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Students praise Hewlett for unique advantages
Program integrates many perspectives

Piloted in 1997-98 and funded by the William and Flora Hewlett Foundation, the two-year program is an innovative, project-based approach to learning that reaches across the boundaries of traditional disciplines. The basic concept is that solving environmental problems requires both a grasp of underlying scientific issues and the cultural understanding necessary to form viable policy and conservation strategies. Fully compatible with all majors and all professional programs, the Hewlett Program incorporates small discussion classes, collaborative projects, lectures, field trips and cultural and social activities.

"It's really a pathway for the future," said Students praise Hewlett, page 6

Picture this: Study captures images of memories in the making

BY GERRY EVERDING

The birth of a memory — the split second when the human brain encodes an event for future reference — has been captured through sophisticated neuroscience imaging and used to predict whether experiences will be remembered later or forgotten, according to research just published in the journal Science. "This study marks the first time we've been able to peer inside someone's brain and predict on average whether or not you will later forget something you are now experiencing," said Dr. Randy L. Buckner, senior author of the article and assistant professor of psychology in Arts and Sciences. "Now, we can actually see areas of the brain as they go about the process of memorization." Based on collaborative research by scientists at Washington University, the Massachusetts General Hospital-Nuclear Magnetic Resonance Center (MGH-NMR) in Boston and Harvard University, the journal article describes how levels of activity in certain brain structures can predict whether information will be retained in memory.

Research finds that levels of activity in certain brain structures can predict whether information will be retained in memory.

"One of the big questions about memory is why it is that we remember some of our experiences and yet not others," Buckner said. "We all know this fact from our daily lives, yet as a scientist studying the brain, I could until recently tell you very little about the brain basis of such a process. "Now, by exploring brain activity associated with experiences that we will remember and comparing it to activity associated with words that we will forget, we are making progress in trying to answer this question," he went on. "What our research suggests is that certain specific brain areas in the front-most part of the brain, just above and behind the eyes, will be more active when we are experiencing a word that we will remember, and this activity may participate in one component of the process of memory formation."

Although psychologists have long suspected that how we process information into memory is critically important to later remembering and forgetting, this study is the first to capture images of specific memories as they are being formed within the brain. "This study provides a firmer biological underpinning for the concept that how we encode information is key to whether or not it is remembered," said Daniel Schacter, chair of psychology at Harvard and a co-author of the study. "It is the first work to tie Memories, page 2

Joseph Ackerman named Eliot Professor
Chemistry chair is oldest at Washington University

Joseph J. H. Ackerman, Ph.D., professor and chair of the Department of Chemistry, has been named William Greenleaf Eliot Professor of Chemistry. The Eliot chair is the oldest professorship here, dating back to the University's earliest years. Ackerman, who also holds joint appointments as research professor of chemistry and as professor of radiology in the School of Medicine, is known internationally for his contributions to the application and development of nuclear magnetic resonance techniques for the study of intact living systems. Ackerman came to the University in 1979. He has published widely in the field and is the author or co-author of nearly 100 scientific manuscripts. He provides leadership across campus, serving on the executive committees of the Division of New Science and Mathematics and the Division of Biology and Biomedical Sciences and numerous other panels.

Chancellor Mark S. Wrighton praised Ackerman's research and dedication. "Washington University is fortunate to be able to recognize Dr. Joseph Ackerman by appointing him as William Greenleaf Eliot Professor of Chemistry," Wrighton said. "Dr. Ackerman has made pathbreaking contributions in the chemical sciences and has been an extraordinary contributor to the advance of the Department of Chemistry and the University as a whole. Personally, I am grateful to Dr. Ackerman for his leadership and scholarship and for his commitment to Washington University."

Edward S. Maslin, Ph.D., executive vice chancellor and dean of Arts and Sciences, announced the appointment. "So and I have been colleagues for over two decades and I know from my own experience that he is an absolutely first-rate scientist," Maslin said.

"He came to Washington University having already distinguished himself in the scientific community, and he has continued to do outstanding work in a field that has become more and more important and critical to work in many other fields."

"He cares deeply about our curriculum and is wonderful with our students and faculty, especially in mentoring young faculty members," Maslin added. "I am enormously pleased that he will become the Eliot Professor of Chemistry."

William Greenleaf Eliot was president of the University's Board of Trustees from 1834 to 1870 and chancellor from 1870 to 1887.

