Draft of mouse genome map now publicly available

By Darrell E. Ward

A draft sequence of the mouse genome — the genetic blueprint for the most closely related to humans, and one whose nature has been completed and now is available to the public through databases accessible on the Internet.

Researchers in the School of Medicine Genome Sequencing Center played a major role in the landmark event, as they did with the sequencing and mapping of the human genome.

This is a major achievement because the mouse plays a central and fundamental role in the study of human biology and human disease," said Robert J. Waterston, M.D., Ph.D., director of the Genome Sequencing Center and a leader of the project.

"In evolutionary terms, mice are closely related to humans, and they are the model most often used for powerful genetic experiments.

Perhaps most importantly, the mouse-genome map will help scientists better understand the human genome, he said. It will help scientists identify the location and function of genes and other important elements of the human genome, and scientists now can compare the mouse and human genomes for similarities and differences. Areas that are

Ludmerer, Will elected to American Academy of Arts & Sciences

By Neil Schoenherr

Two University faculty members — Kenneth Ludmerer, M.D., professor of medicine in the School of Medicine and of history in Arts & Sciences; and Clifford M. Will, Ph.D., professor and chair of the Department of Physics in Arts & Sciences — have been elected to the American Academy of Arts & Sciences.

This year’s newly elected fellows join a distinguished group of some 4,600 nationwide who have been recognized for their outstanding contributions to science, scholarship, public affairs and the arts.

In addition to practicing and teaching internal medicine, Ludmerer is an expert on the history of medicine and medical education.


His third book, Time to Heal: American Medical Education From the Turn of the Century to the Era of Managed Care, published in 1999, expands on the topic, examining further the history of American medical education. Both books were nominated for the Pulitzer Prize.

Phillips a team member of NASA’s 2005 Mars Reconnaissance Orbiter

By Tony Fitzpatrick

Roger Phillips, Ph.D., professor of earth and planetary sciences and director of the University’s McDonnell Center for Space Sciences, both in Arts & Sciences, is the deputy team leader for the Italian Space Agency shallow subsurface sounding radar, part of the 2005 Mars Reconnaissance Orbiter.

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Nearly 2,600 students will be awarded degrees at the University’s 141st Commencement today. The ceremony will begin at 8:30 a.m. with the traditional academic procession into Brookings Quadrangle.

Washington People: Theodore J. Cicero serves as the University’s vice chancellor for research

May 10, 2002
Volume 26 No. 32
Washington University in St. Louis

Hats off to today’s graduates

Student speaker has visions of D.C.

By Neil Schoenherr

U.S. Sen. Hillary Rodham Clinton, D-N.Y., owes a small debt of gratitude to Eric H. Schultz. The University senior worked diligently as a research assistant on Clinton’s 2000 campaign.

Schultz, who hails from Syracuse, N.Y., plans to continue a side of political life.

"I’ve always been interested in politics," said Schultz, president of the University’s senior class and this year’s student Commencement speaker. "Being able to work on Hillary Clinton’s campaign was a wonderful experience and a great introduction to professional.

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Schultz. The University senior

image of this text is too small to be read accurately.
Edison Theatre to observe 30 years of OVATIONS!

By Lita Omte

Edison Theatre will celebrate 30 years of exuberant dance and theater, with an eclectic mix of traditions and a cutting-edge theater festival. This is known as the OVATIONS! Series.

Founded in 1973, Edison Theatre presents both new works and innovative interpretations of classics, both by nationally and internationally renowned artists. The series is an interdisci-pline, the modern, the avant-garde and the classics together.

This 2002-03 season will include a range of established favorites and emerging talents — fromreturning favorites to St. Louis’ own — as well as a new installment in the popular ovations! for young people series, which offers specially priced Saturday matinees geared to young people.

For 30 years, St. Louis has been challenged, educated and inspired by Edison's eclectic mix of music, dance and theater, blending the classical with the contemporary, said Charlie Baker, vice chancellor for information. "The 2002-03 OVATIONS! Series represents the diversity of the past three decades while taking a firm step forward."

"The 2002-03 OVATIONS! Series will include an eclectic mix of music, dance and theater, including some new works that are sure to challenge, and some returning favorites that are sure to delight," said B.J. Johnston, associate dean and executive officer. "This season will also look forward to a primal, elemental experience of Shakespeare's Hamlet from the French experimental theatre de la Jeune Lune."

On a completely different note, Australian dance company Vo-Du Macbeth, will return to the Edison with special musical accommodations for young people series, which offers specially priced Saturday matinees geared to young people. "The company has been challenged, educated and inspired by Edison's eclectic mix of music, dance and theater, including some new works that are sure to challenge, and some returning favorites that are sure to delight," said B.J. Johnston, associate dean and executive officer.

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Theatrical works also look forward to a primal, elemental experience of Shakespeare's Hamlet from the French experimental theatre de la Jeune Lune. On a completely different note, Australian dance company Vo-Du Macbeth, which originally set the tale in Haiti, will now set the tale in Australia's Umbilical Brothers will bring Thawed — a comic, cut- off mix of mime, mayhem and audio acrobatics — to the Edison Theatre 2002-03 OVATIONS! Series.

