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Record

20, 2005

Volume 29 No. 34



Washington University in St. Louis

Time to celebrate! It's Commencement

BY ANDY CLENDENNEN

The day that many students — undergraduate, graduate and professional — thought would never arrive is finally here.

The University's 144th Commencement will mark a significant milestone in the lives of more than 2,500 students.

Chancellor Mark S. Wrighton will confer degrees during the ceremony, which will start at 8:30 a.m. in Brookings Quadrangle. Of the 2,511 candidates, 1,321 are undergraduate and 1,190 are graduate and professional.

There are 429 doctoral candidates, including 76 for the doctor of philosophy degree from the Graduate School of Arts & Sciences; 14 for the doctor of science degree from the Henry Edwin Sever Graduate School of Engineering & Applied Science; 230 for the juris doctoris degree from the School of Law; and 109 for degrees from the School of Medicine.

In the event of rain, Commencement will still take place in the Quad. If the weather turns violent,

the ceremony for undergraduates will be moved to the Athletic Complex, while graduate and professional degrees will be bestowed at each respective school's Commencement reception.

Streaming video of the ceremony will be broadcast online at commencement.wustl.edu. The webcast can be viewed in January Hall, Room 110; Brown Hall, Room 100; and Brown Hall, Room 118. All are wheelchair-accessible.

Richard A. Gephardt, former U.S. House minority leader, will give the Commencement address.

Gephardt stepped down in 2004 after serving nearly three decades as U.S. representative for Missouri's 3rd District. A two-time presidential candidate, Gephardt also served as majority leader for Democrats in the House.

In August 1999, Gephardt and U.S. Sen. Christopher "Kit" Bond, R-Mo., received the Science Coalition's Langer Award in recognition of their advocacy for federal government support of basic research.

See Commencement, Page 11

Gallery of Graduates

Read profiles of some of the University's most interesting graduates. Pages 5-10.



At the University's 144th Commencement, more than 2,500 students will be recognized for their scholastic achievements.

For student speaker Friedman, organization is key

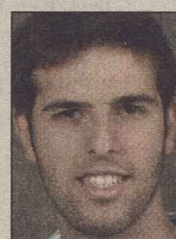
BY NEIL SCHOENHERR

When Jordan Friedman sat down to discuss his years at the University, he did something fairly significant.

He actually sat down.

Pretty unusual posture for a person always on the run.

Friedman, president of the senior class and this year's student Commencement speaker, is a very busy man. From being class president during each of his four years at the University to planning Senior



Friedman

Week activities, he doesn't get much time for rest.

"You can never run your life by trying to finish a project and move on to something else, because there is always something else," Friedman said. "I've learned to enjoy the process and enjoy the path I'm on, because life is a blur and college is even faster."

Friedman, who is from Los Angeles, will receive a bachelor's degree in social thought and analysis in Arts & Sciences today. After Commencement, he plans to work at Microsoft or as a real estate analyst for a few years before going back to school for a law degree.

Though Friedman was not involved in student government in high school, he jumped in with both feet at the University.

"In high school, I thought it was

See Speaker, Page 11

Researchers find new fat is needed to clear the old

BY JIM DRYDEN

Where fat comes from determines whether the body can metabolize it effectively. School of Medicine researchers have found that the old fat stored in the body's peripheral tissues — around the belly, thighs or bottom — can't be burned efficiently unless new fat is eaten or made in the liver.

The research team developed genetically engineered mice missing an important fat-synthesizing enzyme in the liver. As a result, the mice, called FASKOL mice (Fatty Acid Synthase KnockOut in Liver), could not produce new fatty acids in the liver.

Because liver fatty acids are vital for maintaining normal sugar, fat and cholesterol metabolism, these mice must take in dietary fat to remain healthy.

Reporting in the May issue of the journal *Cell Metabolism*, the researchers say these mice developed fatty liver disease when placed on a zero-fat diet.

"When we took dietary fat away from the FASKOL mice, their livers quickly filled with fat," said senior investigator Clay F. Semenkovich, M.D., professor of medicine and of cell biology and physiology. "Their old fat stores mobilized to the liver, but their livers could not initiate fat burning, and the fat just accumulated."

"We concluded that to regulate fat burning, the liver needs new fat."

New fat is consumed in food or is newly made in the liver as glucose is converted to fat by fatty acid synthase, the enzyme missing in the FASKOL mice. When the

system takes in high amounts of glucose, fatty acid synthase in the liver makes it into new fat.

In addition to fatty livers, the transgenic mice developed low blood-sugar levels on the zero-fat diet. Both symptoms were reversed with dietary fat.

On a normal diet, the transgenic mice were no different than

See Fat, Page 4



Semenkovich

WUSTL boasts 2 Udall, 3 Goldwater Scholars

BY TONY FITZPATRICK

Jessica L. Friedman was sitting in her "Sedimentary Geology" class listening to Jennifer R. Smith, Ph.D., assistant professor of earth and planetary sciences in Arts & Sciences — who was subbing for husband Joshua B. Smith, Ph.D. — when Ian MacMullen, Ph.D., assistant dean in the College of Arts & Sciences, approached the sophomore at the end of the class.

After everyone filtered out of the room, MacMullen asked

Friedman to stay back. He told her the good news: She was one of two Washington University students to receive a Morris K. Udall Scholarship.

The University's other Udall recipient, junior Matthew N. Klasen, was a world away in South Africa, where he was spending the semester on a special research project.

"I don't think any experience I've had at Washington University could even compare in terms of the surprise," Friedman said. "I was not expecting to hear about it for a while, and I figured my no-

tification would come in the mail, not from another person.

"Additionally, Jen (Smith) had written one of my letters of recommendation for the scholarship. It was neat to have her there and to feel like she was sharing in my success."

In addition, three WUSTL Arts & Sciences undergraduates have been awarded prestigious Goldwater Scholarships. They are sophomores Jeffrey J. Marlow and Kathleen A. Schwarz and junior Amy Y. Liu.

See Scholarships, Page 2

Junior Pfeifer receives 1 of just 18 Beinecke awards

BY SUSAN KILLENBERG MCGINN

Helen Pfeifer, a junior majoring in comparative literature and in history, both in Arts & Sciences, is one of 18 students nationwide to receive a 2005 Beinecke Scholarship to support graduate study in the arts, humanities or social sciences.

Each year, approximately 100 colleges and universities are invited to nominate a junior "of exceptional promise" for a Beinecke Scholarship, which is

worth \$32,000.

Pfeifer plans to pursue a doctorate in intellectual history at either Columbia University or at the University of California, Berkeley.

"I am delighted that Helen was selected for this prestigious award," said Ian MacMullen, Ph.D., assistant dean in the College of Arts & Sciences, who oversees undergraduate applications for external fellowships and scholarships. "Helen's remarkable academic record and her outstanding potential as an

interdisciplinary scholar are founded on a rare and potent combination of analytical ability and creative insight.

"As a college junior, she is already designing and executing academic projects of genuine originality," he added. "She is destined to make a significant scholarly contribution to the humanities, and especially to the field of intellectual history, as a pioneering researcher and inspiring teacher."

See Pfeifer, Page 2

Music, theater, dance: Edison announces OVATIONS! Series

Edison Theatre will celebrate its 33rd year of exuberant dance, rich musical traditions and classic and cutting-edge theater with the 2005-06 OVATIONS! Series.

Founded in 1973, the OVATIONS! Series serves both the University and St. Louis communities by presenting the highest caliber national and international artists performing works intended to challenge, educate and inspire.

The series highlights the interdisciplinary, the multicultural and the experimental, through new works as well as through innovative interpretations of classical material not otherwise seen in St. Louis.

The season will open Oct. 21-22 with *Slanguage*, the latest boundary-smashing creation by **Universes**, a troupe of five brilliant word-smiths from the South Bronx.

Fusing poetry, jazz riffs, hip-hop, politics, down-home blues and Spanish boleros, *Slanguage* represents the evolution of poetic language from childhood rhymes to literary gospel, integrating theater and street talk with humor and truth and turning the poem into a communal act.

The season will continue Oct. 28-29 with **Diavolo**, the 10-member Los Angeles dance company whose multimedia spectacles combine dynamic movement with the adventurous, high-wire attitude of extreme sports.

Dance lovers also can look forward to three events co-sponsored by OVATIONS! and Dance St. Louis, beginning Nov. 18-20



South Africa's renowned Soweto Gospel Choir will take to the Edison Theatre stage Feb. 11 as part of the OVATIONS! Series. About to enter its 33rd year, OVATIONS! serves both the University and St. Louis communities by presenting the highest caliber national and international artists performing works intended to challenge, educate and inspire.

with **Noche Flamenco**, one of Spain's most successful Flamenco companies.

Eight-time Bessie Award-winners **Doug Varone & Dancers** will display their signature mix of wit, humanity and romanticism March 31-April 2, followed by **LINES Ballet**, the company of

San Francisco choreographer Alonzo King, April 21-23.

New York's acclaimed **SITI Company** will return to Edison Theatre Nov. 11-12 with an all-new production of the 15th-century German classic *Death and the Ploughman*. Theater lovers can also look forward to

Synapse Productions' Animal Farm: The Puppet Musical, based on George Orwell's classic political parable, March 10-11.

For music lovers, the classically trained, boundary-pushing **Turtle Island String Quartet** will join forces with the **Ying Quartet**, the quartet-in-residence at the Eastman School of Music,

for a performance Jan. 20. South Africa's renowned, 26-member **Soweto Gospel Choir** will take the stage Feb. 11.

The OVATIONS! Series will conclude April 28 when jazz vocalist **René Marie** joins the innovative African- and Latin-American ensemble **Imani Winds** for *The Josephine Baker Project: Le Jazz Hot*, celebrating the 100th birthday of the legendary St. Louis-born performer.

Individual tickets are \$28; \$24 for seniors and WUSTL faculty and staff; and \$18 for students and children. Subscriptions are available at two levels: basic (three, four or five events at \$24 per ticket) and premiere (six or more events at \$20 per ticket).

For young people

The 2005-06 ovations! for young people series, which offers specially priced Saturday matinees for audiences of all ages, will open with **Diavolo** Oct. 29.

On Jan. 21, the **Turtle Island String Quartet** will present *The Art of the Groove*, an exploration of rhythm stretching from Beethoven to Jimi Hendrix.

On April 29, **Imani Winds** will present *How Jeff Got His Groove Back*, a musical adventure that follows Jeff, a young French horn player beset by a bassoon-riding witch.

Ovations! for young people events are \$7 each or \$15 for all three events.

For more information or to order tickets, call the Edison Theatre Box Office at 935-6543 or e-mail edison@wustl.edu.

Scholarships

Pathfinder Program has 2 Udalls, 2 Goldwaters
— from Page 1

For Friedman, another part of the surprise was overcoming the odds that she and Klasen, her Pathfinder Program colleague, faced in winning Udall Scholarships.

"Frankly, I was not expecting to get the award," said Friedman, who is majoring in earth and planetary sciences. "I am passionate about the environment and I am a hard worker, but the (Udall) program is so competitive."

"Recently, the Udall foundation sent out the biographies of all of the recipients. I read theirs and I feel so humbled; yet I'm anxious to meet all of these amazing people in Tucson (Ariz.) in August."

Klasen, who is majoring in environmental studies and political science, was runner-up last year for a Udall.

The Morris K. Udall Scholarship is administered by the Udall Foundation and the Excellence in National Environmental Policy Foundation. The scholarship covers tuition, fees, books and room and board up to a maximum of \$5,000 per year.

Friedman and Klasen were two of 80 students to be awarded 2005 Udall Scholarships.

Udall Scholarships are granted to those who demonstrate a commitment to fields related to the environment, or to Native American or native Alaskan students in fields related to health care and tribal public policy.

Congress established the foundation in 1992 to honor Udall and his legacy of public service.

Goldwater Scholars

Marlow is majoring in earth and planetary sciences; Schwarz in chemistry; and Liu in biochem-

"(The Pathfinder Program) has turned out some of the most impressive students one can find anywhere. The entire Washington University community is proud of their achievements."

EDWARD S. MACIAS

istry and molecular biology.

The Barry M. Goldwater Scholarship and Excellence in Education Foundation awarded 320 awards for the 2005-06 academic year to U.S. undergraduate sophomores and juniors.

The Goldwater Scholars were selected on the basis of academic merit from a field of 1,091 mathematics, science and engineering students nominated by the faculties of colleges and universities.

Virtually all of the Goldwater Scholars intend to earn doctorates.

Twenty-seven scholars are mathematics majors, 239 are science majors, 45 are majoring in engineering and nine are computer-science-related majors. Many of the scholars have dual majors in a variety of mathematics, science, engineering and computer disciplines.

The one- and two-year scholarships will cover the cost of tuition, fees, books and room and board up to a maximum of \$7,500 per year.

Goldwater Scholars have very impressive academic qualifications that have garnered the attention of prestigious postgraduate fellowship programs. Recent Goldwater Scholars have been awarded 58 Rhodes Scholarships, 72 Marshall Awards (six of the 40 awarded in the United States in 2005) and numerous other distinguished fellowships.

Pathfinder Program

Udall winners Friedman and Klasen have something in common with Goldwater winners Marlow and Schwarz: They are all members of the University's Pathfinder Program, a four-year educational experience researching environ-

mental sustainability.

Limited to a small number of students, the program reaches out to talented incoming undergraduates with interests in the environmental sciences. Pathfinder relies on case studies and field-based excursions to educate students about the issues surrounding environmental sustainability.

Over the years, Pathfinder students have found unique educational opportunities in such places as Hawaii and the Mojave Desert in California. This provides students the opportunity to meet and bond with a select group of students and faculty.

The Pathfinder Program provides an excellent introduction and education "path" in the Program in Environmental Studies in Arts & Sciences in either the natural or social sciences.

"I think that the best part of Pathfinder for me has been learning with a dedicated group of students whose passion for the environment is rooted in a diverse array of experiences," Friedman said.

"I see my fellow Pathfinders who will go into law, biology, geology, physics, chemistry, anthropology, psychology and education, and I realize the various ways in which we can achieve environmental sustainability."

"Pathfinder has enabled me to look at the environment from a variety of angles, which I think ultimately helped me to get the Udall."

Raymond E. Arvidson, Ph.D., the James S. McDonnell Distinguished University Professor and chair of the Department of Earth and Planetary Sciences, directs the Pathfinder Program.

"I know that Ray would not say this, but I will: Between the Udalls and the Goldwaters, Ray's Pathfinder students may be winning more important awards than some universities," said Edward S. Macias, Ph.D., executive vice chancellor, dean of Arts & Sciences and the Barbara and David Thomas Distinguished Professor in Arts & Sciences.

"That program has turned out some of the most impressive students one can find anywhere. The entire Washington University community is proud of their achievements."

Pfeifer

Is a counselor for rape & sexual assault hotline
— from Page 1

The daughter of Swiss natives, Pfeifer was born in Germany and raised in Columbia, Mo. Her mother is an art professor and her father a physics professor, both at the University of Missouri.

A Natalie E. Freund Art Scholar and Kenneth E. Hudson Scholar, Pfeifer also was one of five WUSTL juniors to be selected for the Undergraduate Honors Fellowship program, which awards students \$3,000 to pursue a research project culminating in a published paper.

She will use the money to do research in Berlin this summer for her history thesis on that city's underground infrastructure during the Cold War division.

She also received the history department's Helen and Isaac

Izenberg Prize for the best junior essay written in advanced seminar classes in 2004. The essay was for a class on U.S. relations with Latin America.

Pfeifer, who began her WUSTL studies as a painting major in the School of Art, is founder and president of the University's Diorama Artist Community and art editor of *Spires*, an intercollegiate arts and literary magazine. She also serves as a peer counselor for the Sexual Assault and Rape Action Hotline, or SARAH.

Last summer, she taught literature to low-income high-school students in the Upward Bound Program in Northfield, Mass. From November 2000-January 2001, while attending high school in Naples, Italy, she organized and mediated a panel discussion on global issues like racism, discrimination, religion and war for the Seminars on Global Education in Naples.