Eight distinguished chemists have held the Eliot professorship in the past: John M. Schofield, 1857-62; Abram Litten, 1862-91; Charles R. Sanger, 1899; Edward Harris Keiser, 1900-13; Leroy McAfee, 1922-46; Joseph W. Kennedy, 1959-57; John Snowden, 1957-62; and David Lipkin, 1966 until 1981, when he became Eliot Professor Emeritus.

Monsanto Archives Chancellor Mark S. Wrighton (left) and Robert Shapiro, Monsanto Co. board chairman and chief executive officer, review a scrapbook compiled by Edgar M. Quincy, a former University trustee and son of Monsanto founder John Quincy. The scrapbook is part of the Monsanto Archives, which will be housed at West Campus beginning this fall. The materials include manuscripts, artifacts, media resources and photographs that trace Monsanto's development.

Ackerman named Eliot Professor Chemistry chair is oldest at Washington University

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Memories

Imaging memories as they form in the brain — from page 1

the creation of a specific verbal memory to specific levels of activity in certain areas of the brain.

Anthony Wagner, a postdoctoral research fellow at the MGH-NMR Center and the Department of Psychology at Harvard, spearheaded the research and is the article's first author. His study is one of two articles on memory in this issue of Science that are based on advanced functional magnetic resonance imaging (fMRI) techniques that were developed by Buckner and Anders Dale, a researcher at MGH and another of the co-authors of Wagner's study.

"This new technique is what allows us to get a snapshot of how brain activity during learning differs between experiences that were later remembered and those later forgotten," Wagner said.

Abstract vs. concrete

Wagner and colleagues used event-related fMRI to measure small but significant differences in brain activation as young adults completed various verbal tasks. The researchers were structured to test whether participants are more likely to remember tasks that require a deeper, more thoughtful consideration as opposed to more routine tasks — a theory supported by earlier research.

While the participants' brain activity was being scanned, they were asked to distinguish between concrete concepts, such as dog or cat, and words that are abstract, such as love or hate. Subjects were later asked to recall whether specific words had or had not been included in the tests. When researchers compared the level of brain activity during processing of words remembered with activity for words later forgotten, they found that increased activity in specific structures, such as the left frontal and temporal lobes predicted whether participants could remember correctly. The study also confirms that a person seems to remember something better when he or she pays attention to its meaning, rather than to more superficial attributes such as physical appearance.

Artificially imaged brain regions were imaged using positron emission tomography (PET) and other relatively slow forms of brain imaging required the use of "block trials," in which subjects were asked to repeat a string of similar short tasks so that data could be collected during a longer period.

In 1996, when Buckner was at the Harvard Medical School, he and his colleagues capitalized on the speed of fMRI to collect brain image data from "individual trials," pioneering a research method now known as "event-related" or "stimulation" imaging. Images that took about one minute to capture using fMRI can now be captured by fMRI for events as brief as 20 milliseconds. Researchers are interested in using fMRI to study creating or destroying memories, and a fortunate place to do so is Buckner, because the technique allows scientists to see how specific brain activity relates to individual mental events.

"What we might be seeing is the seeds that are allowing us to step on the path that will eventually lead us to understand some of the conditions or processes that are impaired, such as in Alzheimer's disease or even in children with learning disabilities," Buckner said. "Time will tell.

Other co-authors of the paper are Michael Rotte, MD, and Bruce Rosen, MD, of the MGH-NMR Center, and Wilma Konstall, PhD, and Anita Maril of the Department of Psychology at Harvard. The study was supported by grants from the National Institute on Aging, the National Institute on Development and Communications Disorders, the Human Frontiers Science Program and the Deutsche Forschungsgemeinschaft.

The view from Pike's Peak

Researchers test new color imaging device

A trip to the top of Pike's Peak sounds like the perfect summer vacation, but for Dr. Daniel R. Fuhrmann, it's a research station — with a view.

This summer, William H. Smith, Ph.D., professor of earth and planetary sciences in Arts and Sciences, and Daniel R. Fuhrmann, Ph.D., (right) associate professor of electrical engineering, pause from summer research atop Pike's Peak in Colorado for a picture with U.S. Air Force personnel assigned to the project.

"It's a majestic view and a fortunate place to do research," Fuhrmann said. "It's a beautiful view and a place to make it safe." The peak is now being to process the collected data.

