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Record

April 20, 2000

Volume 24 No. 28



Washington University in St. Louis



Honors

Frieden, Watson to receive faculty achievement awards

By ANN NICHOLSON
AND LINDA SAGE

One of the world's leading cave archaeologists and an authority on protein structure and folding will receive Washington University's second annual faculty achievement awards. The selection was announced Saturday, April 15, at the Chancellor's Gala in Holmes Lounge. The awards will be conferred at a public event in the fall.

Carl Frieden, Ph.D., the Alumni Endowed Professor and head of the Department of Biochemistry and Molecular Biophysics at the School of Medicine, is the winner of the Carl and Gerty Cori Faculty Achievement Award. Patty Jo Watson, Ph.D., the Edward Mallinckrodt Distinguished Professor of Anthropology in Arts & Sciences, will receive the Arthur Holly Compton Faculty Achievement Award. The awards recognize outstanding academic accomplishments and service.

"The faculty achievement awards provide a wonderful opportunity annually to recognize two standout members among the

University's many fine scholars and professors," said Chancellor Mark S. Wrighton. "This year's recipients are truly exemplary. Their research and scholarship, recognized prominence in their fields, and service and dedication to the University community comprise the bases for the important recognition they are receiving."

The award includes a \$5,000 honorarium. Watson and Frieden will address the University community at the awards ceremony next fall, summarizing their scholarly work.

"Dr. Frieden is an internationally known biochemist whose career began in the early days of the field," said Arnold W.

"The faculty achievement awards provide a wonderful opportunity annually to recognize two standout members among the University's many fine scholars and professors."

MARK S. WRIGHTON

Strauss, M.D., the Alumni Professor of Pediatrics at the medical school and outgoing chair of the Faculty Senate Council, which established the awards with Wrighton. "Even after more than 40 years at Washington University, he continues excellent work in the laboratory and serves as a role model and mentor for young bench scientists."

"Professor Watson has shown

See Honors, page 2



Patty Jo Watson, Ph.D., and Carl Frieden, Ph.D., visit at the Chancellor's Gala Saturday, April 15, following the announcement of their selection as recipients of the University's second annual faculty achievement awards.



Assessing water quality Gregg McKee of Ladue (kneeling) and Robert and Liza Street of Clayton conduct tests at Tyson Research Center as part of the Lifelong Learning Institute's "Aquatic Ecosystems" course Saturday, April 15. Jane Walker, Tyson Field Science Program instructor, led the class, in which 12 participants explored a pond and creek, learned about chemical testing methods and bioassays and collected aquatic organisms. The University's Lifelong Learning Institute provides a wide range of educational opportunities for older adults.

MARY BUTTUS

Padmanabhan named to new chair

By BARBARA REA

"Paddy" Padmanabhan, Ph.D., was installed as the first John K. Wallace Jr. and Ellen A. Wallace Distinguished Professor of Marketing at the John M. Olin School of Business in an April 12 ceremony in Simon Hall. The professorship was made possible by a recent commitment of \$2 million from the Wallaces.

"John and Ellen Wallace are among the University's most

generous and supportive friends," said Chancellor Mark S. Wrighton, announcing the commitment. "Establishing a distinguished professorship is one of the many meaningful ways in which they've shown their longstanding devotion to the University and the Olin School."

Stuart I. Greenbaum, dean of the business school, also expressed his gratitude for the new professorship. "I'm delighted that the Wallaces' generosity

allows us to honor outstanding faculty such as Paddy Padmanabhan," Greenbaum said. "Such gifts help the Olin School attract and retain world-class faculty and contribute to its rise as one of the nation's premier business schools."

Padmanabhan was on the faculty of Stanford University, Northwestern University and the European international business school INSEAD in France before joining the faculty here as professor of marketing in 1998. He teaches customer-focused marketing management, services marketing, advanced services marketing and contemporary marketing channels and pursues research interests in those areas. He has been published in many scholarly journals, including Marketing Science and Management Science.