Each Beinecke Scholar receives \$2,000 immediately before entering graduate school and \$30,000 while attending graduate school.

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Associate Vice Chancellor Judith Jasper Leicht
Executive Editor Susan Killenberg McGinn
Editor Kevin M. Kiley
Associate Editor Andy Clendennen
Assistant Editor Neil Schoenherr
Medical News Editor Kim Leydig
Calendar Coordinator Genevieve Podleski
Print Production Carl Jacobs
Online Production Alice Marre

News & Comments

(314) 935-6603
Campus Box 1070
kiley@wustl.edu

Medical News

(314) 286-0119
Campus Box 8508
leydigk@wustl.edu

Calendar Submissions

Fax: (314) 935-4259
Campus Box 1070
recordcalendar@wustl.edu

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Summer schedule

After this issue, the *Record* will phase into its monthly summer publication schedule. Look for our next issue in June.

Washington University in St. Louis

School of Medicine Update

GSC gets big boost from small package

By GWEN ERICSON

Work in the Genome Sequencing Center (GSC) is going to go a whole lot faster — hundreds of times faster.

Fast enough to sequence the entire genome of a bacterial organism in one day instead of several weeks.

That's because the GSC has acquired a next-generation DNA sequencer to determine the order of a genome's DNA units, or bases. No other DNA sequencer has its capacity and ease of use.

The entire machine is only about the size of a suitcase, whereas the current capillary-based sequencers are the size of a refrigerator.

The acquisition of the new sequencer at the GSC represents only the second installation of this new instrument anywhere in the world.

"Here, hundreds of thousands of sequencing reactions happen at once, and the instrument reads them all simultaneously," said Elaine R. Mardis, Ph.D., co-director of the GSC and assistant professor of genetics and of molecular microbiology. "It's a massively parallel approach to DNA sequencing."

The whole-genome approach utilized by this instrument also eliminates a lot of preliminary work required by other sequencing equipment.

"It's not only efficient, but it

is also very cost-effective," said Richard K. Wilson, Ph.D., director of the GSC and professor of genetics and of molecular microbiology.

"Our older sequencers cost about \$350,000 and handle about 2,000 samples per day.

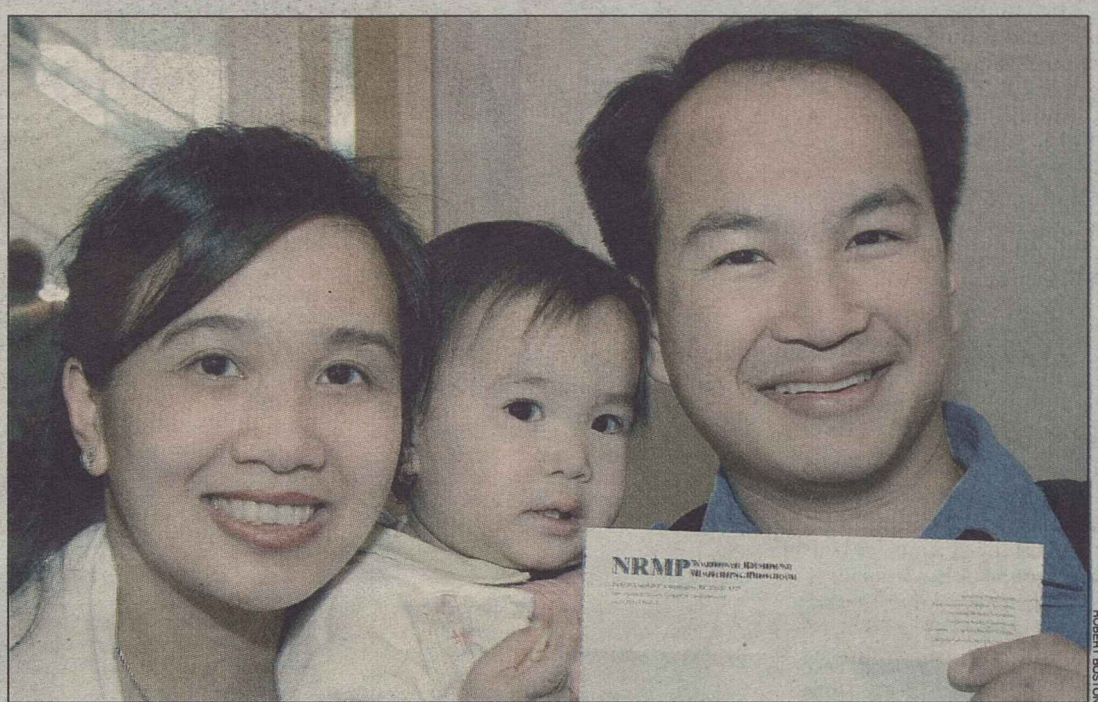
"The new machine costs \$500,000, but it can run through 800,000 samples in an eight-hour workday."

The GSC has been a vital part of the Human Genome Project, the international research effort that sequenced the entire human genome. GSC researchers were primarily responsible for sequencing chromosomes 2, 4, 7 and Y, producing the initial analyses of more than 20 percent of the human genome.

"This is the first new technology for large-scale DNA sequencing that has been developed and introduced in the 15 years we've been doing genome sequencing," Wilson said. "It has spurred a lot of ideas about what the GSC can accomplish."

With the reference sequence of the human genome complete, the new instrument will be useful for quickly resequencing additional human genomes to find variations that can provide insight into disease states.

"Because of its high throughput, the new sequencer will figure prominently in cancer genetics research and many other investigations that seek the genetic causes of disease," Mardis said.

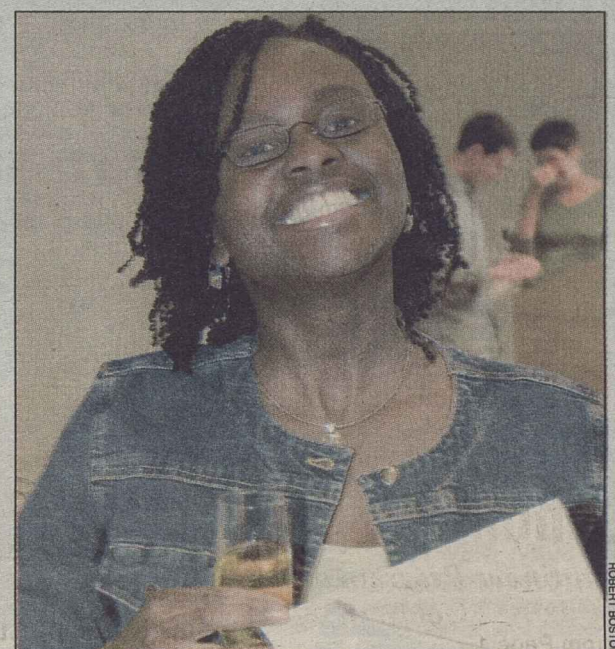


A perfect match

ABOVE: Nam Le celebrates the Match Day news that he will begin a plastic surgery residency at Barnes-Jewish Hospital. Celebrating with him are his wife, Cyndi, and daughter, Abigail.

RIGHT: Nia Mitchell lifts a glass of champagne to toast her match at the University of Colorado School of Medicine in Denver for a residency in internal medicine.

Each year on Match Day, medical students across the United States learn which residency programs they will enter. Many School of Medicine students were thrilled when they opened their envelopes to learn they'll train at their first choice of academic health centers. Le and Mitchell are among the 109 medical students who are graduating in the Class of 2005 and will soon begin residency training.



Timing eliminates immune rejection in transplants

By MICHAEL C. PURDY

University scientists have learned that a temporal "window of opportunity" was critical to their earlier successes in treating diabetic rats with embryonic pig tissues.

In experiments published in 2004, the researchers were surprised to find they didn't have to give anti-rejection drugs to dia-

betic rats treated with embryonic pig-cell transplants. They had expected rats that received no immune suppression would reject the transplants. Instead, the new tissues engrafted with little difficulty — curing the rats of their diabetes.

In a study published online by *Transplant Immunology*, senior investigator Marc R. Hammerman, M.D., the Chromalloy

Professor of Renal Diseases in Medicine, presents evidence that he and colleague Sharon A. Rogers, research instructor in medicine, harvested the embryonic pig tissues at precisely the right point in development.

"When we again harvested the transplant tissues 28 days after fertilization, it reproduced our earlier results, but if we moved the time of harvesting back to

35 days after fertilization, the rats rejected the pig tissues and continued to be diabetic," Hammerman said.

Hammerman and Rogers are leaders in the emerging field of organogenesis, which focuses on growing organs from stem cells and other embryonic cell clusters called organ primordia. Unlike stem cells, which can become virtually any cell type, primordia are locked into becoming a particular cell type or set of cell types that make up an organ.

In earlier studies, the team had shown that transplantation of pig pancreatic primordia into diabetic rats cures their diabetes permanently without the need for immune suppression.

The pig primordia are transplanted into the omentum, a membrane that envelops the intestines and other digestive organs. When the primordia mature, they replace the missing rat insulin, returning the rats' blood glucose to normal levels.

"The absence of a need for immune suppression was such an unexpected and encouraging discovery that we wanted to find out more about why that worked and under what conditions it is possible," Hammerman said.

Superficially, there appears to be relatively little difference between pancreatic primordia from 28-day-old and 35-day-old pig embryos.

"Pig gestation is about 120 days, and it takes every bit of that time for the pancreas to fully develop," Hammerman said.

"There is no pancreas before embryonic day 28, and the 35-day-old pancreas is still very early stage tissue."

Based on additional experi-

ments, Hammerman believes the pancreatic primordia may be effectively invisible to the rat's immune system.

He theorizes that this invisibility is a result of the unusual ways 28-day-old tissues differentiate after transplantation.

The team has shown that no part of the digestive components of the pancreas, which are not needed to treat diabetes, develops after transplantation.

Even the endocrine part of the pancreas, where insulin is made, is different.

"There are no structures similar to the islets of Langerhans, only individual endocrine cells engrafted in the omentum," Hammerman said. "This is a perfect place for them to release insulin where it will do the most good — directly into a key blood vessel known as the portal vein."

In collaboration with scientists at the University of Alabama-Birmingham, Hammerman's team has received funding from the Juvenile Diabetes Research Foundation to transplant pig pancreatic primordia into diabetic primates.

If the pig-to-primate work is successful, he hopes to move on to human trials.

Staff picnic June 10

Come enjoy music, games, prizes and Ted Drewes at the School of Medicine's Employee Appreciation Picnic from 11 a.m.-2 p.m. June 10 at Hudlin Park, adjacent to the tennis courts in front of Barnes-Jewish Hospital.

Bring tickets along with medical school IDs for admission. For more information, call 362-7196.



Community building

LEFT: Graduating occupational therapy students Karen Schroeder (left) and Jennifer Savre (right) celebrate with homeowner Catherine Lloyd after repairing Lloyd's home in north St. Louis for Rebuilding Day. Savre, who will receive a doctorate in occupational therapy today, encouraged more than 20 students and faculty members to participate in the community service event last month. The one-day marathon is dedicated to repairing the homes of low-income elderly and disabled people.

ABOVE: Carrie Henry (left), also a graduating occupational therapy student, and Schroeder repair ceilings in Lloyd's home.

University Events

Health Care Disparities and Kids • Bachelor of Fine Arts Student Show

"University Events" lists a portion of the activities taking place May 20-June 17 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).

Exhibits

Bachelor of Fine Arts Student Show.
Through May 20. Kemper Art Museum.
935-4523.

Lectures

Friday, May 20

Noon. Cell Biology & Physiology Seminar. "Stable Cadherin Dimers in Dynamic Junctions." Sergey Troyanovsky, assoc. prof. of dermatology. McDonnell Medical Sciences Bldg., Rm. 426. 362-7437.

7:30 p.m. St. Louis Astronomical Society Meeting. "Mars Update — Robot Rovers Are Running." Edward A. Guinness, sr. research scientist in earth & planetary sciences. McDonnell Hall, Rm. 162. 935-4614.

Monday, May 23

Noon. Neurology Monday Noon Seminar Series. "In-vivo Monitoring of Therapeutic Response in a Murine Model of Glioma." Sarah C. Jost, neurosurgery resident; "An Animal Model of Executive Control." Gijsbert Stoeft, postdoctoral research scholar/assoc. in anatomy & neurobiology. Maternity Bldg., Schwarz Aud. 747-3243.

5:30 p.m. Cardiac Bioelectricity & Arrhythmia Center Seminar. "Digital Expression Profile of Genes Transcribed in the Heart of a Hibernating Mammal." Matthew T. Andrews, prof. of biology, biochemistry and molecular biology, U. of Minn. Whitaker Hall, Rm. 218. 935-7887.

Friday, May 27

Noon. Cell Biology & Physiology Seminar. "Pharmacological Manipulation of G Protein Beta/gamma Subunit Signaling Pathways." Alan V. Smrcka, assoc. prof. of pharmacology & physiology, U. of Rochester. McDonnell Medical Sciences Bldg., Rm. 426. 362-6040.

Thursday, June 2

Noon. Center for Health Policy Ethnic & Racial Disparities in Health Care Brown Bag Seminar Series. "Health Care Disparities and Kids — Clinical Research & Experience." F. Sessions Cole, prof. of cell biology & physiology and vice chair of

pediatrics. McDonnell Medical Sciences Bldg., Shaffer Conf. Rm. 935-9199.

Friday, June 3

5-6:30 p.m. Nuclear Cardiology CME Course. "Images to Outcomes V." (Continues 7:30 a.m.-3 p.m. June 4, 8-10:45 a.m. June 5.) Cost: \$300 for physicians, \$150 for allied health professionals. Lake of the Ozarks, Lodge of the Four Seasons. For information and to register: 362-6891.

Wednesday, June 8

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

Friday, June 17

6:30 a.m.-5 p.m. Urology CME Course. "Hands-on Advanced Laparoscopic & Robotic Urologic Oncology." (Continues 6:30 a.m.-5 p.m. June 18.) Cost: \$995 for didactic session & live case surgeries, \$2,500 for didactic sessions, live case surgeries and hands-on labs. Eric P. Newman Education Center. To register: 362-6891.

8 a.m.-6 p.m. Mouse Models of Human Cancers Consortium. "Nervous System Tumor Symposium." (Continues 8 a.m.-noon June 18.) David H. Gutmann, Donald O. Schnuck Family Professor of Neurology. Eric P. Newman Education Center. 747-6338.

Commencement Week

For more information, check the Commencement Web site, commencement.wustl.edu, or call the Commencement office at 935-5985.

Thursday, May 19

10:30 a.m. Eliot Honors Convocation. Honoring students for academic and leadership achievements. Athletic Complex, Field House.

1:30 p.m. School of Engineering & Applied Science Recognition Ceremony. Athletic Complex, Field House.

4:30 p.m. College of Arts and Sciences Recognition Ceremony. Athletic Complex, Field House.

8 p.m. School of Art Recognition Ceremony. Graham Chapel.

Friday, May 20

8 a.m. Degree candidates assemble.

8:30 a.m. Commencement Exercises in Brookings Quadrangle.

The following programs begin at 11:15 a.m. or immediately following the Commencement Exercises:

College of Arts & Sciences: Diploma distribution and reception. The Green, west of Olin Library and north of Graham Chapel. Rain location: Athletic Complex, Francis Gym.

University College: Diploma distribution and reception. Women's Building Formal Lounge.

Graduate School of Arts & Sciences: Hooding and recognition ceremony. Edison Theatre. Reception follows in

Mallinckrodt Student Center, Bowles Plaza. Rain location: Mallinckrodt Student Center, Lower Lvl., Food Court.

School of Architecture: Diploma distribution and reception. Brookings Drive Mall. Rain location and time: Diploma ceremony in Graham Chapel, 3 p.m.; reception in Givens Hall.

School of Art: Diploma distribution and reception. Steinberg Hall Terrace. Rain location: Mildred Lane Kemper Art Museum, Steinberg Hall.