Campus quiz: What building do you enter when you pass under the arch? Answer below.

Campus Y

Campus Y coordinates 25 ongoing programs that address a variety of issues, interests and community needs. For more information or to volunteer, call 935-5740.

Be prepared

University Police offer a free self-defense course for women teaching the Rape Aggression Defense (RAD) System. The next session will be Sept. 26 and 27. Taught in more than 49 states and Canada, the RAD System offers easy-to-learn, effective physical defense techniques that might enable you to survive a violent encounter that awaits one in three women. Classes are limited to 16 women. To register, call Jacqueline Cooper at 935-9011 or visit the University Police website on the campus' home page, click Law Enforcement, Office Services, University Police, and then theRAD System page.

For more information on the course, call Steve Hazel at 935-5536.

The arch crowns the University tradition that goes back to the early 1900s. It is a symbol of the school's identity and a majestic scenery that's a point of pride for many students.

"It's a majestic view," Fuhrmann said of the location, "and a fortunate place to do research."
Researchers find way to grow new kidneys in rats

Penelope Shackelford named director of new Division of Pediatric Ambulatory Medicine

P enelope G. Shackelford, M.D., professor of pediatrics and associate professor of molecular microbiology, has been named director of the newly created Division of Pediatric Ambulatory Medicine.

The appointment was announced by Alan L. Schwartz, M.D., Ph.D., the Harry O. Hammerman: division director of Pediatric Ambulatory Medicine and division director of Pediatric Ambulatory Medicine in chief at St. Louis Children's Hospital.

"Penny Shackelford bringss clinical excellence and vision to our growing programs in pediatric ambulatory medicine," Schwartz said. "Her leadership in development of the integrated pediatric subspecialties at Missouri Baptist Hospital, in just the beginning of the growth of clinical excellence, is the foundation that Penny will foster." The pediatric ambulatory medicine division, which started July 1, includes services at St. Louis Children's Hospital and Missouri Baptist Hospital.

In her new role, Shackelford will oversee the ambulatory services of the Department of Pediatrics. She will also be the executive director of the multispecialty ambulatory practice, including prearrangement, scheduling, coordination of care, and physician and patient education and the integration of these services into the St. Louis Children's Hospital and Children's Hospital. She also will study the development of new educational models for residents and students in an ambulatory setting of specialty care.

Her research interests include the development of the immune system, focusing on antibodies that bind to bacterial polysaccharides — the coat that bacteria use to evade the body's immune system. The research is focused on programs to improve the immunization rate among children who receive care in the BJC Health System. Her clinical interests are general pediatric infectious diseases and children with developmental disabilities.

Among her numerous awards are the 1999 Washington University Teacher of the Year Award, the Washington University Medical Faculty Award in 1992 and a School of Medicine Teaching Faculty Award in 1998. She received a bachelor's degree in biology from the University of Wisconsin in 1964 and a medical degree in 1968. She completed her pediatrics training at Babies and Children's Hospital, Cleveland, and at St. Louis Children's Hospital. After fellowship training in infectious diseases at St. Louis Children's Hospital, she joined the University faculty in 1972 as an instructor of pediatrics. She was named associate professor of molecular microbiology in 1982, director of pediatric infectious diseases in 1985. From 1991 to 1998, she served as director of the Division of Pediatric Infectious Diseases.

Longest running at University Scientists use PET to study biochemical processes

A School of Medicine research team has received a five-year, $1.2 million renewal of a program project grant from the National Heart, Lung, and Blood Institute (NHLBI). The investigators will study biochemical processes in the brain, heart and lung using images produced by positron emission tomography (PET).

The grant has been funded continuously for 36 years, making it the longest-running program project grant at the University. The researchers are developing sophisticated molecular probes so we can better understand processes that play a role in normal biological and disease," said principal investigator, Penny Shackelford, M.D., associate professor of radiology and of medicine. Shackelford will be a co-director of the Division of Radiology. Alan L. Schwartz, M.D., Welch will be the director of the medical school's Mallinckrodt Institute of Radiology and a professor of radiology and of molecular biology and pharmacology.

Welch and Arnold Straus, M.D., professor of radiology and of molecular biology and pharmacology, will collaborate on the first project of the program. They will evaluate a PET method for identifying people who cannot break down fatty acids to generate energy for heart muscle. Such individuals develop erratic heart beats.

