasizing music of composers working in that city, at 7:30 p.m. July 25 in Brookings Quadrangle.

The orchestra is conducted by James Richards, professor of music at the University of Missouri-St. Louis.

The program will open with Wolfgang Amadeus Mozart's *Symphony No. 35 in D Major* ("Haffner") and also includes Beethoven's rarely heard *Music for a Knight's Ballet*, a lighthearted early work which, to parallel the dance, contains hunting, drinking and love songs, as well as a war dance.

Featured artist Paul Garritson, instructor in clarinet in WUSTL's

Department of Music in Arts & Sciences, will be the soloist in Carl Maria von Weber's *Concertino for Clarinet and Orchestra*.

The final work in the concert is Johannes Brahms' popular *Variations on a Theme of Haydn*.

The Gateway Festival Orchestra was established in 1964 by William Schatzkammer, professor emeritus of piano, and other local musicians, in part to provide summer employment to members of the Saint Louis Symphony Orchestra. The group originally performed on the downtown riverfront but relocated to WUSTL in 1970.

The public is encouraged to bring lawn seating. The rain location is Graham Chapel.

For more information, call 935-4841.

University Events

University College Preview • Engineering Evening Degree

"University Events" lists a portion of the activities taking place July 23-Aug. 27 at Washington University. Visit the Web for expanded calendars for the Hilltop Campus (calendar.wustl.edu) and the School of Medicine (medschool.wustl.edu/calendars.html).

Lectures

Friday, July 23

9:15 a.m. **Pediatric Grand Rounds.** "The Practice of Political Medicine." Kathryn Plax, asst. prof. of pediatrics. Clopton Aud., 4950 Children's Place. 454-6006.

Wednesday, July 28

11:30 a.m.-1 p.m. **University College Brown Bag Informational Seminar.** Women's Bldg. Formal Lounge. For reservations: 935-6700.

5:30 p.m. **School of Engineering & Applied Science Evening Degree Program Information Session.** For WUSTL employees. Lopata Hall, Rm. 303. For reservations: 935-5484.

Thursday, Aug. 5

7 p.m. **University College Preview Night.** Ridgley Hall, Holmes Lounge. For reservations: 935-6700.

Wednesday, Aug. 11

8:30 a.m.-4:30 p.m. **Center for the Application of Information Technology Workshop.** "Excelling at Change Leadership." (Continues 8:30 a.m.-4:30 p.m. Aug. 12.) Cost: \$1,195; reduced fees available for CAIT members. CAIT, 5 N. Jackson Ave. To register: 935-4444.

How to submit 'University Events'

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

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

Upon request, forms for submitting events may be e-mailed, mailed or faxed to departments, and they may fill them out and return them.

Deadline for submissions is noon on the Thursday eight days prior to the publication date.

Music

Sunday, July 25

7:30 p.m. **Concert.** Gateway Festival Orchestra. Brookings Quadrangle (Rain location: Graham Chapel). 935-4841.

And more...

Friday, Aug. 27

1-4 p.m. **Career Center Event.** On-campus Recruiting Approval Afternoon. Umrath Hall Lounge. 935-9442.

Construction Update

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

Hilltop Campus

Earth and Planetary Sciences Building

The punch list has been completed for most areas. The University has accepted the south and north wing. The occupancy permit for the building has been received. The commissioning is nearing completion. Exterior work, including landscaping, is nearing completion.

Phase IIB Housing, South 40

Exterior building work, tele-

communications and the finish work are nearing completion. The furniture move-in was scheduled to start July 19 and end July 30.

Medical Campus

Specialized Research Facility East

Construction is progressing on the two-story, 40,500-gross-square-foot research building. The concrete stair towers are completed to full height. The structural frame was started July 14 and is expected to take four weeks to complete. Mechanical,

electrical and plumbing systems are being installed from the Basement Mechanical Room out. The tentative project completion date is April.

Farrell Learning & Teaching Center

Construction is progressing on the six-story, 110,000-gross-square-foot teaching facility. Steel erection on the building is 90 percent complete. All concrete floors will be completed by the end of July. The project is on schedule for summer 2005 occupancy.

Woods

Extensive involvement in the community

— from Page 2

In 1987, he changed careers and became president and chief executive officer of Cencom Cable TV, a multiple-system cable operator. In 1993, he co-founded another cable television firm, Charter Communications Inc., which has grown into the fourth-largest cable operation in the United States.

After the sale of Charter in 1999, he left in 2001 to form Cequel III LLC, where he is chairman. Cequel is an investor and operator in the cable television and communication towers businesses.

The Woods also spend considerable time managing their private companies and cattle ranch in Bonne Terre.

Howard served as president of the Olin School's Alumni Association and was recognized with Olin's Distinguished Alumni Award in 1992 and the Uni-

versity's Founders Day Award in 1996.

Washington University is not the only institution benefiting from the Woods' support. Joyce has been actively involved in her local Chamber of Commerce and has served as past president and as a board member.

She also served as past president for Bonne Terre's regional Council of Chambers. She chairs the chambers' transportation committee.

In addition, she chairs the board of trustees of the Parkland Health Center; is a member of the Missouri Baptist Hospital board; and serves on the board of the St. Louis Trust Co.

Howard's civic involvements include having served for six years as one of four commissioners appointed by the governor to the Missouri Conservation Commission in 1997; as director of the Conservation Federation of Missouri; and as the federation's president from 1984-85.

He also has co-chaired the Olympic Festival Organizing Committee, the group responsible for attracting the 1994 Olympic Festival to St. Louis.

Furthermore, he has served on a number of corporate boards, both public and private, and is a member of the University's Board of Trustees.