Olin School of Business: Undergraduate diploma and awards ceremony. Athletic Complex, Field House. Reception follows in Simon Hall.

School of Engineering & Applied Science: Undergraduate diploma distribution. Lopata Hall, Rm. 324. Reception follows in Lopata Gallery and Lopata Plaza, between Jolley and Cupples II halls.

George Warren Brown School of Social Work: Diploma distribution. Graham Chapel. Reception immediately following in Goldfarb Hall, Lucy and Stanley Lopata Courtyard.

Program in Occupational Therapy: Reception. Holmes Lounge. Diploma ceremony immediately following in Graham Chapel.

Program in Physical Therapy: Reception. Sheldon Concert Hall, 3648 Washington Ave. Diploma distribution and hooding ceremony following at 2 p.m.

The following program begins at noon:

Program in Health Administration: Diploma ceremony. Sheraton Clayton Plaza Hotel, Grand Ballroom. Reception immediately following.

The following program begins at 12:30 p.m.:

School of Law: Diploma ceremony. Brookings Quadrangle. Rain location: Athletic Complex, Recreational Gym. Reception immediately following in Anheuser-Busch Hall.

The following program begins at 1 p.m.:

Program in Audiology & Communication Sciences: Recognition ceremony and diploma distribution. Central Institute for the Deaf. Reception immediately following.

The following programs begin at 2 p.m.:

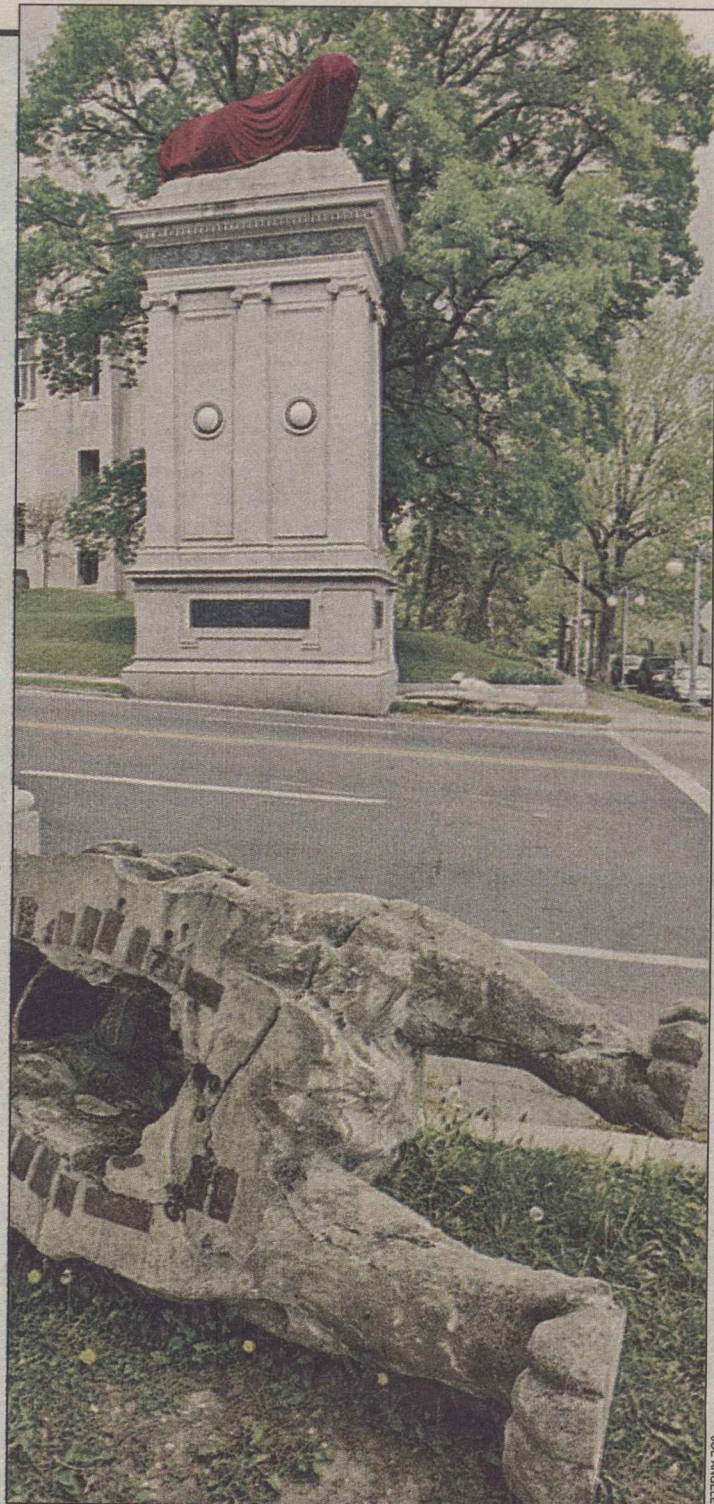
Henry Edwin Sever Graduate School of Engineering & Applied Science: Hooding and recognition ceremony. Edison Theatre. Reception immediately following in Mallinckrodt Student Center, Lower Lvl., Food Court.

Program in Genetic Epidemiology: Diploma ceremony. McDonnell Medical Sciences Bldg., Erlanger Auditorium. Reception immediately following in the GEMS Suite, Shriners Building, Rm. 3307.

The following programs begin at 3 p.m.:

Olin School of Business: Graduate diploma and awards ceremony. Athletic Complex, Field House. Reception immediately following in Simon Hall.

School of Medicine: Commencement recognition ceremony. America's Center (downtown St. Louis), Ferrara Theater. Reception immediately following at America's Center atrium.



Lion around *Forgotten Opportunity*, a sculpture installation by Oliver O'Donnell, senior in the School of Art, spotlights University City's Lion Gates on Delmar Boulevard just north of the Hilltop Campus. The original lions, created in 1909 by Hungarian sculptor Julian Zolnay, were replaced about 15 years ago with copies made from the same molds. O'Donnell's piece — part of the 19th annual University City Sculpture Series, co-sponsored by the Municipal Commission on Arts & Letters and the Regional Arts Commission — juxtaposed new and old by placing remnants of the original lions at the base of the gates while draping the replacements in bright red velvet.

Fat

Findings could lead to better obesity treatment
— from Page 1

normal mice in terms of body weight, body fat, metabolic rate and food intake.

The effect of added dietary fat was duplicated when the mice were treated with a drug that activates a protein called PPAR-alpha. Liver fat declined to normal in the FASKOL mice within 10 days of receiving the PPAR-alpha activating drug.

PPAR-alpha is a protein found in all mammals and is central to metabolic processes that extract energy from dietary components like carbohydrates and fats. Because the PPAR-alpha-activating drug did the same work dietary fat does, the investigators concluded new fat may be crucial to initiating the PPAR-alpha pathway.

"Scientists have argued that PPAR-alpha is activated by fats," said Semenkovich, who also directs the Division of Endocrinology, Metabolism and Lipid Research. "But we've never known which fats or where they come from. This study suggests that new fat is a key that unlocks the door for PPAR-alpha in the liver."

The liver is very important for processing nutrients consumed in the diet and sending them on to

the rest of the body. Abnormal processing of glucose or lipids in the liver contributes to problems of type 2 diabetes and atherosclerosis, and fatty liver disease often is seen in people who are obese or suffer from insulin resistance.

"There's also good evidence the liver plays a key role in mediating cardiovascular risk through the secretion of multiple proteins associated with inflammation," Semenkovich said. "In these mice we found that when too much fat got into the liver, there was excessive inflammation."

With Manu Chakravarthy, M.D., Ph.D., an endocrinology fellow and first author of the paper, Semenkovich found that new fat seems to solve those problems.

The research team is trying to identify fats that could be given in small amounts to activate the PPAR-alpha pathway. They are also studying liver cells and fat cells to see how the liver can tell the difference between old and new fat.

Eventually, Semenkovich believes these findings could lead to more effective strategies for the treatment of obesity, type 2 diabetes and other metabolic problems.

For now, he said that dieters who want to lose fat stored in peripheral tissues may find it useful to take in small amounts of dietary fats, such as fish oils, which might more effectively activate PPAR-alpha and fat-burning pathways through the liver.

Sports

Baseball team heads to NCAA Tournament

For the first time in 13 years, the baseball team is headed to the NCAA Tournament.

No. 5 seed WUSTL (31-8) faced No. 2 seed Wartburg College (31-9) in the second game of the Central Region Championship on May 19, after *Record* presstime.

The regional is hosted by Illinois Wesleyan University.

No. 1 Aurora University (34-7), No. 3 Illinois Wesleyan (32-11), No. 4 Edgewood College (26-14) and No. 6 Ripon College (22-13) round out the field.

Softball team falls to defending champs

The Bears went 2-2 at the Midwest Region Championship in Cedar Rapids, Iowa, as their season ended May 16 against the University

of St. Thomas, the defending national champion.

WUSTL opened the regional with a 1-0 win against St. Mary's University, as sophomore Laurel Sagartz picked up her 23rd win of the season. The Red and Green fell to St. Thomas in the second game, 7-0, moving it into the loser's bracket.

WUSTL knocked off St. Mary's again, this time 6-1, setting the stage for another showdown with St. Thomas. The Tommies prevailed 9-0 to end the Bears' season.

WUSTL (47-3) finishes one win shy of matching the Division III single-season record.

Track and field teams show well at Keeler

The men's and women's track and field teams turned in strong performances at the Dr. Keeler Invitational on May 12-13 in Na-

perville, Ill.

Junior Laura Ehret paced the Bears, breaking the school record in the 800-meter run.

Ehret clocked a time of 2:13.93, provisionally qualifying her for the NCAA Outdoor Championships, which are two weeks away.

Senior Hallie Hutchens missed breaking another school record by only 2/100 of a second.

In the 100-meter hurdles, Hutchens posted a time of 14.49 to place second in the 36-person field, which also earned an NCAA "B" cut.

On the men's side, junior David Skiba led the way, finishing second in the 400-meter hurdles. He recorded a time of 52.98, the fastest on the team this year and also a provisional qualifier.

The Red and Green registered team season-best times in three other events.

Gallery of Graduates

Helping others is most important for Collins

By NEIL SCHOENHERR

To say Rob Collins was highly involved during his four years at the University would be quite an understatement.

The list of activities in which he participated during his time here is literally four pages long. Seemingly, there are no student groups, organizations or services of which Collins has not been a part. And what has all that involvement taught him?

"I really want to do something to help people," he says.

And to that end, the Oak Park, Ill., native plans to pursue a career as a firefighter after today's Commencement.

"I guess during my time at the University, I've learned a lot about how people treat each other," said Collins, who will receive a visual

School of Art

communications degree in advertising

from the School of Art, part of the Sam Fox School of Design & Visual Arts.

"I think corporate advertising seems kind of ruthless. I just started to realize that I wanted to find a career in which I could help people and make their lives better.

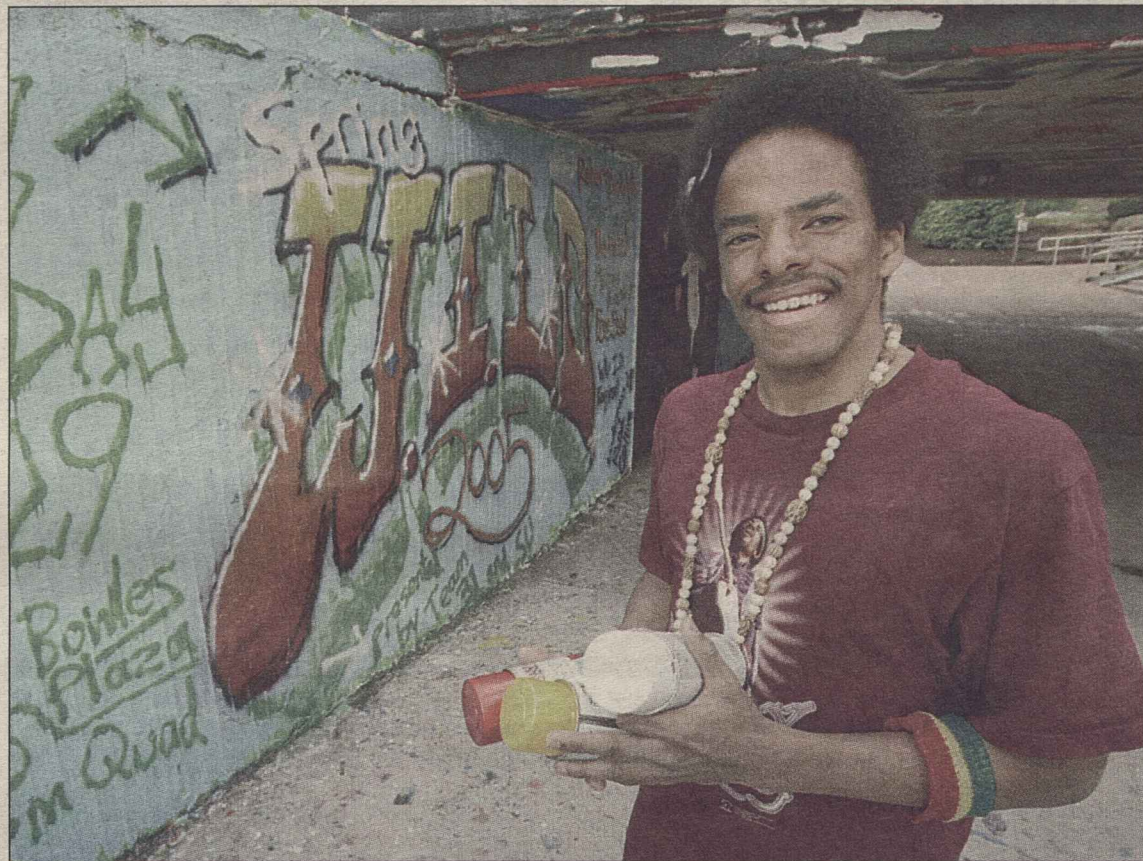
"Firefighting came up, and the more I thought about it, the more I liked it."

He won't abandon his major altogether, though. He still plans to do graphic design jobs for charities and nonprofit groups.

"I'll have a job, but I don't think that job will define me," Collins says. "I'll do a lot of other things."

Just as he did at the University.

Collins' goal for his senior year was to be involved in every major multicultural performance on campus. He's a perfect 4 for 4,



Rob Collins, a gifted artist and graphic design major in the School of Art, painted this mural on the wall of the Forsyth Boulevard underpass, part of a program supported by the Office of Student Activities. Though Collins has a strong passion for art, his passion for helping others is even stronger. He plans to train to become a firefighter after Commencement.

having taken part in Diwali, Black Anthology, the Chinese New Year Festival and Carnival.

Collins, an Ervin Scholar, was National Residence Hall Honorary Residential Advisor of the Year for the University in 2004, co-president of the Art School Council, a member of Student Union and its representative to the Board of Trustees, president of Teach ESL (English as a Second Language) and the Association of Black Students' Man of Es-

sence Award winner for the Class of 2005.

He also ran the 400 meters and threw the javelin on the track and field team.

"Rob is an absolute delight and just a great person," says Jill Carnaghi, Ph.D., director of campus life and assistant vice chancellor for students. "His peers love him. He's simply a good person and one of the most selfless folks I know — always gives you a hug when he sees you, says

hello to everyone he sees and is always pleasant.

"He is truly a unique individual."

That, too, could be an understatement. Collins' involvement on campus and off was amazing.

He was a School of Art peer adviser; organized dinners for students to meet with faculty, including one such dinner with Chancellor Mark S. Wrighton; performed at and hosted numerous events; gave campus tours;

and hosted a total of 21 prospective freshmen.

He founded After School Art, a group of University students who work on art projects with Stevens Middle School students, and participated in Dance Marathon in all four of his years here.

He conceived and led an opportunity for WUSTL students to donate meal points to the St. Louis Foodbank, which feeds local families. More than 10,000 points were donated in two days.