Welch also will study a PET marker that holds promise of identifying tissues that become starved of oxygen. These include brain tissue after a stroke, heart muscle after a heart attack and regions of tumors that are difficult to treat. In collaboration with Yasushi Fujibayashi, Ph.D., associate professor of biochemistry at Kyoto University, Japan, Welch will test a compound that targets oxygen-sensing proteins. It carries a radioactive form of copper that is released under low-oxygen conditions. Marcus E. Raichle, M.D., professor of radiology and of neurology, will lead the second project of the program. He will study normal brain activity related to the factors measured by PET and other imaging methods called functional magnetic resonance imaging to identify areas that correlate blood flow or glucose uptake to an activity. fMRI measures how much oxygen there is in blood.

Raichle also will study the importance of glucose breakdown without oxygen by analyzing a product of the sugar's breakdown. Only small amounts of the lactate product are found in the brain, and Raichle will determine whether this reflects its ability to readily slip into the general circulation.

Robert G. Goplerud, M.D., associate professor of radiology, will lead a third project to identify factors that influence which energy source is chosen by heart muscle in early-onset diabetes.

The choice may influence the risk of developing cardiovascular disease, which is the leading killer of people with diabetes.

Daniel P. Schartner, M.D., professor of medicine and of radiology, will lead a fourth project. He will determine whether enzymes that are used to treat pulmonary hypertension can be used to treat pulmonary hypertension. The enzyme pressure resulting from constricting of blood vessels in the lungs.

As part of the program project, Welch also will develop PET probes targeting the biologically relevant markers, which Welch has received a five-year, $1.2 million grant from the NHLBI for research on lung transplant rejection. His research will involve enzyme inhibitors designed to reduce transplant rejection.
**Exhibitions**


**Washington University Art Collections.** Four mini-exhibitions from the University's collection. Opening reception Sept. 11, 5-7 p.m. Exhibit runs through Oct. 25. Gallery of Art, 935-4333.

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**Films**

**Friday, Sept. 4
**
*7 and 9:30 p.m.* Filmboard Feature Series.
*“Which Way is Forward”* and *“Another Song”*. Directed by Carol D. Cunningham, professor of music, and John T. Podosek, professor of earth and planetary sciences. Room 362 Crow Hall. 935-6276.

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**Tuesday, Sept. 8
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**Thursday, Sept. 10
**
*1 p.m.* Performance and dance faculty perform "Dance Close-Up." Dance faculty. Free and open to the public. Cost $3 first visit; $2 subsequent visits. Room 100 Brown Hall. 935-5983.

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**Thursday, Sept. 11
**
*7 and 9:30 p.m.* Filmboard Feature Series.
*“Race, Class, and the Media...? Rethinking Affirmative Action.”* Directed by David Bodine, chief, diagnostic chemistry. Room 362 Crow Hall. 935-6276.

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**Saturday, Sept. 19
**
*7 and 9:30 p.m.* Filmboard Feature Series.
*“Diamond Cove, Isles of Shoals.”* Directed by Charles D. Cunningham, professor of music, and John T. Podosek, professor of earth and planetary sciences. Room 362 Crow Hall. 935-6276.

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**Sports**

**Saturday, Sept. 5
**

**Sunday, Sept. 6
**

**Friday, Sept. 11
**

**Saturday, Sept. 12
**

**1:00 p.m.* Washington U. Classic. Volleyball team vs. Webster University. Mallinckrodt Center. For costs, call 535-5220.

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**Book artist Susan Barron presents slide lecture here Sept. 9.

"Which Way is Forward"

*Where* 
*Washington U. Classic, Mallinckrodt Center*

*7:30 p.m.* Washington U. Classic. Valentin event. For costs, call 535-5220.

*Cost Free and open to the public.

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**Streetcar • Cloning • Affirmative Action • Volleyball**

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**Exhibits to showcase University holdings**

Series begins Sept. 11 with four 'mini-exhibitions'.
The Performing Arts Department in the College of Arts and Sciences will present its fourth annual “Dance Close-Up,” an intimate and thought-provoking presentation of new and original choreography by the departments of dance and theatre, at 8 p.m. Sept. 10, 11 and 12 in the Mallinckrodt Center Dance Studio, Room 207. The evening will feature seven women in a variety of dance styles — modern dance, ballet, African modern dance, ballroom dance, and Indian dance. An additional performance will be held at 3 p.m. Sept. 13 in a benefit for local groups supporting women (see accompanying story).