Padmanabhan earned a doctoral degree and master of science degree from the University of Texas at Dallas. He received a bachelor of technology degree from the Institute of Technology, Benares Hindu University in

See New Chair, page 2

WU shines with Trumans; all four entries are finalists

By TONY FITZPATRICK

Washington University is one of only seven universities to place all four of its applicants — the maximum allowed — as finalists in the competition for the prestigious Harry S. Truman Scholarships. Two, Arts & Sciences juniors Sarah Johnson and Kayje Booker, went on to win the awards. Applicants included

students from 311 institutions nationwide.

Juniors Elizabeth Aloï and Emily Beckman, also in Arts & Sciences, were named as finalists.

The Truman Scholarship program is open to juniors interested in public service careers. Truman Scholars are selected based on academic performance, leadership and

See Trumans, page 2

Life's origins Researchers find intriguing possibility in volcanic gases

By TONY FITZPATRICK

Washington University geologists have developed new theoretical calculations about how life might have arisen from volcanic gases on Earth, Mars and other celestial bodies.

Analyzing ash, lava and magma chemical compositions from nine representative volcanoes around the world, geologists Everett L. Shock, Ph.D., professor

of earth and planetary sciences in Arts & Sciences, and Mikhail Y. "Misha" Zolotov, Ph.D., senior research scientist, describe a scenario in which initial volcanic gases spewing from the Earth as hot as 1,200 degrees Celsius cool down to a relatively low temperature of 150-300 C. Shock and Zolotov have shown that, in this temperature range, environmental and chemical conditions are ripe for formation of basic hydrocar-

bons — a wide range of carbon-based compounds essential for life — from the hydrogen and carbon monoxide present in the volcanic gases.

For decades researchers observing volcanic rocks have detected a fine film of organics on the rocks' mineral surfaces, leading to endless speculation about the film's source. Many thought that the organic compounds were stable parts of the

Earth's mantle brought up over time through volcanic activity. Others held that the organic mixtures condensed and coalesced in volcanic gases during eruptions. The Shock-Zolotov calculations show that the latter process is more likely.

Conditions favorable for hydrocarbon synthesis also could be favorable for other life ingredients, such as amino acids and complex organic polymers,

leading, perhaps, to self-replicating RNA molecules and eventually to all sorts of cells and diverse organisms.

The calculations take into consideration temperatures, gas composition, oxidation states of the gases and geophysical conditions of the individual volcanoes. They are valuable as a framework for researchers setting up experiments and testing results, and they

See Origins, page 6



Monopolyville Members of Delta Gamma sorority and Sigma Nu fraternity perform "Monopolyville" at the University's Thurtene Carnival Saturday, April 15. With the audience transported into one of America's favorite board games, the plot thickened as Mr. Hat kidnapped Rich Uncle Pennybags, the mayor of Monopolyville, with Thimble and Penny working to foil his evil plans. Thimble was played by sophomore Jonas Feliciano (front left), with freshman Jamie Rosenthal (left) as Penny. Back-up singers (from left) Community, Chest and Chance were portrayed by freshman Carly Oxman, senior Yael Berkovich and junior Whitney Walters.

New chair

Padmanabhan named to Wallace professorship
— from page 1

Varasani, India.

John K. Wallace Jr., chairman of The Regency Group, a holding company based in Clayton, Mo., and a member of the University's Board of Trustees, has been a distinguished leader in the St. Louis business community for 30 years. After receiving a master of business administration degree from the University's school of business in 1962, he rose to the position of executive vice president and president of charcoal subsidiaries at Cupples Co. Manufacturers in St. Louis. In 1981, he purchased a subsidiary he led and renamed it Imperial Products. When he sold the firm in 1989, it was the largest industrial and third-largest recreational charcoal operation in the United States. Recently, Wallace became a co-owner of the St. Louis Cardinals.

Now semi-retired, he serves on the business school's National Council and chairs the school's efforts for the Campaign for Washington University.

He is a past chairman of the

William Greenleaf Eliot Society and a past president of the business school's alumni association. A recipient of the school's Distinguished Alumni Award for success in his career, Wallace also has received awards for his service to the University as a whole. He is active in many civic and cultural institutions, among them the Missouri Botanical Garden, the St. Louis Zoo and the Municipal Theatre Association of St. Louis.