Though his primary career plans after Commencement don't include graphic design, Collins put his skills to good use while on campus.

He helped create logos and T-shirt designs for Eliot Residence Hall, the Badminton Club, the track and field team, The Village, fraternity housing and the Black Pre-med Society, among others.

"I think the thing that sets the University apart and makes it such a good experience is the resources it provides — both in people and in opportunities," Collins says. "I think taking advantage of those things has made my experience here truly incredible."

"I sometimes wonder if I could have gone somewhere else and had as successful an experience. I don't think so."

He said that when a prospective freshman would talk to him about applying to colleges, he would explain that who they are is the most important thing and they should go to a place where they can freely express their individuality.

"I definitely feel like I found a niche here, and I've had an amazing experience," he says.

Backus: Passionate about empowering diverse populations

By JESSICA MARTIN

An unexpected end to her Peace Corps stint in Jordan left Deborah Backus uncertain about her future.

"As a Peace Corps volunteer, I lived in the city of Aqaba, where I taught English and served as an activities coordinator for the SOS Children's Village and worked for an international committee of the Red Crescent/Red Cross-sponsored women's community center," says Backus, who will graduate today with a master's degree from the George Warren Brown School of Social Work.

In November 2002, after approximately two years of service, her group was evacuated from Jordan because of security concerns in the region before the war in Iraq.

George Warren Brown School of Social Work

With less than 24 hours' notice, we returned to the U.S., and I found myself wondering what I was going to do with my time, as I expected to be in Jordan another eight months.

"It also was hard to leave so quickly. The reverse culture shock was harsh, especially returning to the U.S. at the height of anti-Arab/Middle East sentiment."

While in Jordan, Backus worked with a predominantly Palestinian community and became interested in the issues of forced migration and community development. So after the evacuation, she decided to apply to the School of Social Work.

"I applied to the School of Social Work because I was very attracted to the philosophy of social work as a profession, could

adapt the program to suit my personal interests and was excited by the opportunity to do my concentration practicum overseas," she says.

In addition to her class work in the areas of social and economic development and management, Backus worked part-time as the volunteer coordinator for the Refugee Employment Mentoring Program at Catholic Charities Refugee Services.

"This only strengthened my interest in refugee issues as I recruited and trained community volunteers to offer local Bosnian refugees social support and to serve as mentors in the areas of career development and English as a second language," she says.

Backus brought that dedication to her practicum with the United Nations High Commissioner for Refugees (UNHCR) Regional Office for Thailand, Cambodia, Laos and Vietnam in Bangkok, Thailand. The UNHCR is responsible for protecting the nearly 143,000 refugees in Thailand.

She is working as an adviser to the UNHCR deputy regional representative, Bhairaja Panday, and has had a wide range of experiences during her practicum.

"I've attended UNHCR negotiations with the Thai government, assisted with logistics, wrote situation reports and worked at the detention center during the registration process to address any issues," she says.

"This practicum opportunity has taught me a great deal about refugee protection on an international level and has been a very unique learning opportunity."

Backus' passion for helping others developed at an early age.



Deborah Backus pauses in front of the United Nations office in Bangkok, Thailand. "I began volunteering when I was young due to my parents' influence," she says. "They instilled in me that the greatest values of life are not monetary gains but instead the value gained from influencing and equally being influenced from those around you."

"I began volunteering when I was young due to my parents' influence," she says. "They instilled in me that the greatest values of life are not monetary gains but instead the value gained from influencing and equally being influenced from those around you."

"Throughout my life, I've been continually amazed and humbled by the stories and lives of individuals that overcome great struggles and continue on to achieve great things throughout their lives, or to simply survive."

The faculty, staff and students at the School of Social Work have encouraged Backus' interest in social work on an international level. She considers Gautam N. Yadama, Ph.D., associate professor and director of international programs, one of the major influences on her career.

"Deborah is a natural for the kind of international development work that she is doing at UNHCR," Yadama says. "She is enormously competent in her understanding of other cultures,

keenly aware of the thorny development concerns and is able to work in developing countries without much hesitation."

"She is the kind of American graduate student that we aspire to attract and educate at the School of Social Work as we increasingly internationalize the school."

Following graduation, Backus will continue her work with the UNHCR office in Thailand.

"I have fallen in love with the country, the people and, of course, the coconut and curry," she says.

Gallery of Graduates

Ebreck's journey of compassion leads to law degree

BY DEB ARONSON

You could say that Andrea Ebreck's legal career started with a bike ride.

As a freshman at the University of California, Santa Barbara (UCSB), Ebreck, who will graduate today from the School of Law, decided to bike in the California AIDS ride. Not only must the riders pedal 600 miles from San Francisco to Los Angeles, but they also must raise at least \$3,000 in order to participate.

At first, Ebreck's decision was prompted not so much by the cause as it was the challenge of doing something she could not

envision herself doing physically ("I am not athletic at all," she

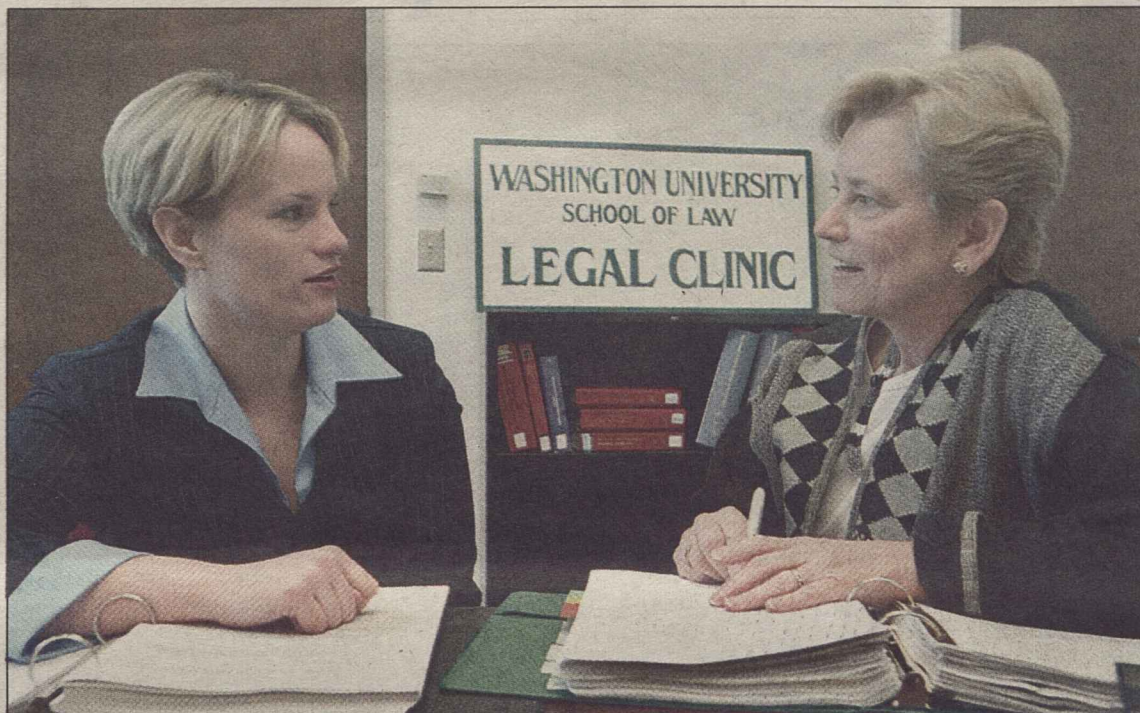
says), combined with the challenge of raising the money, which to many college students is a daunting sum.

But every journey begins with a single step, and this step of hers was pivotal.

"I trained for 10 months and did the whole ride," Ebreck says. "And I raised \$9,500. The chancellor of UCSB wrote me a personal check for \$500. This experience opened me up to how willing people are to help you for a good cause. I realized all you have to do is ask."

From there, Ebreck's commitment to a variety of social justice issues, particularly HIV/AIDS, grew steadily until it was only another small step to consider law school.

"I never actually imagined practicing law," Ebreck says. "It



Andrea Ebreck (left) confers with Karen L. Tokarz, J.D., professor and executive director of the School of Law's nationally recognized clinical program. "Andrea has the brain of a lawyer and the heart of a social worker," Tokarz says. "She is super intelligent and analytical, yet very compassionate."

was more a matter of getting a law degree to help me in nonprofit management or lobbying."

Ebreck, an only child who grew up in California, had intended to stay in California for law school until she received Washington University's recruiting material in the mail.

She was pleasantly surprised to find that, with Washington University's generous scholarship funding, it cost essentially the same as attending a University of California law school as an in-state resident.

"It's pretty cool to have the option of attending an excellent, small, private law school with great student-teacher ratios," Ebreck marvels.

So Ebreck left California for St. Louis, but her journey was just beginning. After her first year here, Ebreck went all the way to South Africa for a public interest internship made possible by a \$5,000 stipend through the School of Law's Summer Public Interest Stipend Program.

There she worked for a human rights nongovernmental

organization (NGO), educating people with HIV/AIDS about their legal rights regarding their medical treatment, employment and estate planning.

"It was eye-opening in so many ways," Ebreck says. "I could see how lawyers can help people in their lives and how the principles I had learned in my first-year classes could be applied to help people."

"I left St. Louis still thinking I would use law in a different career and came back from South Africa wanting to practice law. That was

the point at which my career goal shifted for me."

Ebreck's expectations about law school had shifted as well. She had expected to dislike law school, but she was surprised to find that she loved it, particularly the clinical courses. In two different clinics, Ebreck helped HIV-positive clients get both Medicaid and Social Security benefits they had been denied.

"These benefits are the lifeblood for people who are too sick to work," she says.

"Andrea has the brain of a lawyer and the heart of a social worker," observes Karen L. Tokarz, J.D., professor and executive director of the law school's nationally recognized clinical program, and the coordinator of the South Africa internship project.

"She is super intelligent and analytical, yet very compassionate."

In her spare time, Ebreck was an associate editor of the *Washington University Law Quarterly* and president of Outlaw, a student group committed to supporting gay, lesbian, bisexual and transgendered people.

And now that she has completed her education, Ebreck is moving on again, this time to Columbus, Ohio, and this time with her partner, Shelly Nelson. Ebreck is joining the firm of Vorys, Sater, Seymour and Pease, where she hopes to practice health-care law.

The firm has a strong reputation for mentoring young lawyers and for its commitment to pro bono work, so Ebreck is very pleased about where her journey has taken her.

Carrero relishes the discovery aspect of science

BY TONY FITZPATRICK

In Javier Carrero's native Puerto Rico, it's expected that intelligent people will become a doctor, lawyer or engineer.

Not that he's a rebel, but after graduating with a bachelor's degree in biology from Emory University in 1996, Carrero spent the next two years in the information technology community in Atlanta.

"I've loved computers since I was 10 years old, and when I went into IT, the Internet was just booming," Carrero says. "It wasn't

long, though, before I realized that I missed the intellectual stimulation of research, and

that I was far more motivated by the discovery aspect of science than treating patients."

Carrero returned to San Juan, where he enrolled at the University of Puerto Rico and earned a master's degree in molecular biology in 1998.

He came to Washington University in 2000 to pursue a doctorate in immunology through the Division of Biology and Biomedical Sciences. In this program, he was matched with one of the world's masters of pathology and immunology: Emil Unanue, M.D., the Edward Mallinckrodt Professor and chair of the Department of Pathology and Immunology in the School of Medicine.

Carrero became captivated by the workings of the immune system. With Unanue in his corner, he steadfastly proceeded to make exceptional discoveries into the process by which bacterial pathogens elude the sentries of the immune system.

The discoveries have resulted in Carrero being first author of two critical technical papers, and some-

day could lead to novel drug development against bacterial diseases.

One important Unanue discovery is particularly key to Carrero's doctoral work: Using the bacterium *Listeria monocytogenes*, Unanue showed that molecules known as the "major histocompatibility complex" display pieces of pathogens on their cell surfaces, alerting one of the body's chief bug-busters, the T-cells, to spring into action.

Unanue had observed that *Listeria* infection led to very strong incidences of cell death — called apoptosis — in laboratory mice. Using this as his model, Carrero tried to figure out if the *Listeria* virulence factor listeriolysin O (LLO) is the culprit in causing cell death, which, in turn, endangers an organism's health.

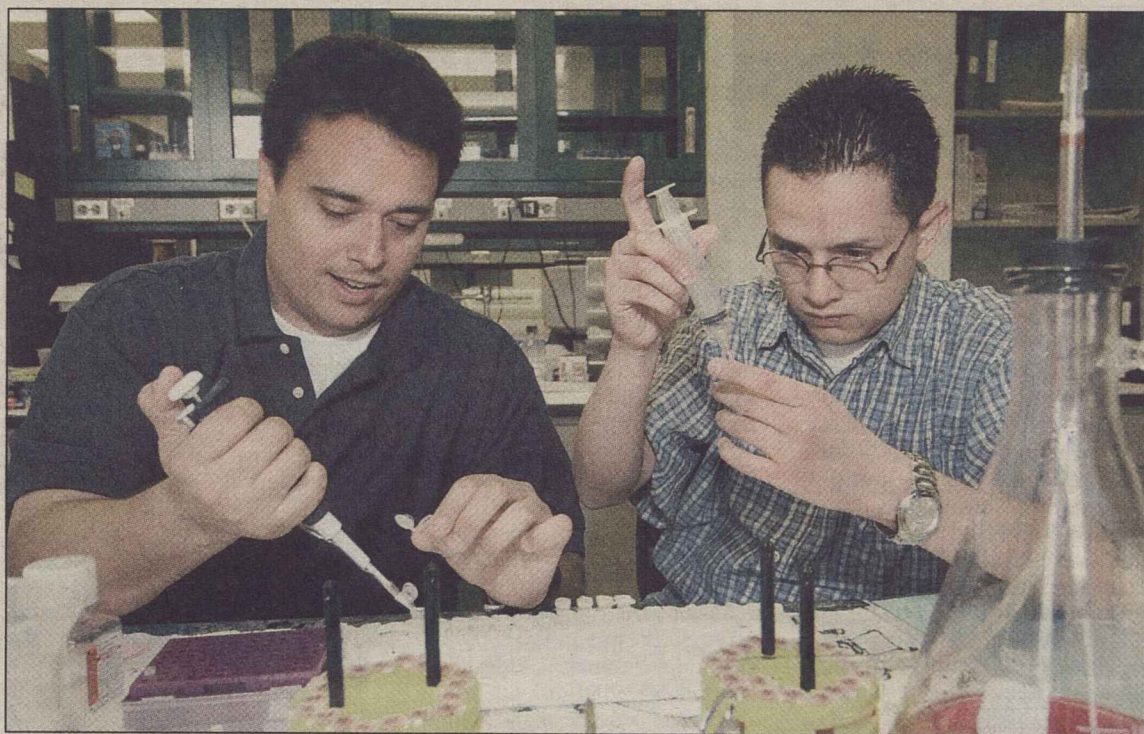
In a 2004 *Journal of Immunology* paper, Carrero, Unanue and WUSTL postdoctoral researcher Boris Calderon, M.D., proved that LLO kills T-cells and described the process.

That same year, in a *Journal of Experimental Medicine* paper, the trio found that mice genetically engineered to be deficient in the immunologically important Type I interferon receptor were actually resistant to *Listeria* infection. They then inferred that T-cell death was responsible for enhanced mouse susceptibility to *Listeria* infection.

The surprise was that Type I interferon-deficient mice infected with almost any virus quickly succumb and die, whereas there is protection from bacterial infection.

"We think we have the mechanism for cell death, but we need to iron it out," Carrero says.

Blocking the pathways involved in cell death might lead to developing vaccinations for people who have a full-blown bacterial infection and possibly a vaccine protocol that would provide



Javier Carrero (left) works in a lab with postdoctoral researcher Boris Calderon, M.D. "The shining diamond of St. Louis really is Washington University," Carrero says. "It's one of the pillars of institutional learning in the world. I've found it to be a very collaborative, collegial environment where egos never get in the way of helping each other out."

better immunity.