Child development center has openings

The St. Louis Children's Hospital Child Development Center, which provides quality care and learning enhancement programs at the School of Medicine, has openings for all age groups at both locations.

There are immediate openings for kids over 2, and a wait

list for infants and toddlers.

The center offers year-round flexible programming. Children of employees at all the University's campuses are eligible.

For more information, call 454-4700 for the 321 S. Newstead Ave. location or call 362-0777 for 4353 Clayton Ave.

Wolfgram is WUSTL's, world's ironman

By KEVIN M. KILEY

While the persistence and drive of the cyclists in this month's Tour de France is amazing and impressive, the University has its own world-class endurance athlete in Edwin D. Wolfgram, M.D.

And he does more than just ride a bike.

Last fall — less than a month before his 71st birthday — Wolfgram came in first in the 70-74-year-old age group at the Hawaiian Ironman World Championship Triathlon. The Ironman comprises a 2.4-mile ocean swim, a 112-mile bike race and a 26.2-mile run, performed consecutively.

Wolfgram's time of 13 hours, 25 minutes not only earned him his first world title in his eighth Ironman, but it also crushed the mark of his next-closest competitor by 45 minutes. It's a feat he hopes to repeat Oct. 16, when he'll be in Hawaii to defend his world-championship title.

Not bad for a guy who didn't start seriously training as an athlete until he was 48 and admits that back then he "couldn't run to the end of the block."

Not bad for a guy who has a bum knee thanks to a high-school football injury.

Not bad for a guy who is an assistant clinical professor of psychiatry in the School of Medicine and still maintains a full-time practice.

Wolfgram brushes aside the idea that he should slow down just because he's a septuagenarian.

"That's dangerous," he says. "The human form was meant to be used, and not just until age 70. We were not intended to be sedentary."

"Look at the animal kingdom. Squirrels don't retire after they've been around for a number of years, and nothing else does either. They keep going until they die."

Wolfgram says cross training largely gave him the edge to defeat former Olympians and earn the title of the world's top endurance athlete between 70-74. Of course, swimming, biking and running are part of his regular training regimen, but so are flexibility training, yoga and Pilates.

"I'm probably the only one internationally who puts all those things together," he says. "Fifteen years ago, these former Olympians put me away massively. But my feeling is that they really didn't tend to the fundamentals." And now, Wolfgram is beating them.

The University's resources also give him an advantage. But it's more than just the Athletic Complex facilities he uses early in the mornings — it's the people, too.

"I never hesitate to ask a coach or a student about how they're training and what their approach is," Wolfgram says. "People are always happy to teach you."

"And then I'm a part of the medical community here with the hospitals, where there are nutritionists, exercise physiologists, physical therapists and so forth. It's ideal."



Edwin D. Wolfgram, M.D. (left), assistant clinical professor of psychiatry in the School of Medicine, trains at Francis Field with Michael D. Moll, vice dean for business affairs in the School of Engineering & Applied Science. "He's incredibly inspirational and has taught me to exercise smarter," Moll says of Wolfgram, the Ironman triathlon world champion in the 70-74-year-old age group.

Never Too Late

It's Never Too Late: Dr. Ed Wolfgram's Book of Fitness, by Edwin D. Wolfgram, M.D., and his wife, Dorothea Wolfgram, is available at the Campus Store on the Hilltop Campus and the Medical Bookstore on the Medical Campus. It can be ordered online at fitnessnever2late.com, or by calling 367-1944 or toll-free (877) 638-3725.

He and head swimming and diving coach Brad Shively have discussed training schedules, stroke techniques and body positioning.

"Ed's terribly coachable," Shively says. "We talked almost three times a week right before the Ironman. He's extremely focused, and physically he's very impressive."

"He's one of the most amazing people I've ever known."

Wolfgram and Michael D. Moll, vice dean for business affairs in the School of Engineering & Applied Science, have been participating in triathlons together for 12 years. The only two members of "The 5:30 Club," they run a 10K in Forest Park very early on Thursday mornings in the spring, summer and fall. Membership in the club, however, is open.

"He talks the whole time, while I spend more time huffing and puffing," says Moll, 54. "He's incredibly inspirational and has taught me to exercise smarter. I hope to be able to do what he's doing when I get to his age."

A lifelong habit

To encourage others to adapt a life of health and fitness, Wolfgram and his wife, Dorothea — a former University publications director and magazine editor —

have written a book. Titled *It's Never Too Late: Dr. Ed Wolfgram's Book of Fitness*, it addresses injury-free training and why we should exercise and eat right.

"Fitness is so critical to the welfare of the nation," he says. "It's frightening to see how people have destroyed their lives and the lives of others."

"People think in terms of wanting to do so much for their children — making a good living, having a nice home, safe car and all this kind of stuff — and in the meantime, they're kind of slob."

"Maybe what's happened is people think they can do whatever they want, and then modern science will take care of them. But really, that's frequently not the case."

When he was 48, Wolfgram saw that that attitude in some of his physician colleagues was having severe adverse effects — diabetes, coronary bypasses, strokes.

"That was frightening," he says, "because I think we all felt we were infallible. We were all doing well and were successful; we were not fully aware that we were mortal. That really brought it home."

And now, in addition to maintaining his own outstanding health, Wolfgram has introduced fitness as part of his treatment for thousands of patients.

"With activity, you raise the level of serotonin in the brain," he says. "After about three or four months, people are aware that they feel better — not necessarily while they're exercising, but overall."

Once a person begins a fitness routine, the next challenge is to continue it so that it becomes a lifelong habit.