"In the Absent Yi Trios, the ovations! for young people series features Kim and Reggie Harris in Music and the Underground Railroad, which recalls one of the most remarkable chapters in American history through interviews, stories, a volunteer narrative; and "The Little Theatre of the Deaf in The Covering Tree" series, inspired by Shel Silverstein’s classic tale of unconditional love."

"For more information or to request a season brochure, call the Edison Theatre Box Office at 935-4543.

The piece is inspired by Orson Welles’ landmark 1936 production for the federal Works and Progress Administration, which famously set the tale in Haiti and is now being presented in African dance, drama and costumes.

Mellon's also can look forward to a primal, elemental experience of Shakespeare's Hamlet from the French experimental theatre de la Jeune Lune.

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American dance icon José Limón (1908-1972) also will be commis- sioning new works by major contemporary choreographers including Donald McKayle and Billy G. Ryman. "Rhythm in Shoes returns to the 2002-03 season with partnership with the St. Louis Red Clay Ramblers! — their latest collection of traditional and old-time American, English, Irish and English music, narration, posters, books and audio acrobatics. And still New York's 'Blackout' remains dedicated to the repertoire of founder and Melbourne's. The Ovation of the Deaf is a comic, cut-off mix of mime, mayhem and audio acrobatics — to the Edison Theatre 2002-03 OVATIONS! Series."

Australians have been inspired by Shel Silverstein’s classic tale of unconditional love. "For more information or to request a season brochure, call the Edison Theatre Box Office at 935-4543.

"The decision-makers were impressed with our faculty members' commitment to using the collection in the classroom. They wanted to know that whoever got it didn't just put it on a shelf but that it was used," said B.J. Johnston, associate dean and executive officer.

"We received a request for a proposal in August of 2000, with a due date just three weeks later," said Angelka, head of special collections. "We tapped staff members from various library units and charged them with gathering all the information and writing the proposal. Faculty members from African and Afro- American Studies, American Studies, History, Film and Media Studies, English and education (all in Arts & Sciences) were told to help us by telling us how they would use the collection. We included some of these statements."

"See Chapman, Page 11"
Researchers in the Molitchnett Institute's labs, including some in the School of Medicine have developed a method to detect the interaction of one experimental protein with another in whole living cells. The technique uses a combination of molecular biology, imaging, and computer science. "This novel tool is an elegant combination of molecular biology, biochemistry, cancer cell biology and radiochemistry," said David Pwnica-Worms, Ph.D., professor of radiology and of molecular biology and pharmacology and principal investigator for the study.

"It offers a new way to study such things as regulatory pathways in cancer biology and the action of drugs and biologics, and it potentially could be used to prove that a drug is hitting its target in a living animal," he said. "It also may help screen for compounds that disrupt selected protein-protein interactions."

The research was published in the May 14 issue of the Proceedings of the National Academy of Sciences. It demonstrates how the technique works and data shows that a protein known as p53 interacts with, or binds to, a number of proteins in the test cells. Two of these proteins produce the p53 protein. The mouse homologs, p53 and TAg, are the third artificial gene in the test cells. Two of these proteins produce a protein detectable by a microPET scanner, a PET scanner scaled down for use with rats and mice. For this study, the engineered HeLa cells were transplanted beneath the skin of immune-deficient mice. When the cells developed into tumors in millimeter size, the researchers injected the mice with doxycycline, an antibiotic that activates the two artificial genes and leads to the production of the p53 and TAg proteins.

"The DRTC pilot and feasibility program fosters proposals required to develop preliminary data that could lead to independent research supported by the National Institutes of Health, which awards the four years to four groups of medical researchers at the school annually," he said. Those interested must submit letters of intent to the DRTC by June 14. Proposals will be submitted by Aug. 15. Both should be sent to Vicky Nudel at Campus Box 1127. For more information, call 362-8290.

**Diabetes research grants available**

Faculty members who conduct research in the areas of diabetes and endocrinology may apply for funding through the Diabetes Research and Training Center (DRTC) in the School of Medicine. Researchers from the Hilltop and Medical campuses are encouraged to apply for the two-year grants, which begin Dec. 1. They will range from $20,000 to $50,000 each year.

Applications from basic, clinical, epidemiological and behavioral science departments are particularly encouraged.

Young investigators receive poster awards

Jonathan W. Hesse, M.D., Ph.D., a postdoctoral fellow and clinical pathology resident, and a M.D./Ph.D. student in molecular cell biology, received two of the three Trainee Best Poster Awards at the American Society for Clinical Investigation (ASCI) and the Association of American Physicians (AAP) meeting in Chicago, which concluded April 28.

This is the first year Trainee Best Poster Awards were offered at the annual meeting. The $1,000 awards were given for the posters presented by ASCI and the AAP. Council members to be outstanding based on scientific novelty and clarity of presentation.

Heusel works in the laboratory of Wayne Yokoyama, M.D., the Wilma and Audrey Leusin Professor of Medicine and Pathology, and Howard Hughes Medical Institute investigator and chief of the Division of Endocrinology.