Ellen Wallace, his wife, also has enjoyed success in business. In 1990 she became a founding partner of Farmhouse Collection Inc., a manufacturer offering unique, high-end handcrafted furniture to the designer trade industry. Together with her partners, Wallace developed the firm into the nationally recognized company it is today, supported by 17 regional showrooms.

Before entering the furniture business, Ellen Wallace volunteered extensively in St. Louis for organizations dedicated to helping disadvantaged and at-risk youth. For 10 years she served as a Citizen's Deputy Juvenile Officer with the St. Louis County Family Court system and was a member of the board of directors of the Providence Program. Currently,

she serves on the boards of the Center for Contemporary Art (COCA) and PayBack Inc.

The Wallaces' commitment is part of the Campaign for Washington University, a major initiative which aims to continue to build on the University's record of excellence and to bring greater benefit to the St. Louis region. The campaign, to end June 30, 2004, has secured gifts and commitments totaling \$846.1 million to date.

Trumans

All four competition entries are finalists
— from page 1

dedication to public service. Each scholarship provides \$30,000 — \$3,000 for the senior year and \$27,000 for two or three years of graduate study.

Scholars also receive priority admission and supplemental financial aid at some premier graduate institutions, along with leadership training, career and graduate school counseling and special internship opportunities within the federal government.

Louis H. Blair, executive secretary of the Harry S. Truman Scholarship Foundation, announced that 61 students from 49 U.S. colleges and universities have been selected as 2000 Truman Scholars. They were selected by 14 independent selection panels on the basis of leadership potential, intellectual ability and their potential for "making a difference."

The 61 scholars were selected from among 599 candidates. Each selection panel interviewed finalists from a three- to four-state region and generally elected one scholar from each state and one or two at-large scholars from the region. Each panel typically included a university president, a U.S. Appeals Court judge or a state Supreme Court justice, a distinguished public servant, and a past Truman Scholarship winner.

Booker is an anthropology major from Helena, Mont. She is interested in environmental law and is currently studying in

Honors

Frieden, Watson chosen for awards
— from page 1

similar commitment, leadership and achievement during her more than four decades at the University," Strauss continued. "One of her colleagues commented that if there were a Nobel prize in anthropology, she would have won it long ago."

Strauss co-chaired the advisory committee making the selections with Gerhild S. Williams, Ph.D., the Barbara Schaps Thomas and David M. Thomas Professor in the Humanities, professor of Germanic languages and literatures in Arts & Sciences and associate vice chancellor for academic affairs. The committee included three members each from Arts & Sciences and the medical school and one member from each of the University's other six schools.

Criteria for selection are:

- Outstanding achievement in research and scholarship;
- Recognized prominence within the community of scholars;
- Service and dedication to the betterment of the University; and
- Respected accomplishments in teaching.

Watson, who joined the faculty in 1969, is renowned for her pathbreaking work in cave archaeology and her interdisciplinary scientific contributions to an understanding of North American prehistory. Much of her work has examined the origins of agriculture, both in the Near East and North America.

She began her career excavating prehistoric sites in Iraq, Iran and Turkey, and then shifted her primary focus to North America, where she has excavated prehistoric pueblos in New Mexico and rock shelters and shell mounds in Kentucky. She is especially well

known for her work with artifacts left by prehistoric people who explored and mined portions of the world's longest cave — Kentucky's Mammoth Cave system.

Author of nearly 100 scientific articles and numerous highly regarded books, Watson's most influential publications are two books on her Mammoth Cave research, two on archaeological theory and articles on procedures she has developed for recovering charred botanical remains from archaeological sites.

She is a member of both the American Academy of Arts and Sciences and the National Academy of Sciences and a fellow of the American Association for the Advancement of Science.

Frieden focuses on a major unsolved problem in biochemistry — how proteins, which begin as long strings of amino acids, fold into their correct shapes, given that there are millions of possible 3-D configurations. He is using a variety of techniques to examine the structures of intermediates that arise during folding and is exploring a number of different protein systems. They include intestinal fatty acid binding protein, which is involved in fatty acid metabolism, and the enzyme dihydrofolate reductase, a target for a number of anticancer and antibacterial drugs.