**Dance Close-Up** allows us to share our work with students, colleagues, and the surrounding community,” said Mary Jean Cowell, Ph.D., associate professor and artistic director for the Dance Program, who serves as artistic director for “Dance Close-Up” and is responsible for developing and performing the work. Some scenes also were developed for a research publication.

The evening will feature seven dances, including “Unforgettable,”

**‘Dance Close-Up’ Faculty present new and original work**

BY LIAM OTTEN

**Science writer Gina Kolata here Sept. 9**

Gina Kolata, science writer for The New York Times, will deliver the opening lecture of the 1998 Assembly Series fall season. Kolata’s talk, titled “Classics: Past, Present, and Future,” will take place at 11 a.m. Wednesday, Sept. 9, in the Mallinckrodt Center. The lecture is free and open to the public.

Kolata, a science and medicine reporter, has written more than 1,000 articles for the Times in the past 11 years. Her articles have appeared in almost every section of the paper, including the Sunday Magazine. She is the author of the best-selling book “A Life in the Balance: Probing the Limits of Fetal Surgery” (written with Edward Laumann, John Gagnon and Robert Michaels) and, most recently, “Christine O’Neal’s duet “Unforgettable” — which she wrote for the piece performed in both the Assembly Series fall season.

Parents should be warned that “Lamban” — which was the last work performed in each evening program is too difficult and not appropriate for young children.

*“Lamban” — Chiquita Payne, adjunct dance faculty, performs an original work to the music of the Anglo-Indian band Colonial Commons, Anheuser-Busch Hall. Call 935-3285 to reserve seats.

**Campus Watch**

The following incidents were reported to Campus Security from Aug. 30 to Sept. 5. Information could not be verified and all incidents, except those involving injuries, are not published. For more information on the Rape Aggression Defense Program and community service in the Office of Student Activities. Relationship Violence Prevention Week begins at 3 p.m. Sept. 13 with a benefit performance of “Past, Present and Future.” One of the pieces included in the concert, Christine O’Neal’s duet “Unforgettable,” depicts a woman’s escape from an abusive relationship. A informational forum on rape and other sexual assault issues.

**‘Making the Legal System Work for Victims of Domestic Violence’**

A range of issues will be considered at an informational forum on the Rape Aggression Defense Program, beginning at 7 p.m. in the Edison Theatre Box office, located in Mallinckrodt Center, at 935-6543, or through MetroTix at 534-1111.

**‘The Dance Close-Up’ benefit takes place in the Dance Studio, Room 207 Mallinckrodt Center. Tickets $4 — the cost of feeding and sheltering one woman for one night — and are available by calling O’Neal at 935-4475. Proceeds will go to local groups working to end relationship abuse. A reception will follow featuring a question-and-answer session with Dwayne L. Brown, executive director of Rape and Domestic Violence (PDV)."
Students enrolled in the Hewlett Program in Environmental Studies make their way up a sand dune in the Mojave Desert. Last spring, the students evaluated environmental degradation of the desert and the formation of the new Mojave National Preserve.

University continues climb in U.S. News' national rankings

Not only is Washington University among the nation's best universities, it's one of the best values, according to U.S. News & World Report's 12th annual "America's Best Colleges" guidebook, released Aug. 30. Among more than 200 national universities, the weekly news magazine ranked Washington University 16th, tied with Emory University. In the best value category, the University ranked 15th. Both rankings represent a rise on the list from last year's rankings.

Among the best national universities, Washington University moved up one spot from last year's ranking of 17. In general, the top college rankings are derived from data gathered from each institution, which are broken down into categories and assigned a weight reflecting the magazine's judgments about which measures of quality matter most. The institutions are ranked against their peer group based on their composite weighted score. The 228 national universities evaluated emphasized faculty research and offer a full range of undergraduate majors plus master's and doctoral degrees.

The 1999 best value rankings for the University marks a four-month rise from last year's ranking of 17. Also in the 13th spot this year are the Massachusetts Institute of Technology and Clarkson and Columbia universities.

The best value category rates schools that offer a high-quality education at a reasonable cost. The best value rankings were devised to provide a realistic measure of where students can get the best education for their money.