Heusel was lead author on a poster titled "The Ly-49H activation receptor in innate natural killer cells recognizes a ligand expressed on MHC class Ia-expressed ligands." The poster described research findings that are an important advance in understanding how immune cells known as natural killer cells are activated and how they contribute to immune responses to viral infection.

Lam, who completed work on his Ph.D. in January and now is completing his clinical training at Barnes-Jewish Hospital, worked in the laboratory of Steven L. Trimble, M.D., and the Wilma and Russell Messing Professor of Pathology and Immunology. Poster was lead author on a poster titled "RANKL: RANK signaling in the osteoclasts and bone formation." The poster described research suggesting that RANKL, a substance produced in the bone to stimulate bone formation and enhance mineral density, may serve as the basis for new drugs that treat certain bone disorders.

"This novel tool is an elegant combination of molecular biology, biochemistry, cancer cell biology and radiochemistry."  
**DAVID PWINCA-WORMS**

"It produces a protein detectable by a microPET scanner, a PET scanner scaled down for use with rats and mice. For this study, the engineered HeLa cells were transplanted beneath the skin of immune-deficient mice. When the cells developed into tumors in millimeter size, the researchers injected the mice with doxycycline, an antibiotic that activates the two artificial genes and leads to the production of the p53 and TAg proteins. Both proteins, however, included one other element, due to the design of the engineered proteins. Attached to the p53 protein was a bit of protein known as a DNA binding domain, which locks onto a specific region of the target DNA. The TAg protein included an activation domain, which triggers the production of the p53 protein. When p53 and TAg interact, they join together something like children's interlocking plastic blocks. This also brings together the DNA binding domain and the activation domain. That, in turn, enables the DNA binding domain to lock onto and activate the third artificial gene, the reporter gene. Activation of the reporter gene results in the production of a protein that ultimately emits a signal detectable by the microPET scanner."

In the end, the PET scan showed the presence of bright regions where the two proteins had interacted. If the two proteins do not interact, the cascade of gene activations will not occur and no signal will be detected by the microPET scanner.

Pwnica-Worms and his colleagues now are investigating the use of a reporter gene that produces bioluminescence, which would produce a signal of light when protein interactions occur.

"We're exploring other ways of doing this to broaden its application," he said.

**Breathing easy**

On World Asthma Day May 7, Tina Oliver-Welker (left), clinical research coordinator in pediatrics, monitors Maya and Michael Culpepper as they test their lung functions. The teens are participating in the CLIC asthma study, which is examining how individual differences affect the body's response to Flovent and Singular, two top-selling asthma medications in the United States. CLIC is recruiting 50 more patients. For more information, call 286-1173.

**Mouse**

**Draft of genome map publicly available online — from Page 1**

similar in both are likely to be particularly important because evolution has retained those regions in both organisms. The Genome Sequencing Center plans a significant role in producing the mouse-genome map. "We produced a significant amount of the raw sequence information," Waterston said. "We also helped evaluate the computer programs that assembled the sequence data, and we provided the initial map to which the sequence information was applied.

The University's team also included John D. McPherson, Ph.D., associate professor of genetics, who played a major role in the initial mapping; Lucinda L. Antonacci-Fulton, research laboratory manager in genetics, who played a major role in developing data; and Michael R. Brent, Ph.D., associate professor of computer science, of biomedical engineering and of genetics, who contributed greatly to the computer analysis.

Waterston is also leading the effort to interpret the sequence. "This includes defining what stretches of the genome have meaning and what stretches don't; and of the parts that do have meaning, what is it that they're saying," Waterston said. "It's really like decoding a language."

At this point, the entire mouse genome has been sequenced, and about 96 percent of the sequences have been placed on the map. This draft sequence shows the order of the DNA chemical bases A, T, C, and G along the 20 mouse chromosomes.

The current results suggest that it is about 2.7 million base pairs in size, or about 15 percent smaller than the human genome. The human genome is 3.1 million base pairs spread out over 23 pairs of chromosomes.

"This is a major achievement because the mouse plays a central and fundamental role in the study of human biology and human disease."

**ROBERT H. WATERSTON**

The task of mapping the sequences on each of the 20 mouse chromosomes is comparable to the task of placing the street names and addresses of towns along a nearly blank map of 20 different highways. The initial map for each highway would show only certain major features such as the names of major highways and roads. The map would then be developed placing the features of the towns on the map according to their position relative to those landmarks.

Genome maps begin with major molecular landmarks identified on each chromosome, and as sequence data is obtained, computers are used to place the sequences on a chromosome relative to the molecular landmarks. When 90 percent or more of the sequences is placed on all the chromosomes, scientists say they have a draft sequence map.

Small gaps still remain and refinements and adjustments must be made, just as they are likely to be for a similar road map. That work already is under way for the mouse genome map.

The draft sequence was assembled by the Mouse Genome Sequencing Consortium, an international team of researchers from Washington University; the Whitehead Institute in Cambridge, Mass., the Wellcome Trust Sanger Institute and the European Bioinformatics Institute in Hinxton, England; with funding from the National Human Genome Research Institute of the National Institutes of Health and the Wellcome Trust in the United Kingdom.