"One of the challenges in immunology is developing a protocol that, instead of targeting the generation of neutralizing antibodies, targets the other arm of the immune system — T-cells — to protect during an infection," Carrero says.

Carrero said that in the future he hopes to focus on new strategies for dealing with infections and come up with new immunity protocols. This could include exploring hunter viruses — non-pathogenic viruses that target other viruses and destroy them.

Carrero defended his doctoral thesis in April and then rewarded himself with a 10-day vacation to Italy, where he indulged in one of

his passions — attending the opera.

He enjoys bicycling, reading and going to the symphony.

"There is plenty to do in St. Louis, and a relatively laid-back atmosphere to do it in," he says.

He comes from a big baseball family and sees several Cardinals games each year.

"I've got an uncle who flies in here and makes sure he sees some games," he says. "Sometimes I wonder, 'Is he coming here to visit me or see the Cards play?'"

Carrero will seek postdoctoral work at the beginning of 2006 and plans a long career as a teacher and researcher like his mentor, Unanue.

"Javier takes care of 'cultivating our garden,' as Voltaire said, but applied here to science," Unanue

says. "That is, for him, his commitment to the day-to-day laboratory work and projects comes first and foremost."

"It has been a real symbiosis working together, sometimes intense and boisterous, perhaps reflecting our common Spanish heritage."

"Emil is a great mentor," Carrero says, "the best I possibly could have had. He's brilliant and a great motivator."

"The shining diamond of St. Louis really is Washington University. It's one of the pillars of institutional learning in the world. I've found it to be a very collaborative, collegial environment where egos never get in the way of helping each other out."

Gallery of Graduates

Moyano strives to understand, interpret context

BY LIAM OTTEN

Architecture is the art of balancing restrictions. Site, program and budget; aspirations of clients and neighbors; zoning issues and building codes — a successful architect must negotiate them all to create environments both functional and stirring.

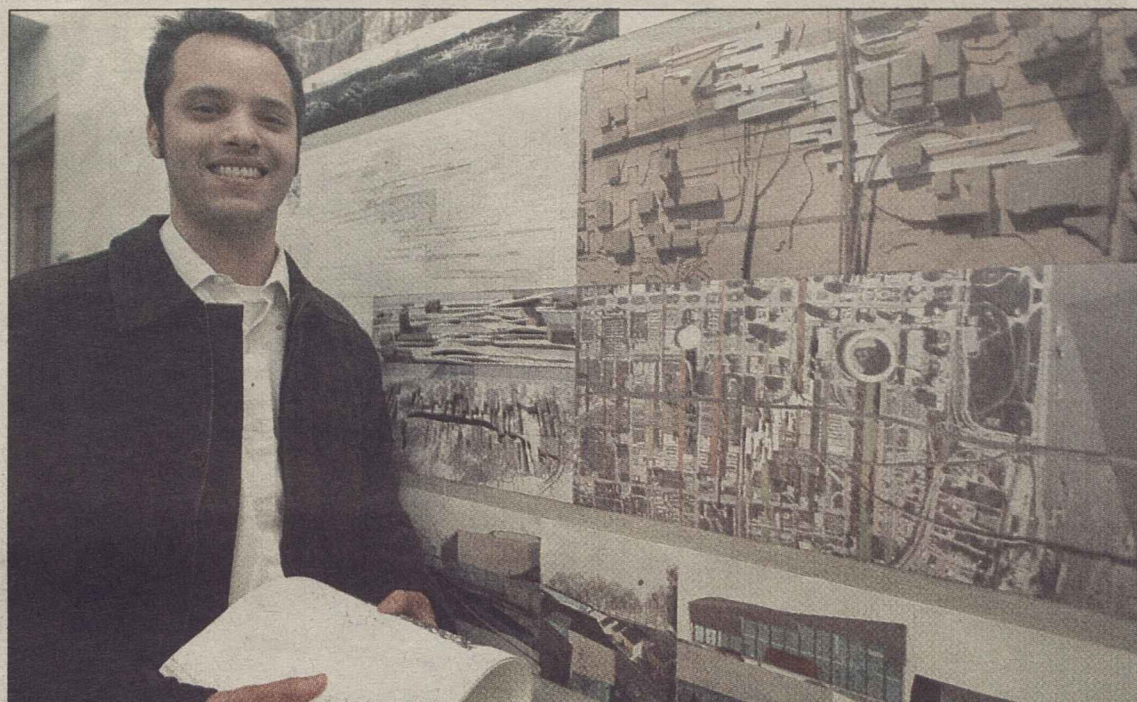
Few are better positioned to navigate such often-competing demands than Pablo Moyano. The Buenos Aires, Argentina, native, who spent years in construction and architecture before coming to the School of Architecture — part of the Sam Fox School of Design & Visual Arts — has earned master's degrees in architecture and in urban design: the field's micro- and macrocosms.

"Historically, there was a very sharp distinction between architecture and urban design," Moyano explains, with urban planners focused on the large scale, architects on individual buildings. "Today, the distinction is more blurred. There is indeterminacy on the disciplines' boundaries, in response to contemporary complexities."

Moyano has been nominated for several of the school's most prestigious honors: the Frederick Widmann Prize, for design excellence; the American Institute of Architects Medal, for scholastic achievement and professional promise; the Hugh Ferriss award for Architectural Drawing; and Alpha Rho Chi, the architectural honor society.

(An exhibition of nominees' work is on view in Givens Hall. Winners will be announced today at the school's diploma ceremony.)

"Pablo is one of those rare designers who can think conceptually



Pablo Moyano, who earned master's degrees in architecture and in urban design, displays his work in Givens Hall. "Pablo is one of those rare designers who can think conceptually about a project while also bringing it to clear and precise resolution," says Gia Daskalakis, assistant professor of architecture.

about a project while also bringing it to clear and precise resolution," says Gia Daskalakis, assistant professor of architecture, for whom Moyano twice served as teaching assistant.

"He understands the sequencing — and the time constraints — of the design process and is able to work in a very steady and consistent way."

Moyano earned a professional architecture degree from the University of Buenos Aires in 2000, graduating with honors. He supported himself by working at Delellis and Moyano Construction, a small architectural and engineering firm co-founded by his brother, Juan Jose, also an architect. He later joined Loma Negra, a large concrete and masonry manufac-

turer, for whom he literally wrote the manual on concrete-block installation.

After a stint with Phonex-Isocor, a leading ceiling and flooring manufacturer that also employed his former classmate and now wife, Catalina, he joined the secretary of culture for the city of Buenos Aires' architectural department. His projects included a 250,000-square-foot auditorium and Emilio Ambasz's Buenos Aires Museum of Modern Art.

Ironically, Moyano came to St. Louis thanks to the University's Buenos Aires studio, which shares facilities with the Argentina Society of Architects.

Every two years, the society chooses one architect for a graduate scholarship at Washington

University. Moyano, a member since 1992, hadn't previously considered living in the United States but applied — with the support of his former professor Alvaro Arrese — in 2002 and won the slot.

Moyano initially intended to study only architecture, but he was deeply impressed by "Elements of Metropolitan Landscape," an intensive, semester-long studio led by Jacqueline Tatom, director of the Master of Urban Design Program. Student projects — largely focused on the area surrounding the new MetroLink station in Swansea, Ill. — investigated issues of transportation, environmental impact and sustainability, among others.

In 2003, the class' work was

exhibited at the William & Florence Schmidt Art Center at the Southwestern Illinois College and Foundation in Belleville.

In subsequent studios, Moyano examined downtown St. Louis, the California Delta and Spain's Ebro River. Last summer, he spent two months in New York, studying the central shopping district in Jamaica, Queens. For his thesis project, he designed a 500,000-square-foot, mixed-use development in Brentwood, Mo., a medium-density St. Louis suburb.

"I wanted to reconfigure typical big-box retail," Moyano explains of the latter, a bold, terrace-like design that manages to blend gently — though not inconspicuously — with nearby one- and two-story homes. "The idea was to increase density while creating something more spatially engaging."

Recently, Moyano and Catalina collaborated with Daskalakis on a conceptual landscape design for St. Anthony's Medical Center. They are working with Adrian Luchini, the Raymond E. Maritz Professor of Architecture, on a planning project in China.

Moyano also recently took a position with Forum Studio, a St. Louis-based architecture, interiors and planning firm.

"I'm doing mostly schematic design," he says, referring to the early, conceptual "brainstorming" phase of the design process. "In general, I try to base projects on information from the site, though that information is not always physical."

"It's the job of the designer to understand and interpret context — the people and the community, the history, landscape and urban environment — and not just to impose a generic strategy or an idea."

Degree is 'family affair' for U. College's Agnew

BY GERRY EVERDING

In her job as an admissions coordinator for University College, the evening division of Arts & Sciences, Patricia Agnew has heard countless stories from adult students about the challenges of pursuing a college degree while working full-time, raising a family or simply trying to hold onto some semblance of a social life.

But now, when Agnew runs into students who are feeling especially overwhelmed, she'll have a warm and inspiring success story to tell them.

Her own.

Agnew will graduate today with a bachelor of science degree in psychology in Arts & Sciences, for which she earned all 120 hours of credit while working full-time at the University.

A single mother, she began seriously taking courses through University College in 1998, the same year her daughter started kindergarten.

"I tried to go the community college route after high school, but my heart wasn't in it and I dropped out in the first semester," Agnew says. "I was pretty gung-ho about taking classes when I started working here in 1989, but I didn't get serious about it until my daughter started school."

"Then I decided it was time for me to get going. She's been my inspiration."

Her daughter may have provided the motivation, but Agnew credits her entire family with providing critical support and encouragement.

"I could never have done this without my mother and sister," Agnew says. "I could never have gone to class two or three nights a week if they hadn't been so willing to help watch my daughter."

"They were always there for me, telling me, 'You can do this.'"

When Agnew accepts her degree, she'll have a team of educational co-conspirators in the audience: her mother, Rebecca; her sister, Sandra; and her daughter, Chelsea. Team Agnew will reassemble soon to celebrate Chelsea's graduation from Wydown Middle School.

"Everyone is so excited about going to the graduation ceremony," Agnew says.

And while her immediate family made it all possible, Agnew credits her "University family" with making the process both enjoyable and rewarding. In addition to friends and co-workers in University College, she has a long list of "study buddies" with whom she has shared long nights mulling over homework in the January Hall library.

"Besides being one of my closest friends, Pat has played and still plays a supportive role in my career as a student," says Terry Wirtel, an administrative assistant in the Olin School of Business and a longtime classmate of Agnew's. "I have depended on her for helping me get through some of my classes and as a result, she has made going to school an enjoyable and fulfilling aspect of my life."

Known for her bubbly personality, energy and enthusiasm — as well as wearing adventurous hairstyles and singing blues standards in the halls — Agnew has long been a familiar face to stu-



Patricia Agnew (front, center), of University College in Arts & Sciences, credits her family — including her mother, Rebecca (left), and sister, Sandra (right) — for helping her earn a degree. "I could never have gone to class two or three nights a week," Agnew says, "if they hadn't been so willing to help watch my daughter (Chelsea, rear). They were always there for me, telling me, 'You can do this.'"

dents seeking help in the offices of University College.

"Because I'm a student too, it

makes me want to be as helpful as possible when students come in with a problem," Agnew says. "If a

student needs financial aid, I make sure they understand what's available, what's out there for them."

"I know exactly what they're talking about because these are the same things I've been going through. I understand their problems."

"I know how difficult it can be to sit down and study after you've been at work all day, how it is to scramble for a baby sitter just so you can get to class."

Agnew has mastered all these challenges well. She will graduate with a high-B average, having made the Dean's List six times.

"We're very proud of her," says University College Dean Robert E. Wiltenburg, Ph.D. "It's extraordinary that she has worked so hard — over so many hours and so many years — to accomplish all of this, and she has done so at a very high level."

"She's done a spectacular job as an employee, as a student and as a mother — all at the same time."

And while her graduation will mark a major educational milestone, Agnew is not finished. She plans to enroll next semester in the University College graduate program in non-profit management.

"In the University College office hangs a framed, enlarged postage stamp which has the statement 'Learning never ends' written on it," she says. "I've become a real believer in that statement."

"I started out thinking it was too late for me, that I was too advanced in years to go back to school, but that's all changed now."

Gallery of Graduates

Cohen poised to blaze a trail in plastic surgery

By KIM LEYDIG

As a 10-year-old growing up in the Russian city of Novosibirsk, Michael Cohen watched his young cousin become suddenly ill. Nobody knew what was wrong, but his health was rapidly declining.

A family friend, who is a trauma surgeon, was finally able to diagnosis the condition. He determined the child was septic from a ruptured appendix, and he saved the young boy's life.

"That story is why I became a doctor," Cohen says. "His ability

School of Medicine

to save my cousin had an incredible impact on me. I knew back then

I wanted to be a surgeon."

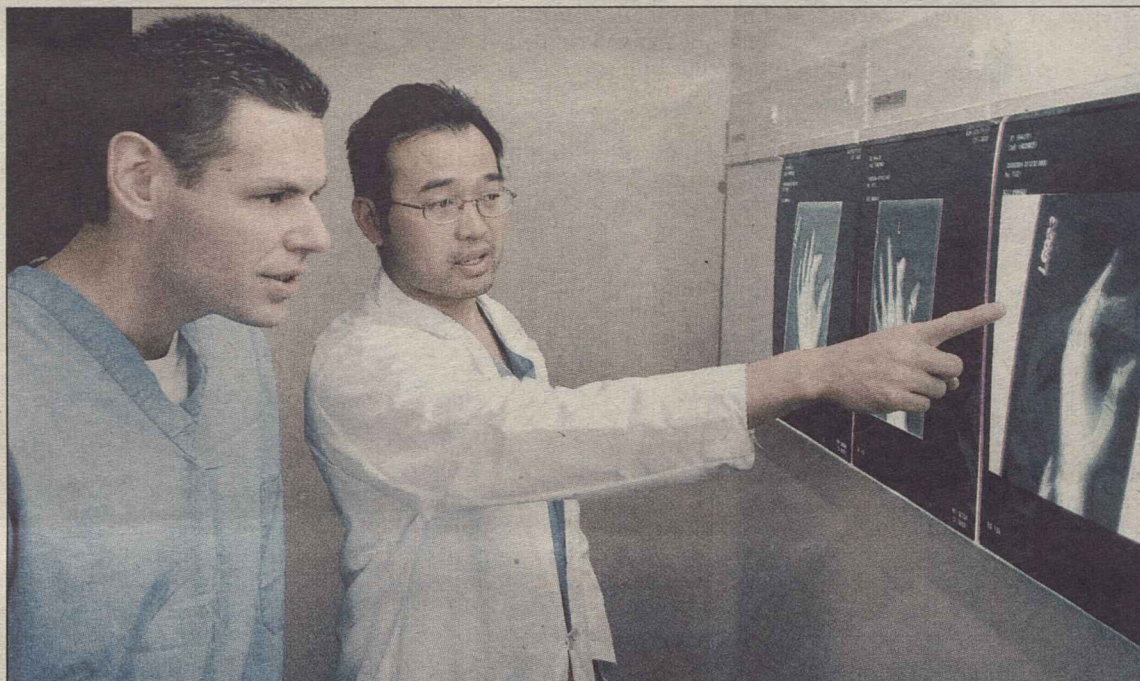
And that childhood passion for medicine has never waned.

During the Cold War, no one was allowed to leave the Soviet Union. Cohen's father, a computer scientist, sought political asylum for his family in America partly because of anti-Semitism in Russia.

A Jewish philanthropic organization helped the Cohen family come to the United States in 1989, when Michael was 14. His family settled in Boston, where his father still works as a computer scientist and his mother owns a beauty salon and a Russian restaurant.

Michael became a U.S. citizen 10 years ago.