Frieden's group also is studying the mechanism by which certain bacterial chaperones help proteins refold and interactions between proteins, especially those that form the cellular skeleton. Other interests include the relationship between protein structure and function and the catalytic mechanisms of certain enzymes.

Frieden came to the medical school as a postdoctoral fellow in 1955 and has been on the faculty since 1957. In 1988, he was elected to the National Academy of Sciences and selected as a fellow of the American Association for the Advancement of Science.

Ecuador. Johnson, from Louisville, Ky., has a triple major in environmental studies, mathematics and earth and planetary sciences. Beckman is an American Culture Studies and Spanish major from Kensington, Md., currently studying in New York; and Aloï is a Bioethics in Public Policy major from Great Neck, N.Y. She is currently studying in London.

Growing up in Montana, Kayje Booker acquired a love of the outdoors and a desire to preserve its natural beauty. Her interest in environmental protection now encompasses national and Latin American issues, with a focus on bringing opposing sides together. She spent last summer working on a trail crew in Baxter State Park in Maine. She is in Ecuador to study its culture and development and plans to do independent research on ecological policies. She enjoys travel, snowboarding, ultimate frisbee and numerous other outdoor sports and activities.

Johnson has taken part in a number of publications and presentations during the past three

years. She currently is finishing honors thesis work involving microbes in the extreme environment at the summit of Mauna Kea, a Mars analogue site. She is a volunteer for Special Olympics and coordinates the Natural Ties Program, which pairs mentally disabled adults in the St. Louis community with Washington University students. She enjoys backpacking, writing, photography, surfing and running.

The Truman Scholarship Foundation was established by Congress in 1975 as the federal memorial to the 33rd president. Foundation activities are supported by a special U.S. Treasury trust fund. There have been 2,003 Truman Scholars elected since the first awards were made in 1977.

The scholarship recipients will assemble May 21 for a week-long leadership development program at William Jewell College in Liberty, Mo., and receive their awards in a special ceremony at the Truman Library in Independence, Mo., May 28.



V. "Paddy" Padmanabhan (left) receives congratulations from Dean Stuart I. Greenbaum following his installation April 12 as the first John K. Wallace Jr. and Ellen A. Wallace Distinguished Professor of Marketing at the John M. Olin School of Business.

Record

Washington University community news

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Medical School Update

Medical students are running for their lives

Relay promotes healthy habits, raises awareness for children's health coverage

By DIANE DUKE WILLIAMS

This year, second-year medical student Roberto Miki realized he and many of his classmates were not making healthy lifestyle choices. Because of their demanding schedules, they often were eating fast food, not exercising regularly and skipping regular medical checkups.

So Miki, secretary and treasurer of the Washington University student chapter of the American Medical Association (AMA), started the

"I like to keep in shape, and I thought if we're going to be telling patients to be healthy, we should be doing the same."

ROBERTO MIKI

Wellness Initiative. The goal of this AMA program is to promote healthier living among medical students.

"I like to keep in shape, and I thought if we're going to be telling patients to be healthy, we should be doing the same," said Miki, a marathon runner. "The habits we start today should stay with us for the rest of our lives."

Since its inception, the Wellness Initiative has invited an exercise physiologist to speak to students, organized physical therapy checkups for students and created and posted training diaries in the medical school's

Olin Gym.

On Saturday, April 15, Miki and first-year medical student Danielle Weems organized another Wellness Initiative project, a 12-hour relay to promote health among the students. About 85 students participated in the race, held at the University's undergraduate track. Two teams—one of first-year and one of second-year students—had someone on the track for 12 consecutive hours.

"We wanted to have a lot of students participate and just have fun," said Weems.

"It's a good way for the different classes to get to know each other better."

Another goal of the relay race was to get publicity for the Children's Health Insurance Program, which provides coverage for uninsured children. The American Medical Association Medical Student Section adopted this program as its national project this year.