"It's just as important to keep fit when you're old as it is when you're young," Wolfgram says. "I run into people who quit and say, 'I used to be an athlete. I even continued into my young-adult life, and that'll hold me.'"

"They lose all the benefits they ever had from their fitness — all the benefits to their longevity — probably within a year, as if they had never done a thing. In other words, you can't put fitness in the bank. You have to sustain it."

University's recycling initiatives increase

By NEIL SCHOENHERR

Are you just about finished reading this issue of the *Record*? When you are, don't throw it away — recycle it!

Recycling keeps trash out of landfills, helps the environment and allows materials to be reused.

The University's Committee on Environmental Quality (CEQ) was restructured last academic year to better serve the WUSTL community and more directly involve faculty, staff and students from the Hilltop Campus in recycling efforts. Last year was, by far, the most productive year in the committee's five-year history.

"We live in a very disposable society, but we need to remember that resources are limited," said Steve Hoffner, assistant vice chancellor for students and director of operations and chair of the committee. "Recycling will extend the lifetime of landfills, reduce the costs of waste collection and disposal, and enable materials to be used again rather than simply discarded."

Some of the new recycling initiatives started or continued last year include:

- Recycling container replacement. With funding provided by Student Union and the University's Sesquicentennial Commission, the committee was able to purchase approximately 25 additional outdoor recycling containers, which have been placed at high-traffic, strategic locations around the Hilltop Campus.

- Recyclemania. For the second year, University students competed in a national campaign to increase recycling awareness and participation by competing in a month-long recycling contest with students from 11 other universities across the country.

- Operation Redirectory. Several hundred pounds of phone books and course listings were diverted from area landfills thanks to a special program to collect these materials from students, faculty and staff and have them sent to recycling centers.
- Recycling information is

being posted in all residence hall trash rooms this summer.

The increased recycling efforts have been largely driven by student interest and commitment.

"Students come here from all over the world," Hoffner said. "Many have been surprised at how far behind we are in the Midwest in terms of recycling and overall environmental awareness. They have taken the lead in telling us that we can and should be doing more."

"This past year, Chancellor Wrighton asked that we undertake a number of environmental initiatives as part of the University's Sesquicentennial. That gave us a boost and hopefully laid the groundwork for future efforts."

There are numerous ways University community members can get involved in the recycling effort.

"Start by getting a small recycling bin from the facilities department and keep it under your desk for all the paper that would otherwise be thrown away," Hoffner suggested. "All paper, including colored and glossy paper and envelopes, can be put in the blue recycling bin."

Other avenues include:

- Recycle old computers, monitors, keyboards, printers and other technical components through the program offered by the Office of Residential Technology in the South 40.

- Dispose of phone books through Operation Redirectory, which will be offered again in the spring.

- Purchase office supplies and other materials that are made with recycled contents.

- Make use of the various outdoor recycling containers placed around the Hilltop Campus.

- Learn how to recycle so the efforts of some aren't contaminated by others discarding improper materials. The most common mistake is mixing plastics with paper or aluminum and throwing food waste in with paper or cans.

For more specifics on the do's and don'ts of recycling at the University, go online to ceq.wustl.edu.

The Work Number offered for quick verification

By ANDY CLENDENNEN

People applying for a car loan or mortgage, attempting to lease an apartment or even changing jobs are often asked to show proof of employment and/or income.

The Office of Human Resources is now offering an automated service that will provide faculty and staff with fast, secure employment and income verification. The University has selected The Work Number, which is managed by the TALX Corp. (a locally owned and operated company), to provide these automated services for faculty and staff. This became effective July 1.

More than 50,000 verifiers (including banks, mortgage companies and other lenders) currently use The Work Number, which handles nearly 88 million employee records nationwide.

"There are several reasons we have chosen to use The Work Number," said Ann B. Prenatt, vice chancellor for human resources. "The most important one, however, is the improved service to our faculty and staff. With The Work Number, faculty and staff have a quick and con-

venient way of having their employment and/or income verified. They also have more control over who has access to their personal information and for how long.

"An added benefit of using The Work Number is that there is a savings to the University in terms of time and resources. There is no cost for this service to the University, faculty or staff, and the resources that used to be spent on completing these verifications can now be used to perform other tasks."

Faculty and staff will benefit by having control of the process of authorizing others to access information, and the organization verifying employment and/or income will have the convenience of having 24 hours a day, seven days a week to access information.

Organizations needing proof of employment and/or income should be directed to The Work Number at theworknumber.com or (800) 367-5690.

For easy step-by-step instructions on how to use The Work Number, go online to hr.wustl.edu. For more information, call 935-5990.

"The human form was meant to be used, and not just until age 70. We were not intended to be sedentary. Look at the animal kingdom. Squirrels don't retire after they've been around for a number of years, and nothing else does either. They keep going until they die."

EDWIN D. WOLFGRAM



Construction crews July 19 work to perfect the soil grade that will be underneath Francis Field's new FieldTurf, a synthetic playing surface. The actual FieldTurf is expected to be installed in early August, and the project is scheduled to be complete by the middle of that month. "The field will provide a safe and consistent playing surface usable seven days a week for student-related athletic and recreational programming needs," says John M. Schael, director of athletics.

New turf at Francis Field to benefit student-athletes

By CHRIS MITCHELL

FieldTurf is being installed as the new playing surface of historic Francis Field, the home of the University football and men's and women's soccer teams.

The FieldTurf will replace the natural grass that has been on Francis Field since its inception in 1904. The project began in early June and is expected to be completed by the middle of August.

"The installation of a synthetic surface on Francis Field, our highest outdoor priority, will

complement the playing experiences enjoyed by Washington University students," said John M. Schael, director of athletics. "Installing an artificial surface on the lighted Francis Field will significantly improve the 'landlocked' issues currently experienced.