The mouse genome sequences, and a comparison between the mouse sequence and the human sequence, can be found at several Web sites, including the following: the European Bioinformatics Institute mouse ensembl.org; the National Center for Biotechnology Information at ncbi.nlm.nih.gov; the Smithsonian Libraries at libraryofcongress.gov; and the University of California, Santa Cruz: genome.ucsc.edu.
Inorganic Nanopores: A Bitter Sweet Journey: WILLI VIRTANEN

**Lectures**

**Friday, May 10**


11:00 a.m. Haines Colloquium: "Catalysis: The Link Between Science and Popular Media," presented by Fred M. Whitehurst, Ph.D., Center for the Study of Science. Location: Crowell Hall, 4th Floor.

**Monday, May 13**


11:00 a.m. Haines Colloquium: "The Link Between Science and Popular Media," presented by Fred M. Whitehurst, Ph.D., Center for the Study of Science. Location: Crowell Hall, 4th Floor.

**Thursday, May 16**


**Friday, May 24**

11:00 a.m. Haines Colloquium: "The Link Between Science and Popular Media," presented by Fred M. Whitehurst, Ph.D., Center for the Study of Science. Location: Crowell Hall, 4th Floor.

**Friday, May 31**

Ian Cornelius works through a violin arrangement in front of Biewell Hall, home of the Department of Music in Arts & Sciences. Originally a biology major, Cornelius is graduating with honors in Arts & Sciences and hopes to someday teach literature at a university.

By ANDY CLENDENEN

Cornelius: ‘brilliant in everything he does’

...when the design grows out of a
relationship, you have a more personal design, and that’s why I want to work at a small firm.
Takahashi continues a social work family tradition

BY JESSICA N. ROBERTS

When master of social work student Seiichiro Takahashi was growing up in Japan, he had one thing he wanted to be a social worker.

"I grew up in the social work field," Takahashi said. "Because my family runs an agency providing residential facilities for children and the elderly in Tokyo, Japan, I was around me a social worker. Even though it was expected that I would take over the agency when I was older, I really wanted to be a social worker," he said.

After that realization, Takahashi was inspired by his family's agency as a child-care worker.

In 1998, Takahashi first visited the George Warren Brown School of Social Work. He was traveling with Japanese professors to research the George Warren Brown Social Work-care system. While at GWB, he was impressed by the diversity of the students and the resources available to students and faculty.

By 2000, his family's agency decided to convert all of its residential buildings from a dormitory style to "family-stimulating style."

"When we made that change, I realized the importance of the management perspective in the social work field," Takahashi said. "I realized once I was out of the social work field that I really wanted to be a social worker." He said.

Currently, Takahashi is working for an internship-exchange program for nonprofit organizations in the United States and Japan at the Japan-U.S. Community Education and Exchange in the San Francisco area.

"I believe I have the ability to take some of the problems the Japanese social work field that I really learned at GWB," he said. "In the future, I would like to develop social work fields between the U.S. and Japan for social workers because even though the country and population are different, the issues in social work are very similar. I am sure that collaboration could bring perspectives and ideas to tackle these issues."
As if not busy enough already, Hammack earns degree with an anthropology degree. She is just the third student in University College to honored with induction into Phi Beta Kappa.
For Susan Mahan Niebur, who will be receiving a doctorate in earth and planetary sciences in Arts & Sciences at Commencement, said, “My life in Bulgaria was greatly influenced by the enormous changes that took place as we transitioned from a communist economy to a market economy,” he added. “The major shift really began in the early ’90s, a few years following the fall of the Berlin Wall — that’s when people going out to protests and having demonstrations, and we had our first de facto democratically elected president and government.”

Niebur’s father is a university professor in Sofia, Bulgaria, and his mother is a high school principal in Sofia, Bulgaria. A competitive swimmer, Filev went to a number of national championships. He had a strong passion for physics.

“We have majors in high schools in Bulgaria,” he said. “I majored in physics, but I knew I wanted to study business in college. I just wanted the quantitative skills to be a good analyst anywhere, but I wanted to come to the United States because it has the best business schools.”

One of the important factors that influenced his decision to attend the Olin School of Business, in addition to its outstanding academic reputation, was the number of international students at the school.

“There were several things that made my decision to come to Olin easy,” Filev said. “First of all, I could not have a job right away right under an undergraduate. It’s also good in finance — the area I was interested in studying. It’s a big plus for me that the University makes it easy for students to major in different schools, because I majored in international business and computer science.”

In addition to holding a 3.8 grade-point average, Filev managed a daunting load while studying at the business school. Filev’s accomplishments include an international business internship at a consulting firm in London building a financial model for analyzing corporate bonds at an investment advisory company; serving on the Educational Policy Committee of the University’s Board of Trustees; winning the advanced intramural racquetball championship; helping design and construct a new web site for the Olin School. Filev also participated in the University team that created an experimental cantiler that flew on the space shuttle Atlantis.