Miki first came up with the idea of a 12-hour relay in high school in Coconut Grove, Fla. He convinced his cross-country track teammates it would be a good way to raise the money



First-year medical student Kerith Lucco, left, passes the baton to classmate Sarah Cook during a 12-hour relay race Saturday, April 15, at Washington University's Bushyhead Track. Eighty-five medical students participated in the race, which the second-year team won by running 111.4 miles. One of the race's goals was to promote healthy lifestyle choices among medical students.

needed to travel to a meet in North Carolina. The relay has become an annual event at Ransom Everglades High School and is used to raise money for various causes. Last year, students paid off the medical bills of a rival team's coach who has cancer.

If the School of Medicine

relay catches on, the organizers might use it to raise money for charity next year.

"This year, we wanted to get people together, have a good time running and teach the public about the Children's Health Insurance Program," Miki said. "We also just wanted to do something good for the world."

Neurosurgery team will volunteer in Kenyan hospitals

By LINDA SAGE

Several St. Louis doctors and nurses will spend their vacation time in Kenyan clinics and operating rooms so patients



Lauryssen: Organizing volunteer mission

there can receive neurosurgical care ordinarily unavailable in their country. Volunteers from Washington University Medical Center, Saint Louis University and the Microsurgery and Brain Research Institute will treat brain and spinal cord problems at Aga Khan Hospital, Nairobi Hospital and Kenyatta National Teaching Hospital, all in Nairobi.

They will leave St. Louis May 5 and return May 20.

Carl Lauryssen, M.B., Ch.B., assistant professor of neurological surgery at Washington University, is organizing the East Africa Neurosurgery Mission. He recently invited a visiting Kenyan surgeon to stay in his home. After hearing about the acute shortage of neurosurgeons in Kenya, he decided to make this trip.

"Kenya has limited medical resources and supplies, and hundreds to thousands of patients die as a result," Lauryssen said. "Coming from South Africa, I empathize with the hardships they face. It is a privilege for me to be a neurosurgeon, and this is my way of giving something back."

Another member of the team, Paul H. Young, M.D., a neurosurgeon at the Microsurgery and Brain Research

"Kenya has limited medical resources and supplies, and hundreds to thousands of patients die as a result."

CARL LAURYSSSEN

Institute, 6725 Chippewa Ave., St. Louis, and a clinical professor of anatomy and neurosurgery at Saint Louis University, spent February 1999 at Kenyatta National Teaching Hospital, the medical training center for Nairobi University. "The hospital, which has more than 1,700 beds, serves a referral area that includes much of East Africa," Young said. "But overcrowding and lack of even

basic equipment and supplies are the rule."

The team members will diagnose and treat patients with neurological problems ranging from brain tumors to spinal cord trauma. They will give lectures and demonstrations to the hospitals' medical staffs and transport donated surgical devices.

Washington University School of Medicine, DePuy Acromed (orthopedic products) and Searle (pharmaceuticals) will help finance the trip. Timely Medical Innovations Ltd. (infection-control products) and Biogel Technology Inc. (medical polymers) will donate neurosurgical supplies. The Kenyan government will subsidize the volunteers' accommodations.

Cagan receives \$1.1 million grant to study cancer syndrome genes

Ross L. Cagan, Ph.D., assistant professor of molecular biology and pharmacology, has received a five-year \$1.1 million grant from the National Cancer Institute to study genes involved in two cancer syndromes.

One syndrome is called

Correction

In the April 13 Record article about funding from the Diabetes Research and Training Center, an incorrect phone number was given. For more information or for applications, the correct phone number is 362-8290.

multiple endocrine neoplasias or MEN2B. It involves developmental defects and aggressive tumors in two or more hormone-producing organs, including the thyroid gland. The other, medullary thyroid carcinomas (MTC), involves developmental defects and thyroid tumors that do not run in families.

The syndromes can result from a defect in a gene on chromosome 10 that codes for a cell-surface protein called RET receptor tyrosine kinase. This receptor tells cells to divide, but its activity is carefully regulated. The defect in MEN2B and MTC permanently activates the

protein, prompting cells to divide without restraint into tumors.