"In addition, the field will provide a safe and consistent playing surface usable seven days a week for student-related athletic and recreational programming needs."

The FieldTurf's durability will allow for more frequent use of Francis Field, including practices,

without the wear and tear that is a factor with natural grass.

Washington University is the fourth University Athletic Association school to install an artificial playing surface, joining the University of Rochester, New York University and Carnegie Mellon University.

Over the past few years, the quality and performance of FieldTurf's patented systems have resulted in over 800 installations in more than 20 countries and has made it the first choice of top stadiums around the world.

Organs

Animal-to-human transplants is goal
— from Page 1

Unlike stem cells, organ primordia cannot develop into any cell type — they are locked into becoming a particular cell type or one of a set of cell types that make up an organ.

"Growing a kidney is like trying to construct an airplane — you can't just make a single part like a propeller, you have to build several different parts and systems and get them all working together properly," Hammerman said.

"Fortunately, kidney primordia already know how to grow different parts and self-assemble into a kidney — we just have to give them the right cues and a little assistance."

For the study, Hammerman and co-author Sharon A. Rogers, research instructor in medicine, gave renal primordia transplants

to 5- and 6-week-old rats.

Prior to insertion, scientists soaked the transplant tissue in a solution that included several human growth factors, proteins and hormones. One of the rats' original kidneys was removed at the same time.

Three weeks after the transplant, researchers connected the new kidneys to the bladder and administered a second dose of growth factors.

Approximately five months after the transplants, scientists removed the remaining original kidney in control and experimental rats. To help resolve uncertainty about which kidney functions are critical to sustaining life, scientists cut the connections between the bladder and the new kidneys in a subset of the experimental rats.

Rats without new kidneys and rats whose new kidneys were disconnected from their bladders lived for two to three days. However, the rats with new kidneys connected to their bladders lived seven to eight days.

"This tells us that the urine-producing functions of the kidney are key to preservation of life," Rogers said.

Hammerman said, "Seven to eight days may not seem like a long time; however, what we have done is akin to building the first airplane and showing that it can fly, if only for a few minutes. It's just as revolutionary."

In this study and in previous research, Hammerman and Rogers have established that the newly grown kidneys can perform many essential renal functions.

"For example, we've shown that they can excrete inulin, an inert sugar that we inject into a rat's bloodstream," Hammerman said. "This demonstrates that the kidneys are filtering the blood."

When scientists injected rats with another compound known as p-aminohippurate, the kidney began to secrete it into urine.

In addition to excretion and fil-

tration, the new kidney also has to reabsorb salts, water and key nutrients. The researchers have shown that the new kidneys can reabsorb both water and the nutrient phosphorus.

Hammerman hopes to use animal-to-human transplants, known as xenotransplants, as a solution for chronic organ donation shortages.

"Every year, approximately 10,000 kidneys become available for transplant into patients with end-stage kidney disease," he said. "But the waiting lists for kidney transplants can run as high as 100,000 individuals, and most patients die of the disease before an organ becomes available."

Kidney function in pigs is similar to that in humans, and Hammerman's eventual goal is to use embryonic pig tissue transplants to help renal failure patients live longer.

Working with embryonic tissues that grow into organs inside the patient lets Hammerman avoid some immune system responses that can destroy xenotransplants.

Hammerman noted that recipients of embryonic xenotransplants would still have to take immune-suppression drugs to prevent acute rejection, another immune response that directly attacks transplanted tissues. But recipients of human kidney transplants also must take immune suppression drugs.

Hammerman and Rogers are working to perfect pig-to-rat xenotransplantation of kidney primordia. If they can extend life in pig-to-rat transplants, the next steps are pig-to-primate and then pig-to-human transplants.

"Therapies based on growing new organs will be part of mainstream medical practice by the middle of the 21st century," said Hammerman, who is also working to develop approaches for growing a new pancreas as a treatment for diabetes.

STARS

Challenging, fun,
valuable experience
— from Page 1

Forty-five students from 18 high schools in the St. Louis metro area and three students from around the country participated in the program.

For six weeks, biologists, chemists, computer scientists, engineers, medical researchers and psychologists at the three institutions have taken student apprentices under their wings in their laboratories, sharing their expertise as they direct the students in research projects.

"Through teacher-student-mentor-scientist partnerships, participants apply various problem-solving strategies to independent research projects," said Ken Mares, director of the STARS program. "They write technical reports and orally present their results in a seminar format.

"This may be the best group ever. Eighteen of the students are in the top 10 of their class, and 38 have grade-point averages of 4.0 or higher."

This year's STARS program, "Experiencing the Scientific Enterprise," started June 14 and ends today. Besides conducting research and presenting papers, students toured scientific enterprises in St. Louis, took part in career workshops and attended lectures by leading scientists in the St. Louis community.

Operational since 1990, the program has become a generational thing.

Anderson's classmate at John Burroughs, Jessica Rubin, worked with Katherine Weilbaeher, M.D., assistant professor of medicine, and also with Weilbaeher's graduate student Angie Hirbe, a Washington University and STARS alum. So, a former STARS student this year taught a current STARS student — a first, Mares said.

To select Arimaa moves for

further consideration, Anderson and Kwasny had to build an intelligent move-generator capable of producing all legal moves, but with the best moves generated first to simplify the pruning process, "an extremely daunting task," Kwasny said. "Any single board configuration can have as many as 40,000 move choices."

"This game is actually designed to defeat any A.I. approach," he added. "It's hoped that the research that comes out of this effort improves A.I. technology. Still, we're in uncharted territory."