“I have been fascinated with space,” he said. “It was a joint program with NASA to build a cantiler and gather experiments from elementary school students to get them involved and interested in space. We had two trips to NASA, and I actually watched the shuttle launch as a VIP. It was amazing.”

Dana Hutton, manager of Olin’s Office of External Relations, commented, “The Olin School is his winning the advanced intramural racquetball championship in 2000. A native of Bulgaria, Filev “has taken advantage of every conceivable opportunity to learn and to become involved,” says Gary M. Hochberg, Ph.D., associate dean of undergraduate programs for the Olin School of Business.

Among Iliya Filev’s numerous accomplishments while at the University is his winning the advanced intramural racquetball championship in 2000. A native of Bulgaria, Filev “has taken advantage of every conceivable opportunity to learn and to become involved,” says Gary M. Hochberg, Ph.D., associate dean of undergraduate programs for the Olin School of Business.

Niebur advocates for graduate, professional students

For Susan Mahan Niebur, who will be receiving a doctorate in physics in Arts & Sciences, working for NASA had always been a dream.

“One of my first memories is of visiting Johnson Space Center as a little girl,” Niebur said. “I was immediately fascinated with the spacecraft, the people and the new knowledge that was being discovered through NASA. Later, I learned that I could give me the quantitative skills to be a good analyst anywhere, but I wanted to come to the United States because it has the best business schools.”

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Sakena Abedin is one of those extraordinary students whose interests and talents — burst traditional bounds. Her intellectual curiosity stretches from natural science to social science to creative writing, and she has displayed striking successes in all three fields.

While earning a medical degree, she published a short story in *The New Physician*, placed among the 20 largest Forbes 400 Magazine's 2004. Sakena won the Performing Arts Department in Arts & Sciences' 1999 A.E. Hotchner Playwriting Competition. The play, *glimpse*, was produced at the A.E. Hotchner Studio Theatre in Mallinckrodt Student Center. Despite her demanding course load, Abedin attended every rehearsal. She continued to revise the dialogue until a week before the play opened.

"I had spent three years writing the play, and what I wanted to say was very clear to me," Abedin said. "But there were still surprises in the production. The actors and director saw things I didn't know I'd put there."

She credits her*A. E. Hotchner Playwriting Competition* for helping her develop her skills.

Michael Nolan was a St. Louis police officer for five years before he enrolled in the School of Law. He originated as a lawyer. He has labored with fellow partners, but not as an attorney at law firm.

And he has professionally interpreted the law on an everyday basis, but not as a member of a crime law. 

You see, before Nolan began pursuing a juris doctoris in the School of Law three years ago, he was a police officer. For five years, he wore a bulletproof vest under a blue uniform and a nightstick and did his best to maintain peace in an often hectic district of south St. Louis.

"We answered calls ranging from domestic disturbances to robberies to shootings," Nolan said. "But my partners and I were always enjoying doing the more exciting work in the gun and drugs and crime."

"In our district, there was always a lot of excitement."

Nolan began noticing a change in his job and in his life.

"It's the nature of the job — you're always looking for the wrong guy," he said. "And therefore you go around looking for that — and that's not just on the street. It spills over into your private life."

"That's where I started to become jaded."

The disillusionment persisting, his wife, Angela, suggested that he attend law school — an idea he originally dismissed. "I never, ever, thought of going to law school or becoming a lawyer," Nolan said. But Angela researched what was needed to take the LSAT and attended law school.

"It's the nature of the job — you're always looking for the right place and doing the right thing that the wrong guy would walk out," Nolan said. "She's been jump-troubled by the police... but still I was a rare combination of talents — a difficult writer."

Abedin said the freedom to pursue independent interests is the most important of the medical school.

"I've learned an incredible amount here," she said. "There are so many broad interests here, and they're willing to take the extra time to work with a medical student on a special project."

"I knew that Sakena could write well," Ivanoff said, "and I was surprised to find out how much she learned to do data analysis. She didn't need detailed instructions. I'd just say the play — okay. She learned it."

"She's done a residency in pediatrics at Children's Hospital of Philadelphia, a program she chose partly because it teaches physicians how to advocate for children."

"It's important to think about the ways lives live outside the office of medicine — and to learn about ways to make a difference in that context," she said.

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She took a year off from academics to think about her future. Medicine always had been a possible career choice: her father is a cardiologist. But she wanted to get some real-world experience first, so she volunteered in a community clinic and took a job working with Southeast Asian refugees in San Francisco.

Those experiences persuaded her that the medicine was the right choice. It would allow her to follow her scientific bent and apply what she had learned in anthropology — sensitivity to people's differing backgrounds and outlooks would make her better able to understand how to treat them.

After her first year in the School of Medicine, a fellowship from the American Medical Student Association and the National AIDS Fund allowed Abedin to return to her hometown of El Paso, Texas, to write a book on HIV prevention for primary-care physicians.

"Someone who wants to talk to patients about HIV in El Paso needs to have different information and a different approach from someone in San Francisco," she said.

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"I've learned an incredible amount here," she said. "There are so many broad interests here, and they're willing to take the extra time to work with a medical student on a special project."