After attending Stanford University his freshman year, he took time off to do volunteer work on a farm in Israel. He returned to America and graduated



Surgeon Thomas H.H. Tung, M.D. (right), and Michael Cohen review images of a fractured thumb after extensive reconstructive surgery, which entailed fusing the bones together after a machine crushed the patient's thumb. Tung says Cohen "has many qualities that will serve him very well as a physician — he's dedicated, conscientious, has a good eye for fine details and cares about his patients."

ed from Harvard University in 1998 with a biochemistry degree.

When he graduates from the Washington University School of Medicine today, Cohen will have already completed a master's program in clinical breast reconstruction and a basic science fellowship in limb transplantation.

After a visit to Siberia, he'll head to Washington, D.C., in June to start a plastic surgery residency at Georgetown University Hospital.

"Mike is a highly motivated, hardworking and talented individual, which is a true product of

his upbringing and personal fortitude," says James B. Lowe III, M.D., chief of facial plastic surgery and assistant professor of surgery. "He possesses a great combination of artistic vision and commitment to excellence based on a foundation of personal responsibility and a work ethic ideal for plastic surgery."

As a second-year medical student, Cohen became fascinated with reconstructive surgery after a lecture on facial reconstruction following traumatic injury and cancer resection. He then decided to take two years off from med-

ical school to further pursue plastic and reconstructive surgery.

First, Cohen completed a Doris Duke Fellowship with breast reconstruction specialist Keith E. Brandt, M.D., associate professor of surgery, exploring two types of the TRAM flap procedure, a technique that allows surgeons to use the patient's tissues to re-create a natural breast.

He then completed a yearlong Howard Hughes Fellowship, researching limb transplantation with Thomas H.H. Tung, M.D., assistant professor of surgery, further confirming his interest in

plastic and reconstructive surgery.

"I really wanted to spend time in the OR instead of pursuing basic science in the lab," Cohen says. "The fellowships really offered me the opportunity to explore plastic surgery and determine it was the right field for me."

Cohen's early realization of his interest in plastic surgery, through both his fellowships and involvement in other projects in the division, allowed the department to not only get to know him well, but also to trust and depend on him.

"Michael is one the best medical students we've worked with," Tung says. "He has many qualities that will serve him very well as a physician — he's dedicated, conscientious, has a good eye for fine details and cares about his patients."

"He would excel in any medical or surgical specialty, and we feel very fortunate that we were able to attract him to plastic surgery."

And Cohen is equally appreciative of the department's devotion to mentoring medical students.

"The entire department is really student-friendly and really inspired me to pursue plastic surgery," he says.

Says Susan E. Mackinnon, M.D., the Shoenberg Professor of Plastic and Reconstructive Surgery and chief of the division: "Not only is Michael an accomplished physician, but he is also an extraordinarily hard worker."

"His combination of intelligence and dedication will propel Michael wherever he chooses to go and allow him to make an important contribution to plastic surgery."

Grosland is 'as unassuming as her talent is conspicuous'

By LIAM OTTEN

Over the past two years, Emily Grosland has become a virtual one-woman design shop for the Performing Arts Department in Arts & Sciences.

In addition to creating programs for every show on the 2004-05 calendar, Grosland designed and illustrated posters for Euripides' *The Trojan Women*; Stephen Sondheim's *Into the Woods*; and the regional American College Dance Festival (ACDF), which the PAD hosted in March.

Her set for Caryl Churchill's *Cloud Nine* took third place at this year's regional American College Theatre Festival.

At the same time, Grosland has emerged as an outstanding performer, starring as Laura in Tennessee Williams' *The Glass Menagerie* — the centerpiece of an international symposium on the playwright's early career — and as Little Red in *Into the Woods*. She choreographed and performed works for the ACDF, winning a coveted spot on the gala concert finale, and even danced professionally, as part of Dance St. Louis' *Contemporary Moves 2004*.

Today, Grosland will receive degrees in dance from the PAD and in visual communications from the School of Art, part of the Sam Fox School of Design & Visual Arts.

"It might be assumed that the purveyor of such an enormous array of talents would be a 'larger than life' personality," says Henry I. Schvey, Ph.D., chair of and professor in the PAD, who directed *The Glass Menagerie*. "The exact



Emily Grosland as Laura with Matt Shapiro as Jim O'Connor in the Performing Arts Department's production of Tennessee Williams' *The Glass Menagerie*. The production was the centerpiece of an international symposium on the early career of the playwright, who was a student at Washington University in the mid-1930s.

opposite is true. Emily is extremely modest, considerate and altogether charming to be around. She is as unassuming as her talent is conspicuous."

A native of Elgin, Ill., Grosland began dancing at the age of 3.

"I did tumbling, ballet, tap, jazz, hip-hop ... pretty much all of it," she says. She also drew constantly. "My mom is a teacher, so I grew up surrounded by art supplies."

Grosland began performing in grade school with the Children's

Theatre of Elgin. (Her first role was a fork in *Beauty and the Beast*).

In high school, she graduated to Elgin Community College's Encore Musical Theatre, though she continued choreographing for the Children's Theatre. Lunch hours and study halls were spent in the art studio; afternoons and evenings in rehearsal.

"I was very much a musical theater girl," Grosland quips, noting that Laura in *The Glass Menagerie* was her first dramatic role.

"I started out as a dancer who kind of sang and tried to act, but at WashU I've become a singer and actor who also dances."

And draws — children's books, to be exact.

For her visual communications thesis project, Grosland wrote, designed, illustrated and even hand-bound *The Loneliest Cranberry*, a Christmas tale based on her grandfather's bedtime stories. She's now developing *Pierce the Porcupine*, written by classmate Monica

O'Malley, a pop-up book that follows the title character's dogged quest for a hug.

"I worked with children a lot in high school and enjoy them as an audience," Grosland explains. "They're brutally honest."

She typically works in pencil and watercolor, then scans finished art into a computer for layouts.

"Watercolor is a little unpredictable, but that's good for me because I'm a bit of a perfectionist," she says. "My work tends to be better when I don't have time to nitpick."

In addition to her PAD and visual communications workloads, Grosland has, for the past three years, served as a board member for All Student Theatre (AST), handling design and publicity.

"I'd say All Student Theatre is the most challenging thing I've done, mainly because we run it ourselves," muses Grosland, who performed in AST's *Once Upon a Mattress* and choreographed *Pippin* and *Cabaret*. "We have to decide what shows we're doing, build sets, hire designers, secure copyrights ... all those things you don't really learn as an actress."

This summer, Grosland will do summer stock with the Theatre L'Homme Dieu in Alexandria, Minn., starring in *The Diary of Anne Frank*, *Rumpelstiltskin* and *Hello, Dolly* while choreographing *You're A Good Man, Charlie Brown*. And after that?

"I just auditioned for Sesame Street Live, which is a 10-month bus-and-truck tour, and I've sent letters to publishers about *Pierce* and *The Loneliest Cranberry*, so we'll see if anybody bites."

"Otherwise, I'll move to New York, find some illustration work and start auditioning."

Gallery of Graduates

Hunt tackles chemistry & religion to find out 'why?'

By ANDY CLENDENNEN

Jasmine Hunt will be the first to say that she has problems selling herself to other people. And things get even more convoluted when she tells others that her majors are in chemistry and in religious studies, both in Arts & Sciences — two areas of research that could be construed as polar opposites.

But they have at least one thing in common — they are perfect disciplines for people with questioning natures.

"I have always wanted to know 'why,'" Hunt says. "I was interested in science, but also I was always a questioning person. I was never one who believed something just because the Sunday School teacher said it, or someone else told it to you. I have to know why."

"To me, chemistry was the smallest you can break things down, and religion is the motivation for so many people — even those who aren't religious — it still affects their choices."

Ah, choices.

When you get right down to it, Hunt didn't particularly have her eye on Washington University after high school. She had played volleyball in Normal, Ill., and captained the two-time state champions.

So her first choice was to try to play at an NCAA Division I school. But that involves the aforementioned selling herself to others.

"I had tried the D-I recruiting thing and it wasn't appealing," she says. "I didn't like selling myself to people, and the schools that were

interested weren't great academically.

"But I'm from Normal, Ill., and I wanted to be as far away from home as I could. And my mom started having a panic attack and said, 'Why don't you look at WashU?'"

"I had never heard of the school, but she's an admissions officer at Illinois State (University), so she knew these things."

After one visit to the Hilltop Campus, Hunt knew this was where she wanted to be.

It took a little longer, though, for her to discover exactly what she wanted to be doing while she was here.

"I knew that I wanted to be a chemistry major," she says. "I came in here as pre-med, and halfway through realized I didn't want to be a medical student because I wanted to do more research."

"Then I started taking Christianity classes and it developed from there. I started learning about Islam, too, and it turned into another major."

"I don't think I would have gotten through school with just majoring in chemistry. Sometimes it can make you crazy."

In the fall, Hunt will be attending the University of California, Santa Barbara, aiming for a doctorate in biochemistry, where she will be working with renowned biochemists Craig Hawker and Luc Jeager to combine synthetic and biological polymers.

It will be a continuation of her work here, where she was in the lab of Karen L. Wooley, Ph.D., professor of chemistry. Wooley specializes in nanoparticle research, and Hunt developed cross-

linkers for molecules that hopefully one day will be used to deliver chemotherapeutic agents through the bodies of cancer patients.

And the volleyball thing? Turns out that even though she didn't play Division I like she had originally hoped, she managed to make a go of it just the same. In fact, she won a national championship here in her junior year and captained the team her senior season.

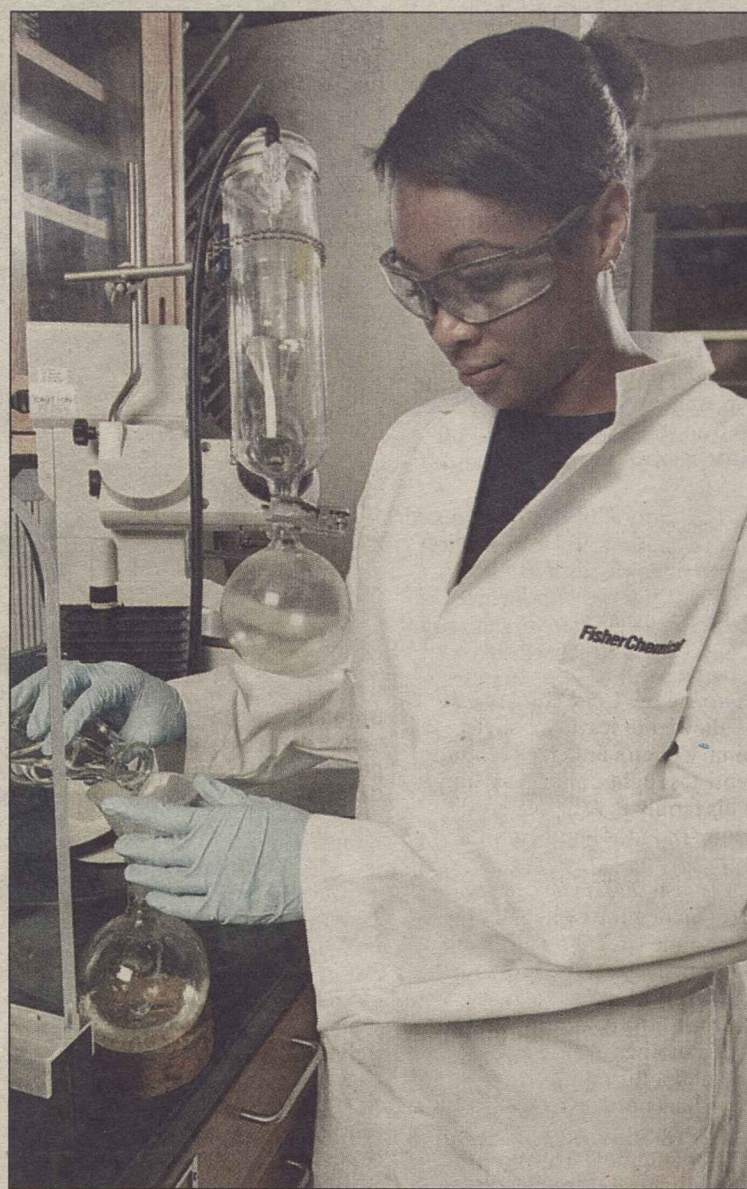
"Jasmine's grasp of our systems of play and strategies made her an invaluable asset to the team," says head volleyball coach Rich Luenemann. "When she was on the floor, it was akin to having a coach on the court."

"In her role as a captain, Jasmine provided exemplary leadership skills. She embodies the best of both worlds — she's both incredibly brilliant and a superior athlete."

So it's safe to say that everything worked out pretty well, considering her knowledge of the University one month before her first visit.

"I grew up in a small town," she says. "My brother and I were the only black kids in the whole private school, and everyone was the same kid — all upper-middle class, everyone's parents worked at State Farm Insurance. It was like everyone was the same — either Catholic or Protestant, no different ever."

"Coming here really exposed me to a whole lot of issues I had never even thought about. It's not like I didn't have an opinion; I just never thought about them. That's what I'll take away the most."



Jasmine Hunt, who majored in chemistry and in religious studies, both in Arts & Sciences, works in McMillen Laboratory. "Coming (to Washington University) really exposed me to a whole lot of issues I had never even thought about," she says. "It's not like I didn't have an opinion; I just never thought about them."

'Amazing' Byron embraces University opportunities

By SHULA NEUMAN

Kevin Byron is not terribly busy these days. Not like he used to be.

When he started his final year at the University, Byron decided it was time to cut back on extracurricular activities. He's practically bored because all he has to worry about these days is studying, being a resident adviser (RA) in Liggett House and tutoring grade-school students at Kid's Place in University City.

Byron's current slate of responsibilities is nothing compared to the previous three years. He served

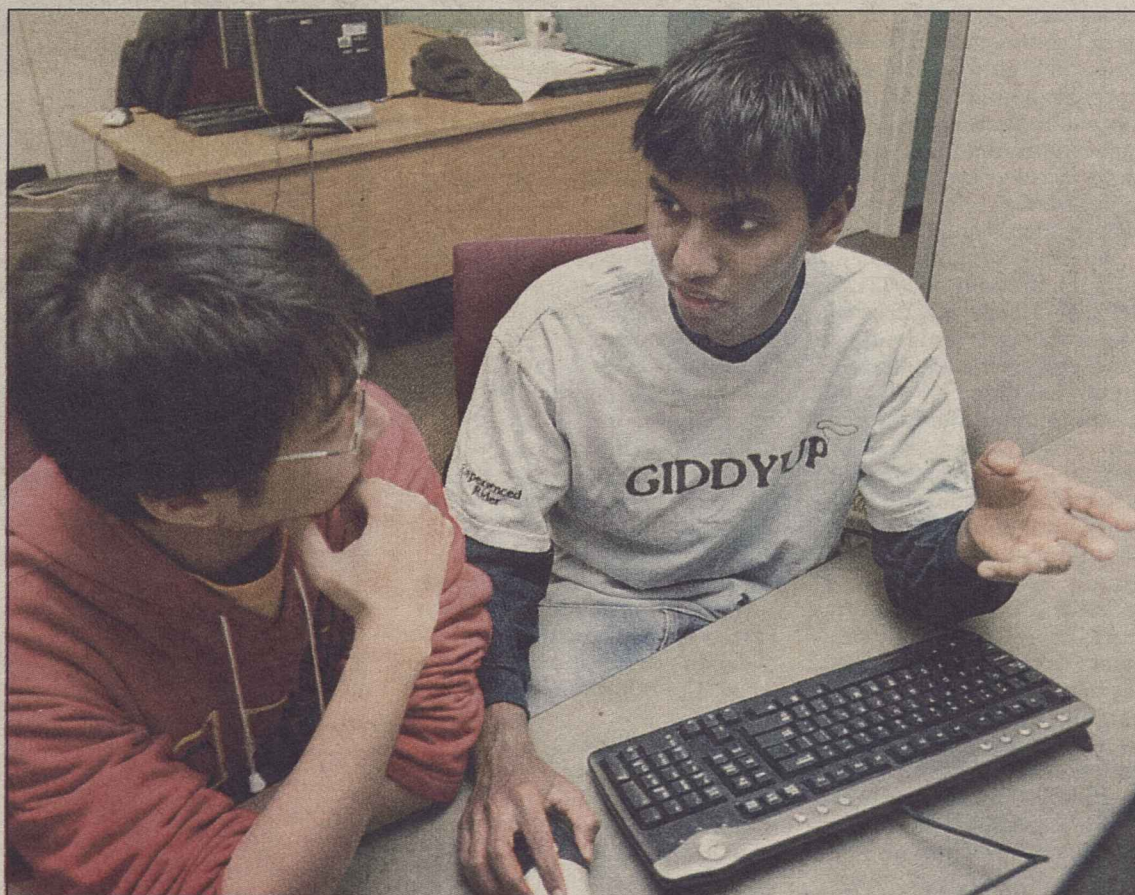
as president of the Campus Programming Counsel, operation chair for

Team 31 Productions, committee chair for Celebrations Weekend, a choreographer for the Diwali celebration, and membership and recruitment chair for Feed St. Louis.