"Steven has done a tremendous job with this. The STARS program, because it's so short, offers a good starting point. This is something Steven can go back to from time to time, if he wants to."

Anderson found the STARS experience challenging, fun and valuable.

"It was good to become so involved in a focused research project," he said. "It was fun working with Dr. Kwasny, and I learned a lot."

He said he especially found a STARS presentation by Frank Yin, M.D., Ph.D., the Stephen and Camilla Brauer Professor of Biomedical Engineering and chair of the department, helpful because he's interested in a possible biomedical engineering career. He's looked into Washington University, the University of Illinois, the University of Michigan, and Northwestern, Johns Hopkins, Carnegie Mellon and Case Western Reserve universities.

Kwasny has mentored a STARS student every summer but one since 1992.

"The STARS program's reputation has really grown over the past decade, with more schools showing interest all the time," Kwasny said. "It's a rare opportunity for a high-school student to participate in a research project that emphasizes doing science, writing about it and giving an oral presentation."

"That's the essence of a science career right there."

History

Other collaborators
include Kastor, Duncan
— from Page 2

film *Glory*; and Frederick Douglass' views on "What to the Slave Is the Fourth of July."

Other Arts & Sciences faculty collaborating on the project include Peter Kastor, Ph.D., assistant professor of history and assistant director of American Culture Studies; and Garrett A. Duncan, Ph.D., associate professor of education, of African and Afro-American Culture Studies.

Other training sessions included:

- "The Impact of Westward Expansion on Native Americans and People of Color," a program focusing on the Lewis and Clark

expedition, transportation and life along the American waterways. Offered in collaboration with the Missouri Historical Society and the St. Louis Mercantile Library, this session included unique access to the Mercantile Library's collection at the University of Missouri-St. Louis.

- "Separate but Unequal," a focus on the landmark Brown v. Board of Education court battle, equality of educational opportunity and other civil rights legislation and documentation since 1954. This was offered in collaboration with the Department of History.

- "Freedom and the U.S. Constitution," a study of landmark Supreme Court decisions in American history, offered in collaboration with the Bar Association of Metropolitan St. Louis, the Mound City Bar Association and the Saint Louis University School of Law.

Campus Watch

The following incidents were reported to University Police July 1-20. Readers with information that could assist in investigating these incidents are urged to call 935-5555. This information is provided as a public service to promote safety awareness and is available on the University Police Web site at police.wustl.edu.

July 10

3:11 a.m. — Two students were skateboarding in front of cars near Wohl Student Center. The two had been advised in the past by police that skateboarding on campus for reasons other than transportation is against University policy. They have been referred to the judicial administrator.

July 12

8:55 a.m. — A camera bag that had been left unattended July 10 at the Whispers Café in Olin Library was found at another location inside the café. Cash and the camera that had been in the bag were missing. Total loss is estimated at \$750.

Additionally, University Police responded to six reports of theft and one report each of disturbance, fire and injury.

munity on the Hilltop Campus."

Other parking business can be conducted online.

"We are very excited to now be able to offer permit sales and citation payments online at parking.wustl.edu," Underwood said. "This will be a convenient way for members of the community to transact business with us."

Dining Services will be selling daily passes out of its office in Wohl Student Center.

Inquiries regarding North Campus space should be directed to the Treasury Office at 935-5045.

Notables

Schaal receives high honor from Yale

By TONY FITZPATRICK

Barbara A. Schaal, Ph.D., the Spencer T. Olin Professor in Arts & Sciences and professor of biology, also in Arts & Sciences, was awarded the Wilbur Lucius Cross Medal, the Yale University Graduate School's highest honor, at its recent commencement ceremonies.

Schaal applies state-of-the-art theory and technique to the study of plant evolution. Major recent emphases are conserving plant diversity, the potential benefits and perils of genetically modified crops and the origins of invasive species.

Her seminal work on the plant cassava documented genetic variation among the wild progenitors of it, leading the way for other analyses. She has consistently been the voice of reason in the area where science and society meet.

Schaal earned a bachelor's degree in 1969 with honors in biology from the University of Illinois at

Chicago; a master's in 1971, and a doctorate in 1974, both in population biology from Yale.

She joined Washington University in 1980 as associate professor in biology; she became a full professor in 1986.

In 1999, she was elected into the National Academy of Sciences, an honor that recognized her research investigating the evolutionary process within plant populations using a wide variety of techniques, from field observations to quantitative genetics and molecular biology.

Schaal has served as chair of the biology department and has served on numerous committees including the Academic Planning Committee in Arts & Sciences, the Curriculum Implementation Committee and the University Affirmative Action Committee.

She serves on the National Research Council's Board on Life Sciences and chairs the council's committee on agricultural biotechnology.



Schaal



Copenhagen Consensus Douglass C. North, Ph.D., the Spencer T. Olin Professor in Arts & Sciences and a co-recipient of the Nobel Memorial Prize in Economic Sciences, joins a panel of distinguished economists recently in Denmark for the "Copenhagen Consensus," an intensive forum exploring the costs and benefits of ongoing efforts to address critical global challenges such as war, famine and disease. A package of measures to control HIV/AIDS was identified by participants as the challenge most likely to yield the greatest return on global relief fund investments. Other "very good" investments cited were interventions aimed at fighting malnutrition, actions to reduce trade barriers and eliminate agricultural subsidies and efforts to control malaria. "Finding a way to end warfare is probably the most important challenge facing mankind, but that's a problem for which there is no easy solution," North said. "On the other hand, we know how to provide people with clean drinking water. We have the medical tools to tackle devastating diseases such as malaria. These problems are solvable — that's where we should be focusing our resources."