Cagan is using the fruit fly, *Drosophila*, in his research. He already has mutated the fly gene that is similar to the human gene for RET, giving it the defect that causes MEN2B and MTC. He expressed the defective gene in the fly's retina, which is accessible to genetic screening.

Cagan is screening cultures derived from the abnormal retinal cells to identify genes that can modify the mutant receptor's actions; many of these genes are likely to code for proteins that relay the receptor's signal into cells. He then will determine how the products of

these genes act during normal fly development and in retinal tissue that makes the defective receptor. Next, he will identify the corresponding human genes in cell lines derived from tumors of MEN2B and MTC patients.

He already has identified more than 100 fly genes that modify the action of the mutant gene. He also has demonstrated that halving the dose of some of these genes drastically inhibits cell proliferation. "These genes are of particular interest as potential drug targets because reducing the activity of their human counterparts may have important therapeutic effects," Cagan said.

AIDS drugs could lead to bone loss

By NICOLE VINES

Researchers are tacking on bone deterioration to the list of hazards associated with potent AIDS medications. However, they consider it a small tradeoff for the dramatic cut in death rates among AIDS patients taking these drugs.

Reporting in the March 10, 2000, issue of *AIDS*, Pablo Tebas, M.D., assistant professor of medicine in the Division of Infectious Diseases, said that protease inhibitors appear to leach minerals from the bones of some HIV patients.

In a study of 112 HIV-infected men who underwent bone scans, Tebas found that the probability that patients on highly active antiretroviral therapy (HAART) involving protease inhibitors would have a condition called osteopenia was double that for patients who were not taking the inhibitors. Both osteopenia and osteoporosis weaken bones by reducing bone mass and increasing the risk of subsequent fractures. Osteoporosis is a more severe form of osteopenia, with a higher risk of fracture. Osteopenia leaches minerals from bones, whereas osteoporosis makes bones porous.

The study does not prove causation, but it does demonstrate an association between osteopenia and protease inhibitors. "We don't know if this effect results from the protease inhibitors alone or from the combination of protease inhibitors and other commonly used drugs called nucleoside analogs," he said. "That is something that must be studied prospectively, which is what we're doing now."

This research was conducted at the AIDS Clinical Trials Unit at the School of Medicine and supported by the National Institutes of Health.

Scans detect trouble

Initially, Tebas and his team were investigating fat redistribution in patients who were on HAART. More than 50 percent of patients using protease inhibitors experience this metabolic problem, which causes fat to relocate from the limbs and the face and settle in the abdomen. In an effort to understand this change, Tebas used dual-energy X-ray absorptiometry to evaluate the amount of muscle and fat subjects had in their arms, legs and abdomen. Because the scan also indicates bone mass, the researchers began to observe that many of these patients had low bone-mineral density.

Taking the data from the fat-redistribution studies, Tebas divided the 112 male subjects into three groups: 60 HIV patients on HAART, 35 HIV patients on other therapies or no therapy and 17 HIV-negative subjects to serve as controls.

Using World Health Organization (WHO) guidelines, he determined that half of the patients taking protease inhibitors met the WHO definition for osteopenia. Twenty percent of the subjects taking HAART had severe bone loss compared with only 6 percent of the control group.

"We also looked at whether there is a relationship between fat redistribution and osteopenia, but we found no association," Tebas said.

Tebas urges patients using protease inhibitors to continue taking them. "While osteopenia appears to be a side effect of the therapy, these medicines have other beneficial effects," he said. "They have turned HIV infection into a chronic disease that we can manage on an outpatient basis and have dramatically reduced the mortality of AIDS."

University Events

'The Octagon Waltz' • Mars • Nanowires • Guerrilla Curating • Jazz • Passover

"University Events" lists a portion of the activities taking place at Washington University April 20-29. Visit the Web for expanded calendars for the School of Medicine (medschool.wustl.edu/events/) and the Hilltop Campus (www.wustl.edu/thisweek/thisweek.html).

Exhibitions

"Master of Fine Arts Thesis Exhibition." Through May 3. Gallery of Art. 935-5490.

"Architecture's Design Awards Graduation Exhibit." April 22 through May 20. Givens Hall. 935-6200.