On top of that, he was an RA and worked as a teaching assistant for courses in finance, microeconomics and advanced financial management. Byron also was on the Dean's List throughout his entire college career.

Byron's very presence at the University came thanks to the government of Trinidad and Tobago, his home country.

Byron graduated from Trinidad and Tobago's British high-school system with the top scores in the country for his grouping on the A-level exam. He was just settling into university life in Trinidad when he learned that he had won an academic scholarship from the government that would pay for Byron to attend any uni-



Kevin Byron (right) discusses a project with classmate Steve Lau. About four years ago, Byron won a scholarship from the government of his home country, Trinidad and Tobago, which would pay for him to attend any college in the world. "I wanted a university with a good reputation and a high-caliber business program," he says. "I didn't know much about Washington University, but I knew it fit that profile."

versity in the world.

"I had the whole world to choose from," Byron says. "But I wanted a university with a good reputation and a high-caliber business program."

"I didn't know much about Washington University, but I knew it fit that profile."

A lot has happened during his time here, but at least two things

have remained consistent within him: an interest in business and a generous spirit.

"I'm a completely different person now than I was four years ago," Byron says. "I'm more confident, I know more what I want. I'm a better leader — and I had never considered myself to be a leader before. I've lived life so that now I have the opportunity

to give something back."

After he graduates today with a bachelor of science in business administration degree, Byron hopes to head to Chicago to begin a consulting career. From there, he says he may pursue an M.B.A., acquire more work experience in the United States, and then return to Trinidad and Tobago to start a business or perhaps get involved

in politics.

Considering Byron's ambitions and accomplishments, one might expect that he's an energetic force to be reckoned with.

"Everything he does, he does well," says Glenn MacDonald, Ph.D., the John M. Olin Distinguished Professor of Economics and Strategy, the faculty associate for the Residential College where Byron is an RA and one of Byron's favorite professors.

"Yet half of the time when I'm over at the dorm, I walk by his room and there's Kevin literally asleep sitting up. I'll see an arm flung on the floor and he'll be slumped down, fast asleep."

MacDonald says that as an RA, Byron shows true compassion and caring for the students in his dorm. That's a quality Mary F. Elliott, Byron's boss and the Residential College director for Liggett, noticed from the first day she met him.

"When he says he'll do something, he does it," Elliott says. "He's laid-back, but always dependable, unflappable. I don't know how he does it because half the time, I have to wake him up in the morning."

Elliott was new on the job this past fall, which made Byron a veritable veteran. Elliott says despite his trepidation, he supported her and gave her a chance.

"After a few months he said to me that I'm doing an OK job," Elliott says. "From him, that's a big deal — he doesn't throw out compliments often."

"Kevin's amazing — he values his family, he's highly ambitious, he wants to do well for himself and his country, he's generous, and the guy fits in wherever he needs to. The more I know him, the more impressed I am by him."

Gallery of Graduates

Sullivan inspires, motivates others to action

By NEIL SCHOENHERR

Teresa Sullivan has the uncanny ability to motivate people to action.

The senior, whose passions include community activism and service, founded St. Louis Project Democracy and helped register more than 1,000 new voters before the Nov. 2 presidential election.

"Project Democracy showed me that I could build something from scratch and that I could find the right people around me to help me build it," Sullivan says. "It really showed me how to build the bridge between service and activism."

The Aurora, Ill., native majored in international and area studies and in Spanish, both in Arts & Sciences. She was also involved in Cambios, a volunteer organization that helps tutor and mentor Latino immigrant youth; the Visions Gospel Choir; More Fools Than Wise madrigal choir; and Dance Marathon.

College of Arts & Sciences

In addition, she was:
• a residential adviser in Wheeler Hall;
• a member of Congress of the South 40;
• an Office of Student Activities and Residential Life intern;
• an orientation assistant;
• an English as a second language tutor; and
• an undergraduate representative to the University's Board of Trustees.

"I guess you could say I've had the WUSTL buffet," Sullivan jokes. "I think there's so much to take in here, and I'm trying to do as



Teresa Sullivan (left) talks with immigrants during an ethnic potluck dinner at the International Institute in St. Louis. Sullivan was a development and communications intern at the institute, a refugee and immigrant transition organization. "I've always been interested in immigration issues," Sullivan says. "My parents raised me with an international consciousness. They are very worldly people. Many of my experiences here have helped expand that interest."

much as I can."

Despite being so heavily involved outside the classroom, the Danforth Scholar and National Merit Scholar will graduate summa cum laude and Phi Beta Kappa with a grade-point average of 3.83.

Leading up to Commencement, Sullivan has been working as a development and communications intern at the International Institute of St. Louis. After today, she will take on an internship in the services department at Motorola Corp. in Schaumburg, Ill.

She will be return to St. Louis in September to begin a nine-month Coro Fellowship in public affairs.

Her ultimate career goal is to run political campaigns or to be the executive director of an advocacy organization that works with immigrants or international women's issues.

"I've always been interested in immigration issues," she says. "My parents raised me with an international consciousness. They are very worldly people."

"Many of my experiences here have helped expand that interest,

especially working with Cambios."

Another of those experiences was a semester spent studying in Spain during her junior year.

"Being in Spain really forced me to step back from being over-involved in my life at Washington University and to focus more on my relationships with my friends," she says. "It taught me a lot about enjoying life and taking what comes your way and dealing with it."

"The experience helped me to know myself because I was forced to live in a completely foreign —

in so many aspects of the word — environment."

Back home, Sullivan describes the University as "a perfect fit."

"I think the people here, while they certainly are smart and talented and focused on academics, are also just really good people," she says. "I honestly think some of the friends I've made will leave here and go change the world."

"To come to a place and meet that many people who are going to have that big an influence on the community is truly amazing."

Sullivan has been recognized for her leadership, scholarship and service to the community by receiving a 2005 Ethan A.H. Shepley Award. She also received a Women's Society Leadership Award.

"Teresa is one of the most engaging student leaders I have known at the University," says Stephanie Kurtzman, director of community service. "She does more than get things done — she inspires and energizes people to be involved in the process. Her leadership of St. Louis Project Democracy is a shining example, but not an isolated one, of the way she acts on her passions in a thoughtful and substantive way."

"Teresa is truly a delightful person to know, and I found her — even in her first year at the University — to be mature ahead of her years."

While Sullivan is excited to be graduating and putting her education to use in the working world, she said she will be somewhat sad to leave the University.

"I love the people here," she says. "They inspire me to be a better me."

Woock is all-American in the classroom, on the field

By ANDY CLENDENNEN

Generally, when the words *ESPN The Magazine* and "spinal cord" are linked, it's because the sports publication is running a story on debilitating athletic injuries.

But the résumé of John Woock features both prominently.

Woock, a three-time first-team All-University Athletic Association defensive back, was named an *ESPN The Magazine* First-Team Academic All-American in 2004, by virtue of his prowess in the classroom (4.0 grade-point average) and on the field.

"John is accountable for all he does," says head football coach Larry Kindbom.

School of Engineering & Applied Science

"He took upon himself the role of being connected with every player.

His peers deem him as someone with the utmost character and integrity. As important, he is both dynamic and capable.

"As a coach, I would go to him to get the pulse of the squad. I can trust him; he is a man of his word."

"He has a plan to make a difference in this world. He is very humble and very gracious and thankful to those around him. He has touched many lives at this University."

But it's in the classroom where Woock really excelled. As a biomedical engineering major in the School of Engineering & Applied Science, he studied stem-cell grafts and their application to people with central nervous system disorders.

"I've known since I walked in that I wasn't planning on going into medical school," Woock says. "That's why I got into biomedical

engineering.

"I had a girlfriend from high school whose stepfather is a senator in Kentucky, and his niece was paralyzed in a car accident several years ago. Now he funds, through laws and political backing, the major spinal cord injury center in Louisville. He arranged for me to go in and work in the lab, and it took off from there."

And how.

In the summers of 2002 and 2003, Woock interned at the Kentucky Spinal Cord Injury Research Center at the University of Louisville.

And last year, Woock worked with John W. McDonald, M.D., Ph.D., former assistant professor of neurology and director of the Spinal Cord Injury Program at Barnes-Jewish Hospital, who treated Christopher Reeve.

In the fall, Woock will attend Duke University, where he will pursue a doctorate in biomedical engineering and work with Warren Grill, Ph.D., associate professor of biomedical engineering. Their research will involve electro-stimulation to restore function to individuals with various central nervous system disorders like spinal cord injuries.

"The potential for this research is unlimited," Woock says. "There are a lot of amazing people that have had their lives drastically changed, and stem-cell research offers the possibility of changing their lives."

"Advances in these fields can directly improve the lives of these individuals, and it is amazing to sit there and say that I'm doing something day in and day out that can have a direct positive effect on these individuals."

But that's generally how Woock operates.

Whether on the football field

— where he led the Bears with 85 tackles (22 more than the next closest player), five interceptions and 10 passes defended — or in the classroom — where he was named a 2004 NCAA College Football National Scholar Athlete (one of just 15 nationwide to receive the \$18,000 post-graduate scholarship) — Woock has a simple goal.

"The drive for me has always been to make a difference, on the football team, in the classroom, in the community," Woock says. "I established what I wanted to do with myself and what I wanted to accomplish over the course of a semester in high school and carried it over."

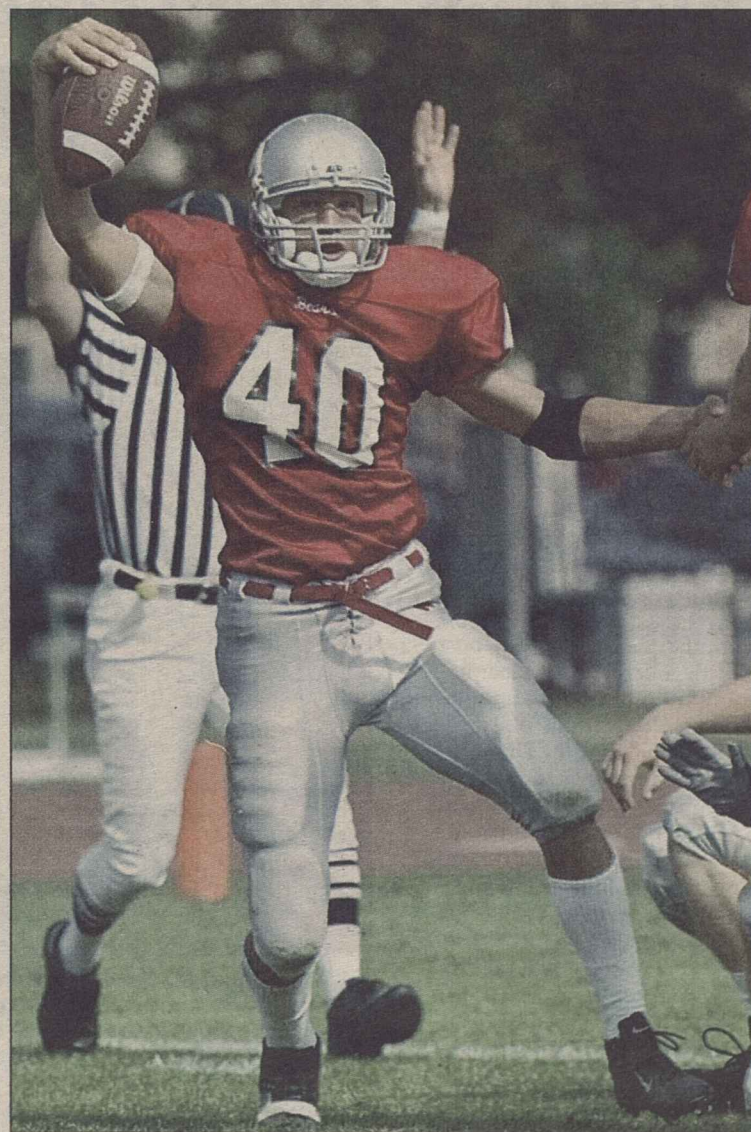
"The people here have been amazing. It's been almost impossible to not be involved with things. They are all good people with good intentions. I've had success working with everyone — it hasn't been because of me."

"The football team's success was because my teammates were successful. The success in the classroom was because I've been working with really intelligent engineers and people that are just as driven as I am."

Despite all of his accomplishments, accolades, awards and honors, Woock will be taking something a little more intangible from his experience here when he leaves in May.

Born and raised in Louisville, he says that Washington University expanded his horizons.

"I think WashU really delivers an eye-opening view of the rest of the country — and the world — to someone like me who has come up only knowing things one way," Woock says. "It offers so much in its ability to probe important social and political issues, and it exposed me to so many different



John Woock celebrates another big play for the Bears. In 2004, Woock — who will pursue a doctorate in biomedical engineering at Duke University in the fall — was named both an NCAA College Football National Scholar-Athlete and an *ESPN The Magazine* First-Team Academic All-American.

people that it definitely had a huge impact on who I am.

"While my college experience has been amazing and fun, it's

really impacted how I think and how I view people. That's something that will stay with me for a long time."

Commencement

Lee Robins to serve as honorary grand marshal
— from Page 1

The coalition comprises some 400 organizations, institutions and individuals that support research funding.

In February, the University announced the establishment of the Richard A. Gephardt Institute for Public Service in his honor. The goal of the institute is to encourage people, especially students and older citizens, to become involved in public service.

Honorary degrees also will be awarded at Commencement. In addition to Gephardt, who will receive a doctor of humane letters, honorary degree recipients are:

- William H. Gass, Ph.D., the David May Distinguished University Professor Emeritus in the Humanities in Arts & Sciences at Washington University, doctor of humanities;

- Emily Rauh Pulitzer, founder and chair of the Pulitzer Foundation for the Arts in St. Louis, doctor of humanities;

- Robert G. Roeder, Ph.D., the Arnold O. and Mabel S. Beckman Professor of Biochemistry and head of the Laboratory of Biochemistry and Molecular Biology at Rockefeller University in New York, doctor of science; and

- James E. Stowers Jr., co-chairman of the Stowers Institute for Medical Research in Kansas City and founder and board member of leading investment manager American Century Cos. Inc., doctor of science.

Commencement will begin with the traditional academic procession into the Quad, which will be led by honorary grand marshal Lee Robins, Ph.D., professor emeritus of sociology in psychiatry in the School of Medicine and the founder of the Master in Psychiatric Epidemiology (MPE) Program.

Robins joined the medical school faculty in 1954 as a research assistant in psychiatry, rising to full professor in 1968.

Established in 1989, the MPE is the only program of its kind in the world, offering fundamental epidemiological and research skills to pre-doctoral students and post-doctoral fellows.

On the Hilltop Campus, Robins served as a lecturer and an adjunct associate professor of soci-



The academic procession into Brookings Quadrangle for Washington University's 144th Commencement will begin at 8:30 a.m. today.