Pope promoted to associate dean in Arts & Sciences

By SUSAN KILLENBERG MCGINN

Nancy P. Pope, Ph.D., was promoted to associate dean of the Graduate School of Arts & Sciences, effective July 1, announced Dean Robert E. Thach, Ph.D.

"As an assistant dean, Nancy Pope has made outstanding contributions to many aspects of the graduate school's mission," Thach said. "For example, she has overseen the development of the Olin Fellowship Program for Women

into one of the University's premier programs for graduate education. As the grad school's office manager, she has streamlined all our day-to-day activities,



Pope

enabling us to make full use of new technologies for improving efficiency.

"I am delighted to see Nancy take on ever wider responsibilities in her new role as associate dean."

Her additional duties will include acting as information officer for graduate and professional students. In this capacity, she will organize a calendar of events and edit a newsletter, and will pay particular attention to the needs of students interested in opportuni-

ties for interdisciplinary study and community service.

Pope will also continue to coordinate the Mr. and Mrs. Spencer T. Olin Fellowship Program for Women in Graduate Study, a role she's had since 1998. The Monticello College Foundation established the program in 1974 to bring outstanding women to WUSTL to pursue careers in higher education or the professions.

An annual conference is held on campus to honor past and present fellowship recipients. Pope, a former Olin fellow, has coordinated several Olin conferences.

Pope, who earned a bachelor's degree in medieval studies from Brown University in 1973, began her graduate studies in comparative literature in Arts & Sciences

at Washington University in 1974 as a member of the first class of Olin fellows. She earned a master's degree in 1976 and a doctorate in 1982 from the University.

In 1983, Pope joined the Department of English in Arts & Sciences as a lecturer. She has also taught at Illinois College and Webster University, where she was coordinator of the Writing Center from 1993-97.

While a lecturer and then an adjunct assistant professor of English here until 2000, Pope received the Dean's Faculty Award for Teaching in University College in 1988, the Council of Students of Arts & Sciences Teaching Award in 1996 and Student Union's Professor of the Year Award in Arts & Sciences in 1999.

Bush tabs Raven for science committee

Peter H. Raven, Ph.D., the Engelmann Professor of Botany in Arts & Sciences and director of the Missouri Botanical Garden, has been appointed to the President's Committee on the National Medal of Science by President George W. Bush.

Raven will serve on a 12-member committee of scientists and engineers that reviews nominations and makes recommendations to the president. He will

serve the remainder of a three-year term that will expire Dec. 31, 2006.

Other new appointees are Francisco Cigarroa of Texas; Denise Dee Denton of Washington; and Margaret Wright of New Jersey.

Raven received the National Medal of Science — the nation's highest scientific honor — in 2000 for his leadership in efforts to preserve biodiversity and a sustainable environment.

Physicist is named DOE outstanding investigator

By SUSAN KILLENBERG MCGINN

Henric S. Krawczynski, Ph.D., assistant professor of physics in Arts & Sciences, received the U.S. Department of Energy's (DOE) Outstanding Junior Investigator Award in high-energy physics, one of eight scientists in the country to receive the prestigious re-cognition in 2004.

"I am delighted that Henric Krawczynski has received this award from the DOE," said John W. Clark, Ph.D., the Wayman Crow Professor and chair of physics. "This is a distinctive signal of research excellence and promise. The department can be very proud of Henric for achieving this recognition after such a short time with us."

Krawczynski, who joined the department in 2002, received the award for his research proposal titled "Using VERITAS to Explore Supermassive Black Holes and Early Structure Formation in the Universe."

The award, which identifies new, talented high-energy physicists early in their careers and assists and facilitates the development of their research programs, will provide Krawczynski \$55,000 per year until tenure. The award also guarantees him top priority for steady, long-term support after tenure.

VERITAS, the Very Energetic Radiation Imaging Telescope Array System that is under construction on Kitt Peak in southern Arizona, will consist of four 12-meter-diameter optical reflectors with ultrafast cameras. When com-

pleted in 2006, it will be one of the most sensitive very high-energy gamma-ray observatories in the world.

The observations with VERITAS will be a key to understanding many physical processes in nature.

Krawczynski's proposal described using these next-generation telescopes to study highly relativistic plasma outflows from supermassive black holes, which are found in the centers of galaxies. The gamma-ray emission from these objects can be used to study the process of their growth by swallowing ambient interstellar matter.

In addition, the strong gamma-ray emission probes the extragalactic infrared radiation background, which contains key information about star formation.

He also proposed developing a follow-up experiment to VERITAS, consisting of two 50-meter-diameter telescopes.

Krawczynski and his WUSTL colleague James H. Buckley, Ph.D., assistant professor of physics and a 1998 recipient of the DOE's Outstanding Junior Investigator Award, are part of an international collaboration building VERITAS.

A native of Germany, Krawczynski earned a master's degree in 1994 and a doctorate in 1997, both in physics from the University of Hamburg.

Before joining the WUSTL faculty, he was a research associate at the Max Planck Institute for Nuclear Physics and a researcher and instructor in Yale University's astronomy department.



Krawczynski

Obituaries

Becker, 90

Frederick G. Becker, a renowned printmaker who taught in the School of Art from 1948-1968, died Wednesday, June 30, 2004, at his home in Amherst, Mass., of esophageal cancer. He was 90.

Gummer, 66

Burt Gummer, a former professor of social work and emeritus professor at the University at Albany School of Social Welfare, died Wednesday, June 30, 2004. He was 66.