"I knew that Sakena could write well," Ivanoff said, "and I was surprised to find out how much she learned to do data analysis. She didn't need detailed instructions. I'd just say the play — okay. She learned it."

"She's done a residency in pediatrics at Children's Hospital of Philadelphia, a program she chose partly because it teaches physicians how to advocate for children."

"It's important to think about the ways lives live outside the office of medicine — and to learn about ways to make a difference in that context," she said.

She continued to revise the dialogue until a week before the play opened.

"I had spent three years writing the play, and what I wanted to say was very clear to me," Abedin said. "But there were still surprises in the production. The actors and director saw things I didn't know I'd put there."

She credits her*A. E. Hotchner Playwriting Competition* for helping her develop her skills.

She took a year off from academics to think about her future. Medicine always had been a possible career choice: her father is a cardiologist. But she wanted to get some real-world experience first, so she volunteered in a community clinic and took a job working with Southeast Asian refugees in San Francisco.

Those experiences persuaded her that the medicine was the right choice. It would allow her to follow her scientific bent and apply what she had learned in anthropology — sensitivity to people's differing backgrounds and outlooks would make her better able to understand how to treat them.

After her first year in the School of Medicine, a fellowship from the American Medical Student Association and the National AIDS Fund allowed Abedin to return to her hometown of El Paso, Texas, to write a book on HIV prevention for primary-care physicians.

"Someone who wants to talk to patients about HIV in El Paso needs to have different information and a different approach from someone in San Francisco," she said.

Michael Nolan was a St. Louis police officer for five years before he enrolled in the School of Law. He originated as a lawyer. He has labored with fellow partners, but not as an attorney at law firm.

And he has professionally interpreted the law on an everyday basis, but not as a member of a crime law. 

"We answered calls ranging from domestic disturbances to robberies to shootings," Nolan said. "But my partners and I were always enjoying doing the more exciting work in the gun and drugs and crime."

"In our district, there was always a lot of excitement."

Nolan began noticing a change in his job and in his life.

"It's the nature of the job — you're always looking for the wrong guy," he said. "And therefore you go around looking for that — and that's not just on the street. It spills over into your private life."

"That's where I started to become jaded."

The disillusionment persisting, his wife, Angela, suggested that he attend law school — an idea he originally dismissed. "I never, ever, thought of going to law school or becoming a lawyer," Nolan said. But Angela researched what was needed to take the LSAT and attended law school.

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Baseball finally wins record 30th game

The Bears won 30 games for the first time in school history and bettered the previous single-season record of 27, established in 1999 and 2000. The Bears (30-10) won four straight after dropping a 12-7 contest April 30 at Greenville. WVU defeated Penn State7-3, on May 1 and swept a doubleheader from Principia on May 3, winning 8-2 and 14-4. Then they made it a 30-win season with a 7-3 win over Westminster on May 4. Joe Kelly contributed his best start, hitting 500 (6-9-18) with nine RBIs and five runs last week. Reg features traveled his 290th base, breaking the single-season record of 28 set in 1982, and Macdonald improved his top time with a second-place finish in 31.38. In the 3,000-meter steeplechase, sophomore Dustin Vartanian broke the record of 9:22.89. On the women’s side, the Bears posted two NCAA automatic qualifiers in the 10,000 meters as sophomore Lauren Homer and senior Andrea Newberry ran 34:22.22 and 36:39.98, respectively. Freshman Halfie Rahman won the 110-meter hurdles, while sophomore Melissa Miller won the 800 meters in 2:39.91.

The football team completed its regular season with two losses at home and 12 wins for the year. The Bears dropped Games 1 and 2, 1-0. The Bears finished with a win over the Titans in a 33-12 game. In the 3,000-meter steeplechase, sophomore Dustin Vartanian broke the record of 9:22.89. On the women’s side, the Bears posted two NCAA automatic qualifiers in the 10,000 meters as sophomore Lauren Homer and senior Andrea Newberry ran 34:22.22 and 36:39.98, respectively. Freshman Halfie Rahman won the 110-meter hurdles, while sophomore Melissa Miller won the 800 meters in 2:39.91.

The women’s tennis team, ranked ninth in NCAA Division III, earned its third straight invitation to the NCAA Tournament and will host the first and second rounds May 10-11. All matches will be played at Shaw Park in Clayton. The Bears host Kenyon College (Ohio), Denison University (Ohio) and Saint Mary’s College (Ind.) in one of the Central Regional. The winning teams and their opponents will be determined May 8 at the Divisional playoffs, and semifinal and final rounds will be played at Sweet Briar College in the semi-final rounds May 17-22. The Bears, enjoying one of the finest seasons in their history, beat Kenyon twice this season, their first-ever victories over Kenyon.

Field hockey ended its season with a win over Webster on May 4. Joe Kelly contributed his best start, hitting 500 (6-9-18) with nine RBIs and five runs last week. Reg features traveled his 290th base, breaking the single-season record of 28 set in 1982, and Macdonald improved his top time with a second-place finish in 31.38. In the 3,000-meter steeplechase, sophomore Dustin Vartanian broke the record of 9:22.89. On the women’s side, the Bears posted two NCAA automatic qualifiers in the 10,000 meters as sophomore Lauren Homer and senior Andrea Newberry ran 34:22.22 and 36:39.98, respectively. Freshman Halfie Rahman won the 110-meter hurdles, while sophomore Melissa Miller won the 800 meters in 2:39.91.