The methodology uses three variables: ratio of quality to price, percentage of all undergraduates at the school receiving grants meeting students' financial needs during the 1997-98 academic year and the percentage of a school's total costs covered by the average need-based grant to undergraduates.

Washington University in the guidebook are:

- Third among the top 50 national universities for classes with fewer than 20 students (74 percent; tied with Cornell University); and
- Low-student-to-faculty ratio of 7:1.

The guidebook is available on newstands and at bookstores, and all rankings are available on the magazine's Web site at www.usnews.com.

W&L's plan not to be a buzzword

Intense and in-depth the program is. Because it does sound like, "Washington, Free trips!" Let's go to Hawaii, "let's go to the Mojave." But really, it is intense. I learned so much going to the Mojave — we had to cut back my term paper to 16 pages. I had to cut back my term paper to 16 pages. "It's not just eating granola, hugging trees and saving whales. There's a lot of science involved — some of the purest science you can get," Sarah Johnson, Nelson's classmate from Lexington, Ky., said. The University as an engineering major. "I've always been interested in nature," she said, "but I really didn't think I could make enough of a career out of it. Honestly, I came here thinking I should put in my four years of college and find a good job. But I didn't realize the extent of things you can do this in this field."

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University settles suit to stop business from using its name

Washington University has asked a federal court to stop a Pennsylvania-based profit business from using its name, according to Vice Chancellor and General Counsel Michael R. Cannon. The details of the settlement are confidential, he said, but the consent judgment entered by the court prohibits the business and its proprietors from using "Washington University's name or any other name likely to be confused with Washington University. The Pennsylvania for-profit's use of the name "Washington University" came to the attention of the University about a year ago following a series of ads in internationally distributed publications. Faculty in the University's administrative offices began to receive inquiries from alumni, prospective students and others asking if the advertisements referred to this institution or some other entity. Subsequent investigation led to filing the suit.

International attention was drawn to the sheer nature of it by the military regime of Burma (Myanmar) claimed, in a series of international statements, that a friend of his - the totalitarian government's name - had received an honorary degree from "Washington University." Supporters of a democratic Burma contacted Washington University to protest. In an Internet response, Washington University in St. Louis denied the burning of any such document and asked U. Chin Shein, noting that "our institution has rigorous standards that our students and honors must satisfy before conferral of degrees," not recognized by the University. The Internet response went on to state that the other so-called "Washington University" was a "for-profit business which uses the administration center in Hawaii and its student communication and registration center in Pennsylvania. To the best of our knowledge, it is not an accredited institution of higher education."

In addition to federal and state trademark laws and other statutes, Washington University is protected by the so-called "Washington University" from using its name. "Unauthorized use of W.U.'s name confuses and misleads the international public and dilutes the distinctive value of the institution's name we have served for generations," said Brouillet, who is director of the program. "We admit to being called an "eco-_phrase" wrong." And then I realized that there's "Washington University" here.


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We're pleased to have been able to resolve this litigation with the settlement provisions that prohibit misuse of our name to confuse others, the employers and the international community," Ebel continued. Washington University does not file lawsuits "Washington University" came to the attention of the University about a year ago following a series of ads in internationally distributed publications. Faculty in the University's administrative offices began to receive inquiries from alumni, prospective students and others asking if the advertisements referred to this institution or some other entity. Subsequent investigation led to filing the suit.

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In addition to federal and state trademark laws and other statutes, Washington University is protected by the so-called "Washington University" from using its name. "Unauthorized use of W.U.'s name confuses and misleads the international public and dilutes the distinctive value of the institution's name we have served for generations," said Brouillet, who is director of the program. "We admit to being called an "eco-phrase" wrong." And then I realized that there's "Washington University" here.


"It's not just eating granola, hugging trees and saving whales. There's a lot of science involved — some of the purest science you can get," Sarah Johnson, Nelson's classmate from Lexington, Ky., said. The University as an engineering major. "I've always been interested in nature," she said, "but I really didn't think I could make enough of a career out of it. Honestly, I came here thinking I should put in my four years of college and find a good job. But I didn't realize the extent of things you can do this in this field."