Hershey, 85

Falls B. Hershey, M.D., a retired surgeon and educator in the School of Medicine, died on Thursday, June 24, 2004, of heart failure at St. John's Mercy Medical Center. He was 85.

Hoffman, 62

Edward J. Hoffman, the co-inventor of the PET scanner, the most commonly used whole-body scanning procedure for detecting disease and cancer, died Thursday, July 1, 2004, in Los Angeles. He was 62.

Hoffman helped develop the first human PET scanner in 1973 at Washington University before leaving for UCLA in 1976. A memorial service will be at 11 a.m. July 24 in Graham Chapel.

Larson, 65

Alvin Henry Larson, an adjunct professor of chemical engineering, died Wednesday, June 23, 2004, in St. Louis. He was 65.

Matheson, 77

John William "Bill" Matheson, a librarian of rare books from 1962-1971, died Thursday, June 17, 2004, of colon cancer at his home in Chevy Chase, Md. He was 77.

Pienaar, 85

Nancy Jane Pienaar, an administrative assistant in alumni relations from 1954-1981, died Saturday, June 12, 2004, in Webster Groves, Mo. She was 85.

Seaman, 87

William B. Seaman, M.D., a professor of radiology in the mid-1950s, died Monday, June 7, 2004, in his home in Tequesta, Fla. He was 87.

Simon, 77

Robert Simon, D.D.S., a former faculty member in the School of Dentistry, died Sunday, June 27, 2004, at St. John's Mercy Medical Center of complications from a bicycle fall. He was 77.

Washington People

As a child, Roberta Sengelmann, M.D., spent many weekends making rounds with her father, Robert P. Sengelmann, M.D., a plastic and reconstructive surgeon. Dressed in kid-size scrubs, she gently held the hands of patients who had sustained burns, trauma or undergone cosmetic surgery while her father changed their bandages and cared for them.

"I've always had a primitive instinct to want to help people," she says. "Even as a child, I admired the connection my father had with his patients and his ability to improve their lives. I modeled my career after his devotion to his patients."

BY KIMBERLY LEYDIG

By the age of 12, Sengelmann was observing her dad's cases in the operating room. In high school, Sengelmann discovered she had a knack for math and science and was recognized with a merit scholarship. By the time she graduated, it was clear she was well on her way toward becoming a physician.

Now, as director of the University's Center for Dermatologic and Cosmetic Surgery and an assistant



Roberta Sengelmann, M.D. (center), fellow Shawn Allen, M.D. (left), and resident Paul Klekotka, M.D., perform reconstruction of a nasal wound defect following Mohs micrographic surgery, a technique that offers exceptional cure rates for non-melanoma skin cancer while allowing preservation of healthy tissue to minimize scarring.

Endless positive energy

Roberta Sengelmann's passion for patient care inspires her colleagues

Roberta Sengelmann

Hobbies: "I love to lollygag with friends and family. Downtime is so rare and precious. I also love outdoor sports — skiing, swimming, hiking and running. Nature soothes me."

Family: Along with her parents and husband, Tamir, she also has five brothers and four stepsisters.

Hometown: Santa Monica, Calif.

Hot skincare tip: After getting enough sleep, a healthy diet, regular exercise and wearing sunscreen daily — simple and safe in-office procedures like Botox, lip augmentation and peels go a long way in warding off the aging process and making you look and feel better.

Beauty advice: Get over your guilt about taking pride in how you look but also don't let it rule you. There's a healthy balance. It's perfectly healthy to want to look your best. People that look and feel good lead more productive and longer lives.

professor of medicine, Sengelmann has turned her childhood dream into a reality.

As a dermatologic surgeon with special training in Mohs micrographic surgery, reconstruction and aesthetic enhancement, Sengelmann focuses on prevention and treatment of the harmful effects of sun damage such as skin cancer and age-related changes.

As a Mohs surgeon, Sengelmann is trained to surgically remove the cancer cells and to read the pathology to assure margin clearance. The technique offers exceptional cure rates for non-melanoma skin cancer while allowing preservation of healthy tissue to minimize scarring.

Sengelmann performs nearly 1,000 Mohs surgeries annually and directs a fellowship approved by the American College of Mohs Micrographic Surgery and Cutaneous Oncology.

"Dermatologic surgery has truly pioneered minimally invasive aesthetic surgery, and it is imperative that someone with competence and experience train our residents and fellows," says Lynn A. Cornelius, M.D., chief of dermatology and an associate professor of medicine. "Roberta takes great pride in her work and in imparting her knowledge and skill to trainees."

Sengelmann also specializes in minimally invasive facial rejuvenation procedures as well as body contouring with tumescent liposuction, a fat removal procedure performed under local anesthesia that helps reduce postoperative

bruising, swelling and pain. Recently, Sengelmann teamed up with two of the world's leading experts to give an international workshop on the tumescent liposuction technique in Colorado.

She continues to help develop many of the latest cosmetic advances, including training physicians

nationally on the latest rejuvenating procedures and serving on advisory boards to help steer the development of new products like Botox, Restylane, Hylaform and Radiesse.

Dermatologic surgery also allows Sengelmann the opportunity to be creative.

"Everybody's face is different, so each case presents its own artistic challenge," she says. "Sometimes the simplest change can go a very long way in enhancing appearance and boosting self-esteem. I try to help people improve their appearance without interfering with their daily activities and quality of life."

Cornelius explains that while Sengelmann is an excellent dermatologic surgeon, backed with an incredible knowledge of cutaneous malignancies and skin cancer surgery, she also possesses an incredible talent for aesthetics.

"Roberta, along with a select group of her dermatologic surgery colleagues, has been on the forefront of advancing minimally invasive aesthetic surgery," Cornelius says. "She also is an extremely caring, compassionate, detail-oriented and conscientious physician — a combination that serves our specialty and our patients well."