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Empirical legal studies focus of minicourse

"Conducting Empirical Legal Scholarship," a minicourse presented by the Center for Interdisciplinary Studies in the School of Law, will be held May 13-15, 2002 at the Charles F. Knight Executive Education Center. This first of its kind course will teach legal scholars how to conduct empirical studies and use statistical software to manage and analyze data. The minicourse also will provide a foundation to pursue advanced statistical studies.

Among the topics to be covered during the minicourse is the role of theory in empirical research; research design; the logic of statistical inference; applied training in statistical software; public databases of interest to legal academics; and replications and data archiving.

Andrew D. Martin, Ph.D., assistant professor of political science and fellow in the Center in Political Economy at the University, also will lead the workshop.

Registration for the minicourse includes accommodations, meals and course materials. Attendees are required to bring their own laptops.

For more information about the course or to register, call the Center in Political Economy at 935-5906.

Obituary

Hasty, former housing coordinator

By Andi Cleland

Natalie B. Hasty, former housing coordinator at the University, died Sunday, April 28, 2002, at her home. She was 61.

Hasty came to the University in the department of Apartment Referral Service in January 1977. Four months later, she was hired as the secretary of that department. In 1983, Hasty's secretary position was upgraded to housing services coordinator; and her additional duties in the new position included assisting the manager of Millbrook Apartments.

In 1987, Hasty moved to the South 40 residence halls, where she became the housing services coordinator. She then assisted the activities of maintenance, housekeeping, grounds and laundry services. She held that position until her retirement in 1995.

Survivors include a daughter, Laura Cohen of Coobidee, Ariz., a stepdaughter, Linda Dauten of Jerseyville, Ill., a brother, Eugene Levy of Courtenay, British Columbia, and two step-grandchildren.

Memorial contributions can be made to the American Cancer Society in care of Bass Funeral Home, 3950 W. Clay St., St. Charles, MO 63301.

At press time, it was learned that Paul Wright, a second-year student in the School of Law, died Sunday, May 5, 2002. A full obituary will appear in a future issue of the Record.

Hampton

in our proposal." The Library of Congress, WGBH (Boston PBS station), the University of Georgia and Indiana University Press, which has a well-established film archives also were among the sponsors.

After the proposal was submitted, Baker, Posega and reference to Rudolph Clay traveled to Boston to present the proposal. (June, 2001) word came that the top choice was Washington University Libraries.

Johnston described the competition in sporting terms: "We were the underdog. We were the Montreal Expos winning the World Series." Posega said, "The decision-makers were impressed with our faculty members' commitment to using the collection in the classroom. They wanted to know that whoever got it didn't just put it on a shelf but would also do outreach, not only on campus but locally, nationally and internationally.

Chancellor Mark S. Wrighton said, "Henry Hampton was a distinguished professor of the University and a dedicated teacher of this department." He graduated with a B.A. in psychology, a minor in Russian; and a minor in fine arts.

Svrakic will graduate with an impressive record of community service and work, and she said she is proud to be able to assist Russian families at a local international center. Svarkic will graduate with honors in biochemistry and molecular biology; with honors in Russian; and a minor in fine arts. She will attend Columbia University Medical School this fall and plans to become a reconstructive plastic surgeon.

Wohl garage to add level

Starting May 13, the entire Wohl Student Center parking garage will be closed for the construction of an additional level of parking.

The construction should be completed by Aug. 25.

Stake Prizes awarded by biology department

By Tony Fitzpatrick

Svetlana Aleshkina and Majid Malek both have received the Department of Biology in Arts & Sciences' Stake Prizes. The Stake Prizes are awarded to graduating seniors whose work has been published by the department in scholarship, service and breadth of interest. It is given in honor of Harrison Stalker, Ph.D., who was an evolutionary biologist, and a member of both the Mortarboard and Alpha Epsilon Delta Pre-Health honorary societies.

Aleshke is a double major in biology and in ceramics in the School of Art. She graduates with a distinguished record of achievement in biology and is a member of both the Mortarboard and Alpha Epsilon Delta Pre-Health honorary societies.

Malek is an outstanding artist as well, serving the Skirke Core Art Award from the School of Art and a University City Sculpture Series Award. His ceramic tile pannels of herbal plants are on display in south St. Louis at the Grace Hill South Health Center, which oversees care for poor immigrant St. Louis residents.

Aleshkina is preparing for a career in dental medicine. Svarkic demonstrated her breadth of interests and talents in high school in Belgrade, Yugoslavia, in Senior Spanish and government, and in the applied arts.

Svarkic is completing a special major in biochemistry and molecular biology on the Hilltop Campus, she works in the St. Louis office of Dan Sales, Ph.D., professor of biology. She also volunteers in a laboratory at the School of Medicine and at the law school.