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University settles suit to stop business from using its name

Washington University has asked a federal court to stop a Pennsylvania-based profit business from using its name, according to Vice Chancellor and General Counsel Michael R. Cannon. The details of the settlement are confidential, he said, but the consent judgment entered by the court prohibits the business and its proprietors from using "Washington University's name or any other name likely to be confused with Washington University. The Pennsylvania for-profit's use of the name "Washington University" came to the attention of the University about a year ago following a series of ads in internationally distributed publications. Faculty in the University's administrative offices began to receive inquiries from alumni, prospective students and others asking if the advertisements referred to this institution or some other entity. Subsequent investigation led to filing the suit.

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Of note

Carrie Baker Brackman, Ph.D., a postdoctoral fellow in molecular biology and pharmacology, has received a two-year postdoctoral fellowship from the Cancer Research Institute. The award enabled her to study the molecular mechanisms controlling apoptosis, the study of cancer and the search for cancer drug targets.

David D. Ellis, J.D., professor of law and former dean of the School of Law, served as commencement speaker for Maryville (Tenn.) College and was presented with an honorary doctor of laws degree. Ellis, who graduated from Maryville in 1960, spoke on "What's Liberal about America?"

Michele W. Shoresman, Ph.D., director of graduate and joint degree programs, reorganized the department, recently was selected designee for the University's Architect for the University's guidelines for submitting copy: A native of New York in 1942 and completed a postdoctoral fellowship in molecular biology and pharmacology during the 1988-89 academic year. The award criteria are research accomplishment, academic record and career potential.

Speaking of

Susan M. Bilzer, coordinator and rehabilitative audiologist for the Hearing Rehabilitation and Cochlear Implant Program in the Department of Otolaryngology, and the School of Medicine, spoke on "The Influence of Personal Beliefs in the Adaptation of Hearing Loss." The seminar was held in the Arthur Institute of the Performing Arts. The seminar was held in the Arthur Institute of the Performing Arts.

A "Bag of FREDDY Tricks" at the annual Statistical Analysis System (SAS) User's Group International Conference in Nashville, Tenn. This group shares ideas on using SAS, a computer language and analyze research data. Morgan presented a talk on the law school's legal analysis and writing program, which emphasizes the values of modesty, integrity, and currently is pursuing a juris degree from China's Xiamen University in 1993 and a master's degree in operations research from the University of Illinois at Urbana-Champaign in 1997. Received a bachelor's degree in 1991 from the Chinese Academy of Social Work. Her current post at the law school, Shoresman will work with a faculty steering committee to help identity ways to market and strengthen the existing graduate and joint degree programs.

New appointments

David M. Becker, J.D., associate dean for external relations
Janet L. Bollin, J.D., assistant dean for admissions
G. Peter Niskanen, M.D., assistant dean for medical education
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Dean Daniel L. Keating, J.D., has announced new appointments at the School of Law in external relations, external affairs, admissions, office business, graduate and joint degree programs and information resources.

David M. Becker, the Joseph C. Acton Professor of the Law of Property, a 1973 Founders Day fellow and recipient of the first Law Alumni Association Distinguished Teacher Award in 1988, is known among law school alumni and has been active in several alumni activities.

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Exploring chemistry's frontiers

Interdisciplinary pioneer Joseph Ackerman applies technology to image chemical processes

BY CHARLES B. ADAMS

Not many scientists have the opportunity to lead a project that is part of their own experiments. After all, they can't switch themselves on a petri dish, as Joseph J. H. Ackerman, Ph.D., professor and chair of Chemistry in Arts and Sciences, knows exactly what it feels like to lie inside a powerful nuclear magnetic resonance (NMR) machine.

"A number of years ago, I had some imaging techniques I wanted to try out," Ackerman said. "I got into a high-field NMR imaging machine at the National Institutes of Health in Bethesda and laid in for about four hours while they did experiment after experiment. It was a lot of fun. I understood the physics taking place, and I could hear the machine's field gradient coils pulsing. I came away even more convinced that NMR was a dominant technology well into the 21st century."

NMR imaging, also known as magnetic resonance imaging (MRI) in medical parlance, involves placing the subject in a strong magnetic field. The instrument detects nuclear-spin resonances within the samples, field as radio signals. The signals are processed in computers and turned into a spatial image similar to an X-ray image but containing far more information. In a related field, NMR spectroscopy, the signals are processed to reveal information about molecular structure and dynamics.

Part of the reason that Ackerman enjoys research involving NMR imaging and spectroscopy is that it allows scientists to look at the bodily chemical processes of an intact living specimen without being invasive or destructive.