Attention to detail

While earning her medical degree at New York Medical College, Sengelmann knew she wanted to be a surgeon but wavered between specializing in dermatology and head and neck surgery or following in her father's footsteps and pursuing plastic and reconstructive surgery.

The desire to focus on disease prevention, early diagnosis and pathology, ultimately drew Sengelmann to dermatology and dermatologic surgery.

"I talk to my patients about ways to prevent disease and illness," she says. "Every patient who sees a physician is in some way vulnerable, and I take that responsibility very seriously. I hope to inspire my patients in some small way that will ultimately have a positive impact on their lives."

During medical school, Sengelmann not only discovered that dermatology was a perfect match, she also found true love. At orientation, she met Tamir Keshen, whom she quickly befriended.

"What impressed me most about Roberta was her confidence and compassion," says Keshen, M.D., an assistant professor of sur-

gery of pediatrics. "She has this amazing aura that attracts people and draws them in — people just want to be around her."

Jeff Peterson, M.D., Sengelmann's partner and an assistant professor of medicine, also adds that he admires her positive attitude and compassionate approach to medicine.

"Roberta has a great attitude — every day she walks in with a smile," he says. "She has such a warm and genuine bedside manner, and she's just as concerned about her patients' and staff's problems as she is her own. She has this big-sister mentality that's very caring."

Some of those nurturing qualities stem from the fact that Sengelmann has five brothers. Growing up as the only girl in a large family — and the only one of her siblings to become a doctor — Sengelmann has a special bond with her father. Now, instead of observing him in the OR, she consults with him on cases and loves the opportunity to operate with him.

Everyone from her dad and husband to her colleagues and patients admire Sengelmann's meticulous attention to detail and endless energy.

"Dr. Sengelmann's dedication to excellence is unwavering," says practice manager Theresa Barnett. "She is never complacent and always gives 100 percent. She works very hard to provide patients with the best possible care."

Keshen admits his wife has more energy than anyone else he knows.

"She could juggle flaming torches, plan a budget for a small country and make dinner at the same time," he jokes. "Roberta has an amazing ability to multitask — her battery never stops."

A medical match

After graduating from medical school, Sengelmann and Keshen "couples matched" at the University of Iowa to pursue an internship in internal medicine and residency in general surgery, respectively.

In 1994, Sengelmann left her fiancé in Iowa and moved to Houston to begin a dermatology residency at the University of Texas Health Science Center/M.D. Anderson Cancer Center. Keshen joined her a year later when he began a postdoctoral research fellowship in neonatal metabolism at the USDA/RDS Children's Nutrition Research Center at Baylor College of Medicine.

However, their different specialties would soon cause the cou-

ple to separate again. Only days after they married in 1997, Sengelmann began a fellowship in Mohs/Advanced Dermatologic Surgery at the University of Texas Southwest Medical Center in Dallas, and Keshen returned to the University of Iowa to finish his general surgical training. Neither suspected the separation would last for five years.

"When one door closes, another opens," Sengelmann says. "I looked at the time Tamir and I were apart as the chance to jump into my career with both feet."

"Keeping our priorities straight and focusing on the long-term goal is how we made our relationship work while we were apart."

"We love each other too much to let something as trivial as distance break us apart. It also helps that we both love our work."

Sengelmann joined Washington University in 1998 and just two years later she was appointed as the director of the University's Center for Dermatologic and Cosmetic Surgery.

The new position entailed designing and building a new facility, now located at 969 Mason Road, and overseeing everything from ordering surgical equipment to choosing the office décor.

In 2002, after completing a pediatric surgery fellowship, Keshen came to Washington University.

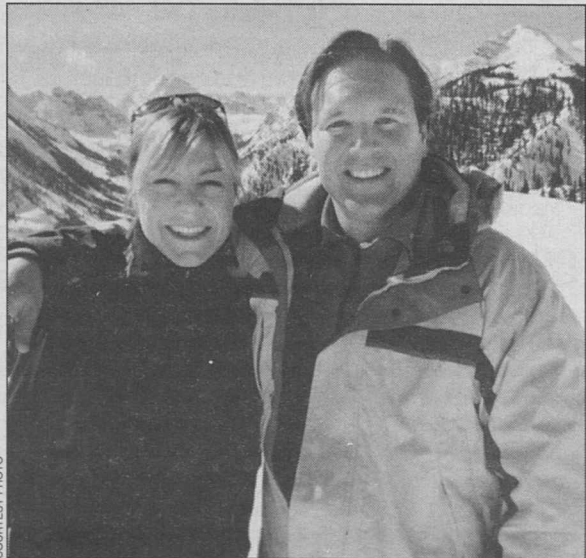
"The high caliber of the faculty, the resources and the chance to collaborate with some of the best physicians in the world is what drew us to the University," Sengelmann says.

"But it's not just the faculty that continues to impress us. The staff here is also incredibly talented. And the patients are so grateful — it may be a Midwestern thing."

In addition to pursuing their careers at the University, Sengelmann and Keshen are looking forward to adding to their family, which now consists of two cats and two dogs — one of which is a stray (named Lucy) they adopted at a Stray Rescue benefit two weeks ago.

"Whether it's running in the rain, adopting a stray dog or eating pancakes for dinner, I never take the conventional or predictable path," Sengelmann says.

"If there's an obvious course of action, I'm likely to cultivate one that is uniquely my own."



Sengelmann and her husband, Tamir Keshen, enjoy the slopes of Snowmass, Colo. "We love the outdoors; nature soothes us," she says.