Svarkic has a strong interest in her course load and work schedule, Svarkic has an impressive record of community service, and she said she is proud to be able to assist Russian families at a local international center. Svarkic will graduate with honors in biochemistry and molecular biology; with honors in Russian; and a minor in fine arts.

She will attend Columbia University Medical School this fall and plans to become a reconstructive plastic surgeon.
A distinguished scientist, Theodore J. Cicero, Ph.D., also serves the University as vice chancellor for research.

Encouraging, supporting research

Cicero's grandson, Michael Joseph Nolan, worked in the field of neuropharmacology.

Theodore J. Cicero, Ph.D. (right), vice chancellor for research and professor of neuropharmacology in psychiatry, is reinitiated the behavior, you can

Most of Cicero's research at Purdue involved using animal models to look at brain areas involved in the reward pathways that motivate behaviors. That work led him into studies of drug abuse, and that became the primary theme of his research career. The area fascinates him because of the way drugs seem to permanently alter the brain.

"In a drug addict, there are changes in the brain that appear to be permanent," he explained. "No matter how long you wait, there seems to be some permanent preference for drug use. Even if you have a 10- or 15-year delay, if you reintroduce the behavior, you can become addicted again, only at a much more rapid pace and with much lower doses." One of Cicero's first important discoveries involved the effect of drug use on sex hormones. In studies of the effects of chronic drug use, particularly narcotics, on receptors involved in hormone release, he was looking at the secondary sex organs in male rats — the seminal vesicles and the prostate — because they were rich in a type of receptor he hoped to study.

But after administering narcotic drugs to the rats, Cicero had a difficult time even finding the tissues he hoped to study. They were about a quarter the size of the secondary sex organs in normal rats. It turned out that the narcotic drugs — as well as other abused substances, such as alcohol — were depressing testosterone levels in the testes.

"It was a totally accidental finding, but it became the pursuit of my career," he said. "From that point on, we were able to connect the dots, and from these studies it was ultimately learned that endogenous opioid peptides were integrally involved in the regulation of the hypothalamic-pituitary-gonadal axis, a system that helps explain how the brain controls and interacts with hormones throughout the body."

Animal studies

Cicero does most of his research in animals because there are no social and demographic variables that contribute to drug use in humans. Studying a drug's effects in animals allows him to control for variables that contribute to drug use in humans. Studying a drug's effects in animals allows him to control for variables that contribute to drug use in humans.

In recent research, for example, he has identified major differences in how drugs affect male vs. female rats. "It's the sort of study that is virtually impossible in human subjects," he said. "There are just too many social stereotypes and expectations that have to be filtered out."

Over the years, his work on the biological factors involved in drug abuse has landed Cicero on many committees and study groups that look at the impact of drug use and study various drugs to determine their abuse potential.

"I've known Ted for years, through work with organizations such as the College on Problems with Drug Dependence, the Food and Drug Administration and the National Institute on Drug Abuse," said Charles O'Brien, M.D., Ph.D., professor of psychiatry at the University of Pennsylvania School of Medicine. "He has a gift for coordinating the work of diverse people that makes him an asset to any research or administrative endeavor."

Because Cicero was his department's primary user of lab rats, he ended up charged in the psychiatric animal facility. Later, when the School of Medicine decided to centralize and upgrade its animal program, Cicero was in the call.

He organized faculty committee meetings with architects and engineers to design the new animal-care program, Cicero said, "I made sure that the regulations in such a way that we don't interfere with our core research mission when our investigators do their research."

Researchers truly is one of the most regulated industries in the United States," he said. "There are animal issues, human-studies issues, the potential for conflict of interest. My job is to make sure we are in full compliance with the regulations in such a way that we don't interfere with our core research mission when our investigators do their research."

The other part of the job involves making sure that the University research effort is in compliance. The other part of the job involves making sure that the University research effort is in compliance.

"Ted Cicero is a valued colleague who has greatly enhanced the University's efforts to bring the benefits of research to the community," said Chancellor Mark S. Wrighton. "He is a distinguished research scientist himself and has an excellent grasp of the importance of technology and the opportunities that come with the future of the modern research university."

Theodore J. Cicero, Ph.D.

Born: Aug. 14, 1942, in Niagara Falls, N.Y.

Education: B.S. in biology, St. Louis University, 1964; M.S. in physiological psychology, Purdue University, 1969; Ph.D. in neuropharmacology, Purdue University, 1972.

University positions: Professor of psychiatry and professor of neuropharmacology, vice chancellor for research

Family: Wife, Angela; children, Kelly Nolan, Bill Peck and Mark S. Wrighton.

Hobbies: Bicycling, crabbing, "I love golf, but I never have the time," going to the mountains and skiing in the winter, soccer, tennis, Little League coach and parent-teacher organization president.

"My greatest pleasure right now is visiting my kids at just about any time around. Actually, we added a swimming pool to our house three years ago, and my wife says we didn't even use it in the world so we are doing this now?"

And I said, "I'll make sure the kids come home on weekends. And sure enough, when I open up, my kids come home."

Theodore J. Cicero, Ph.D. (right), vice chancellor for research and professor of neuropharmacology in psychiatry, is reinitiated the behavior, you can...