"With NMR, you can put a laboratory animal such as a transgenic mouse in the machine, take your images or acquire spectra, and then release it unharmed," he said. "You can look at it anytime you want—before and the day after that and so on. You can, for example, follow treatment of a given animal over time or do a longitudinal study with an entire sample population over time. That gives you much, much stronger statistical data."

Pioneering experiments

Ackerman received an undergraduate degree in chemistry from Boston University and his doctorate in physical chemistry from Colorado State University. Following a year of post-doctoral study at Colorado State, he won a National Institutes of Health Fellowship for advanced study at Oxford University in Britain. During his fellowship, he participated in pioneering NMR experiments with living systems.

"I was trained as a physical chemist and became very familiar with an entire sample population in the NMR machine; if it had been possible to make an image of his motivation and interests, it would show a man completely committed to his research as well as to the University's chemistry department. On the surface, it may seem these two ventures to be odds, but Ackerman is drawn equally to both. That's because he is the kind of man who likes to look deeply into things and investigate the relationship of one process to another, whether inside the brain of a laboratory mouse or within his department."

A great team

"I've enjoyed both jobs enough that trying to juggle a lot of disparate things has been a worthwhile challenge and a terrific learning experience," he said. "It's been exciting, and I'm reasonably good at juggling multiple responsibilities. However, the most important responsibility I have is to hire good people, whether they are administrative staff or faculty members. We have very competent people at all levels in the department, and I have been very good at juggling these responsibilities.

One of the people Ackerman hired was Andre D'Avignon, director of the University's High Resolution Nuclear Magnetic Resonance Facility.

"Andre has run one of our key experimental centers — or equipment centers in the chemistry department. It is very important to chemists of all types. Not only has Andre's facility been a major center of other centers in the department, but other centers in the University have studied it to see how he has managed resources and operations," Ackerman said. "D'Avignon pays equally high compliments back to his chair. "When I came here 14 years ago, I knew this was where I wanted to be and I've never looked back."

Joseph J. H. Ackerman, Ph.D.

Born Tulsa, Okla.

Education B.S., chemistry, Boston University; Ph.D., physical chemistry, Colorado State University; advanced study, Oxford University, and under a National Institutes of Health Fellowship Position Professor and chair of the Department of Chemistry in Arts and Sciences; research professor of chemistry and professor of radiology in the School of Medicine

"He's... created an environment within the department in which the faculty can learn and grow. He's a real motivator."

Andre D'Avignon

"It is becoming clear that the dominant experimental laboratorian in the 21st century is probably going to be the transgenic mouse," he said. "These mice can be expensive to produce and maintain, making them excellent subjects for non-invasive, non-destructive NMR techniques. What we need are higher-resolution MR images of them, and that's where our department is now heading."

The third area of research that Ackerman and his associates are investigating is defining biophysical events that have been difficult to quantify without an injury. In particular, the team is beginning what may be a long journey toward helping physicians distinguish between salvageable and irreversibly damaged cells at the site of a brain stroke.

"Enjoy moving into new research areas," he said. "Advances in high-resolution NMR technology now allow experiments barely dreamed of a decade ago. New discoveries and methods are coming at an astonishing rate — you can't imagine a more exciting time to be pursuing NMR experiments in the life sciences.

"The real main reason I came was because of Joe. He was known as a 'rising star' in NMR." Ackerman is known internationa-- for his contributions to the field of high-field NMR imaging and spectroscopy. In recognition of his contributions to the field of magnetic resonance imaging in Medicine (the society's highest and most esteemed award) he was named William Simpson Award for Excellence in Experimental Magnetic Resonance Imaging from Wayne State University; the St. Louis Award from the American Institute of Medical Society's St. Louis Section; and he was recently named a Fellow of the International Society for Magnetic Resonance in Medicine. "He's also created an environ-

ment within the department in which the faculty can learn and grow," D'Avignon said. "He's a real motivator, particularly for people willing to take on new challenges."

During his tenure as chair, the chemistry department increased its interdisciplinary approach to studying both the physical and life sciences. For our students, it is important that they take courses in both biology and medicine. "It will continue to be a good example of how the life sciences and physical sciences are integrated, chemistry as well as an appreciation for the application of chemistry at its interfaces with biology, physics and medicine, which is a really good thing if the student is going to be an interdisciplinary researcher."