In a Commencement tradition, master's and doctoral students "hood" each other after the conferral of their degrees. The colors of a hood represent the school from which the graduate earned a degree.

ology from 1957-1969 and professor of sociology from 1969-1991, when she was named University Professor of Social Sciences. She served as a professor in the Program in Social Thought & Analysis in Arts & Sciences from 1991 until her retirement in 2001.

Her studies have made key observations about how psychiatric disorders early in life can affect adults, revealing that antiso-

cial behavior in childhood is a major predictor of psychiatric problems later in life. Those studies have forced her colleagues in psychiatry to rethink topics from teen suicide to drug abuse.

Robins' first major study eventually became the book *Deviant Children Grown Up*, published in 1966. She also is the editor of 11 books.

Over the years, continuously

supported by the National Institutes of Health, Robins gathered data on Vietnam veterans, disaster survivors and others. She also wrote the diagnostic interview schedule and was one of the principal investigators for the landmark Epidemiologic Catchment Area study in the 1980s.

The study involved more than 20,000 Americans who were interviewed to determine the preva-

lence of psychiatric illness in the general population.

Also at Commencement, approximately 125 alumni from the Class of 1955, celebrating their 50th reunion, will march in the opening procession.

For the 25th consecutive Commencement, the program will begin with music by The Mighty Mississippi Concert Band of St. Louis, under the direction of Dan Presgrave, music director/conductor of the University Symphony Orchestra, the University Wind Ensemble and The Saint Louis Wind Symphony.

Debra Hillabrand, who will receive a master of music in vocal performance degree, will sing "America the Beautiful."

Jordan Friedman, president of the senior class, will deliver the student Commencement greeting (see article, Page 1).

Conferral of academic degrees will follow, with the deans of each of the schools and Edward S. Macias, Ph.D., executive vice chancellor, dean of Arts & Sciences and the Barbara and David Thomas Distinguished Professor in Arts & Sciences, assisting Wrighton.

After the conferral of degrees, Wrighton will deliver his message to the Class of 2005.

Clark Sturdevant, who will receive a master of music in vocal performance degree, will conclude the ceremony by singing the "Alma Mater."

Afterward, the University's schools will hold receptions for graduates and their guests.

Speaker

Among many activities, also was a finance tutor
— from Page 1

more of a popularity contest," he said. "Plus, it was tough to facilitate change in high school. There wasn't a good way to get in touch with the constituents."

"In college, I felt I had a little more breadth and room for creativity."

His biggest project this year was planning Senior Week, which was May 12-18. Members of the senior class attended a St. Louis Cardinals game, a freshman floor reunion, a float trip, a hoedown with live music and food, a paintball excursion, a picnic in Forest Park, a movie night and the Senior Gala.

"We started planning Senior Week last summer," Friedman said. "The amount of tasks that

have to be accomplished for 1,300 students to enjoy eight days of activities is pretty daunting. I learned more about the administration, the faculty and the senior class than I ever thought possible.

"It's been a massive undertaking, but it's also been a lot of fun."

The main thing Friedman has learned through his involvement in student government is organization.

"Nothing is over until it's over," he said. "You cannot be in charge or delegate without having your schedule organized. Responsibility and organization are keys."

Outside his governmental duties, Friedman was a member of Sigma Phi Epsilon fraternity and the University's judicial board, as well as serving as an ambassador for the University at various community functions and as a teaching assistant for finance to students in the Olin School of Business.

In his speech to the Commencement audience, Friedman plans to talk about the road ahead.

"I've been working on the speech for some time," he said. "It's tough not to write the stereotypical graduation speech, but hopefully I can give some advice that most can appreciate and relate to."

His advice?

"Enjoy the ride because it's going incredibly fast. The years fly by, especially if you keep looking ahead. Be present to where you are and enjoy it."

Commencement speakers

More than a dozen distinguished individuals will speak at Commencement-related events for graduates and their friends and families.

Richard A. Gephardt, former U.S. House majority and minority leader, will deliver the address at the main Commencement ceremony in Brookings Quadrangle.

Other speakers are:

- **Sandra Van Trease**, group president of BJC HealthCare and 1992 Executive M.B.A. Olin School of Business alumna, for the Olin School's Graduate Diploma and Awards Ceremony; 3 p.m. today in the Field House of the Athletic Complex.

- **Paul Nagle**, founding partner of BioMedical Insights and 1993 Olin School alumnus, for the Olin School's Undergraduate Diploma and Awards Ceremony; immediately following the main Commencement ceremony in the Field House of the Athletic Complex.

- **Ronald Feldman**, co-founder of Ronald Feldman Fine Arts in New York, for the School of Art Recognition Ceremony; 8 p.m. May 19 in Graham Chapel.

- **Joel Seligman**, J.D., dean of the School of Law and the Ethan

A.H. Shepley University Professor, for the law school; 12:30 p.m. today in Brookings Quadrangle.

- **Christopher I. Byrnes**, Ph.D., dean of the School of Engineering & Applied Science and the Edward H. and Florence G. Skinner Professor of Systems Science and Mathematics, for the School of Engineering & Applied Science Recognition Ceremony; 1:30 p.m. May 19; and for the Henry Edwin Sever Graduate School of Engineering & Applied Science; 2 p.m. today in Edison Theatre.

- **Jane H. Aiken**, J.D., the William M. Van Cleve Professor of Law, for the George Warren Brown School of Social Work; immediately following the main Commencement ceremony in Graham Chapel.

- **Cynthia Weese**, dean of the School of Architecture, for the Eliot Honors Convocation; 10:30 a.m. May 19 in the Field House of the Athletic Complex.

- **Henry L. "Roddy" Roediger III**, Ph.D., the James S. McDonnell Distinguished University Professor and dean of Academic Planning in Arts & Sciences, for the Graduate School of Arts & Sciences; immediately following the main Commencement ceremony in Edison Theatre.

- **Zeuler Lima**, Ph.D., assistant professor of architecture, for the School of Architecture Diploma Ceremony, immediately following the main Commencement ceremony in the Brookings Drive Mall.

- **Eric J. Richards**, Ph.D., associate professor of biology in Arts & Sciences, for the College of Arts & Sciences; 4:30 p.m. May 19 in the Field House of the Athletic Complex.

- **Michael E. DeBakey**, M.D., chancellor emeritus of Baylor College of Medicine, for the School of Medicine; 3 p.m. today in America's Center, downtown St. Louis.

- **Susan M. Fitzpatrick**, Ph.D., vice president of the James S. McDonnell Foundation, for the Program in Occupational Therapy; 1 p.m. today in Graham Chapel.

- **Connie Hauser**, D.P.T., owner of Kentucky Physical Therapy, for the Program in Physical Therapy; 2 p.m. today in the Sheldon Concert Hall, 3648 Washington Ave.

- **The Rev. Jerry W. Paul**, president and chief executive officer of the Deaconess Foundation, for the Health Administration Program, noon today at the Sheraton Clayton Plaza Hotel, 7730 Bonhomme Ave.

Violent Weather Plan

The decision for implementing the Violent Weather Plan will be made by 7 a.m. today. Major local radio and TV stations will be given the information, and it will appear on wustl.edu and be announced through campus e-mail.

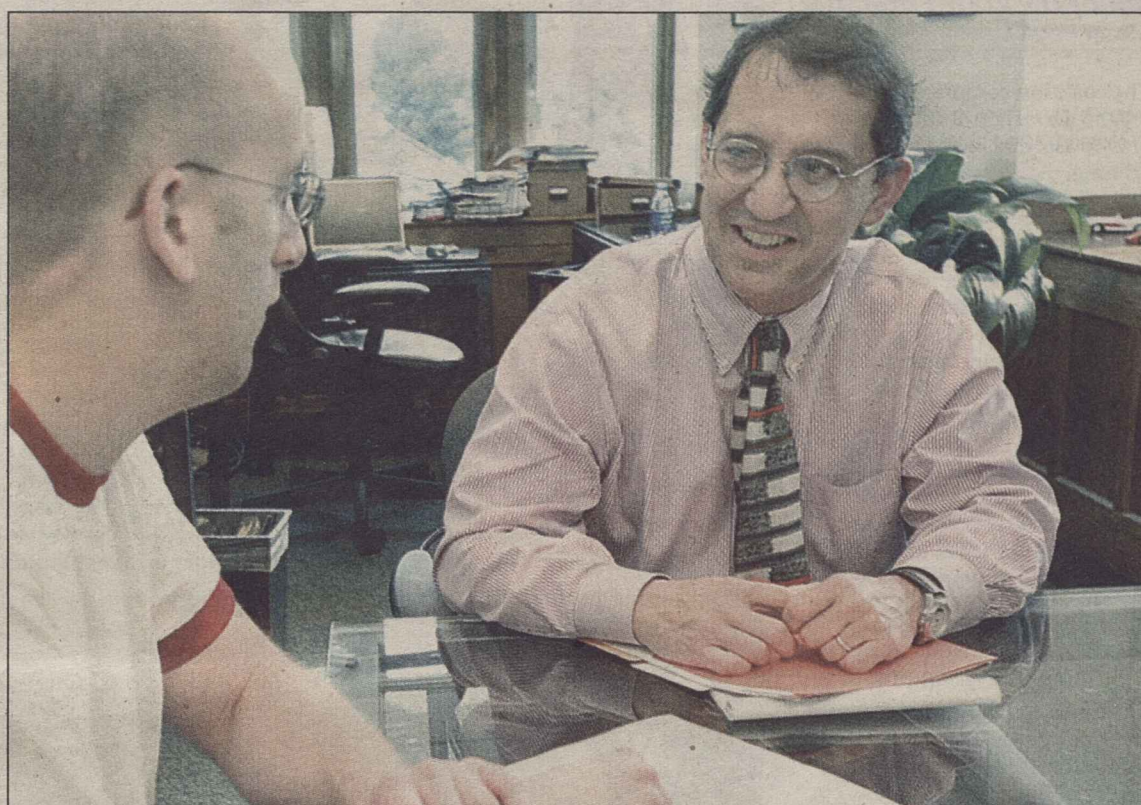
Washington People

After earning an undergraduate degree from Bowdoin College in 1977 and moving to the Boston area, Edward F. Lawlor spent many mornings searching for a job.

Typically, he would then head over to Harvard Square to browse the job openings posted there — and also to catch an afternoon movie.

"Easy Rider and Five Easy Pieces were playing one day," says Lawlor, Ph.D., dean of the George Warren Brown School of Social Work and the William E. Gordon Professor. "The theater's theme for the day was 'easy' — kind of ironic, given the fact that most of the people in the theater, including me, were having a hard time finding employment."

His own job search was about to become easier. While perusing the Harvard University job postings, he found a listing for a research posi-



Edward F. Lawlor, Ph.D. (right), chats with first-year master of social work student Scott Wilson. Lawlor is dean of the George Warren Brown School of Social Work and the William E. Gordon Professor. "Washington University has a very strong sense of purpose," he says. "As soon as you walk onto campus, you know you're in an environment that is promoting academic and scholarly life. Even the physical spaces on campus seem to invite discussion and interaction."

Believer of life's accidents

Eddie Lawlor's journey has led him to becoming dean of the School of Social Work

tion with the university's John F. Kennedy School of Government.

Lawlor dropped off his résumé at the department office and was met by the director of the Public Policy Program, Lawrence E. Lynn Jr.

"We had a great conversation, and he hired me right off the street," Lawlor says. "If not for that chance meeting, there's no way I'd be where I am now. I'm a big believer in life's accidents."

According to Lawlor, his five-year run at the Kennedy School was "spectacular" and fed his interest in public policy and social welfare.

Lawlor then pursued a doctorate at the Florence Heller Graduate School for Advanced Studies in Social Welfare at Brandeis University, where he focused on the economics and politics of aging.

"When I was done with my doctorate, I called Larry Lynn, who was then the dean of the School of Social Administration at the University of Chicago, for a reference," he says. "I wasn't necessarily planning on going into academia — I was considering research and government positions — but he asked me to apply for a faculty position at Chicago."

Lawlor and Lynn spent the next 20 years as colleagues there.

"I began as one of his faculty members, and then in 1998 I became his dean," Lawlor says. "It was a remarkable 30-plus-year set of collaborations."

"I owe a lot to that chance encounter. I think about the great mentor I had when I work with students today."

Lawlor became dean of the George Warren Brown School of Social Work July 1. He enjoys being at the helm of one of the top institutions in social work education and research.

"The fun thing about my job is its many dimensions and demands," he says. "I'm able to participate in policy and social services research while working with great students, faculty and staff. My job's never dull."

During his career, Lawlor has developed a distinguished record of scholarship in Medicaid and Medicare policy, access to health care, health insurance and the health-care work force.

Lawlor is the founding editor

of *Public Policy and Aging Report*, a quarterly journal on policy and research in an aging society, and the author of *Redesigning the Medicare Contract: Politics, Markets, and Agency*, a critically acclaimed book that looks at Medicare as a social contract between society at large and its most vulnerable citizens.

"Eddie Lawlor is a great addition to the leadership team of the University," Chancellor Mark S. Wrighton says. "He is just concluding his first year here, but he has already established himself as an effective leader for his school and a key contributor to the Uni-

versity Council. He is assuming a large role in engaging the University in community issues and has been effective in stimulating discussions of important interdisciplinary programs."

"Creative, thoughtful, dedicated and enthusiastic are descriptors of our newest dean, and I am privileged he made the commitment to join us."

MARK S. WRIGHTON

The next week, the Lawlors hosted students from Taiwan and learned about the underlying issues at play in the tensions with China.

"Our international students manage to plunge into their work and responsibilities here and also keep current back home," Lawlor says. "Being a part of a community that is so engaged and so knowledgeable has added a whole new dimension to our lives."

Lawlor hopes to see this international and comparative discussion become more and more the lifestyle of the school.

"I recently went to a study group of faculty and doctoral students discussing aging and social security in China," Lawlor says, "and I was impressed by the num-

ber of faculty who were there just because they were interested. It was just another example of the faculty's curiosity and dedication to students."

"There is a strong community at the School of Social Work. The faculty and students are always at work in Brown and Goldfarb halls, and they are a group that has a good time with each other as well."

Lawlor finds this same sense of community in the University as a whole.

"Washington University has a very strong sense of purpose," he says. "As soon as you walk onto campus, you know you're in an environment that is promoting academic and scholarly life."

"Even the physical spaces on campus seem to invite discussion and interaction."

Mush!

Lawlor has temporarily put his interest in dog-sledding on hold while in St. Louis.

When he was working at Har-

vard, Lawlor put together a small dog-sledding team and did winter camping in northern New England.

"Originally, Betsy and I thought we would be making our way to Alaska, but it seems like we have been moving in the wrong direction," he says. "We still have two aging sled dogs — an Alaskan malamute and a Chinook, but this is not exactly the climate for running a team."

"It is still in my life plan to run the Iditarod or one of the other big races."

Although dog-sledding is on hold, the Lawlor family is finding St. Louis a great environment for cycling, sports and music.

"Betsy and I have made great use of Forest Park for cycling and have begun riding with a number of our neighbors," he says. "Both (daughter) Abby and (son) Casey are active in soccer, both at school and on club teams."

"The music scene has been the best. Betsy is singing in chorus, and Abby is playing trombone and euphonium in a number of school and local groups."

Lawlor jokes that he has been in St. Louis for just over 300 days. He hopes to become more involved in urban policy and social service issues as he learns more about the region and its issues. He has already joined the board of the United Way of Greater St. Louis, and he's looking to find an appropriate role in health policy in the region.

"One of the most rewarding experiences I had in Chicago was my 10-year stint on the Chicago Board of Health. I hope to be able to make a similar contribution here."

Edward F. Lawlor

Positions: Dean of the George Warren Brown School of Social Work and the William E. Gordon Professor

Degrees:

- Bachelor's in economics, government and legal studies; Bowdoin College, 1977

- Doctorate in social policy; Florence Heller Graduate School for Advanced Studies in Social Welfare at Brandeis University, 1984

Family: Wife, Betsy; son Matthew (19), daughter Abby (16), son Casey (13)

By JESSICA MARTIN