"The Octagon Waltz (1995-2000)." Through May. Special Collections, fifth floor Olin Library. 935-5495.

Film

Friday, April 21

7, 9:30 p.m. and midnight. Filmboard Free Feature Series. "Dogma." (Also April 22, same times, and April 23, 7 and 9:30 p.m.) Room 100 Brown Hall. 935-5983.

Wednesday, April 26

6 p.m. Chinese Film Series. "Peking Opera Blues." Sponsored by Asian and Near Eastern languages and literatures. Room 219 Ridgley Hall. 935-5156.

Lectures

Thursday, April 20

Noon. Gerontology lecture. "Successful Aging." John Morley, the Dammert Prof. of Gerontology and dir. of geriatric medicine, Saint Louis U. Brown Hall Lounge. 935-4909.

4 p.m. Cardiovascular research seminar. "Advances in Contrast Echocardiography." Julio E. Perez, prof. of medicine. Room 801 Clinical Sciences Research Bldg. 362-8901.

4 p.m. Chemistry seminar. "Design and Assembly of an Energy-transducing Artificial Photosynthetic Membrane." Thomas A. Moore, prof. of chemistry and biochemistry, Ariz. State U. Room 311 McMillen Lab (coffee 3:40 p.m.). 935-6530.

4 p.m. Earth and planetary sciences colloquium. "Effect of Oxygen Exposure Time on the Preservation of Organic Matter in Modern Coastal Sediments." John Hedges, prof. of oceanography, U. of Wash. Room 361 McDonnell Hall. 935-5610.

4 p.m. Institute for Biomedical Computing computational genome analysis seminar. "Mouse-human Genomic Sequence Comparison." Webb Miller, Pa. State U. Room 823 McDonnell Medical Sciences Bldg. 362-2138.

4:15 p.m. Philosophy's Herbert Spiegelberg Memorial Lecture. "Thought and Action." Charles Larmore, prof. of philosophy and political science, U. of Chicago. Room 216 Psychology Bldg. 935-6670.

5 p.m. Art history and archaeology lecture. "Raphaelle Peale's Blackberries: Imagination, Embodiment and the Refusal of Selfhood." Alexander Nemerov, asst. prof. of art history, Stanford U. Room 116 Givens Hall. 935-5270.

5 p.m. Vision Science Seminar Series. "Synaptic Events That Shape the Retinal Output." Peter D. Lukasiewicz, assoc. prof. of anatomy and neurobiology and of ophthalmology and visual sciences. East Pavilion Aud., Barnes-Jewish Hospital Bldg. 362-5722.

Friday, April 21

9:15 a.m. Pediatric Grand Rounds. "Protective Effects of Human Milk." Joseph W. St. Geme, assoc. prof. of molecular microbiology and of pediatrics, dir., div. of infectious diseases, and co-leader, Infection, Immunity, and Inflammation Research Unit. Clifton Aud., 4950 Children's Place. 454-6006.

Noon. Cell biology and physiology seminar. "K Channels - Something for Cell Biology?" Colin G. Nichols, assoc. prof. of cell biology and physiology. Room 426 McDonnell Medical Sciences Bldg. 362-6950.

Noon-1 p.m. Gastroenterology research conference. "Fibroblast Growth Factors and FGF Receptors: Multiple Roles in the Development of the Lung and Brain." David Ornitz, assoc. prof. of molecular

biology and pharmacology. Room 901 Clinical Sciences Research Bldg. 362-8951.

4 p.m. Anatomy and neurobiology lecture. Karen O'Malley, prof. of anatomy and neurobiology. Room 928 McDonnell Medical Sciences Bldg. 362-7043.

4 p.m. Hematology seminar. "The Copper Chaperones." Jonathan D. Gitlin, prof. of pathology and of pediatrics. Room 8841 Clinical Sciences Research Bldg. 362-8801.

4 p.m. Biology seminar. "Strabismus: A New Spin on Eye Development." Tanya Wolff, asst. prof. of genetics. Room 322 Rebstock Hall. 935-6860.

4 p.m. Immunology Research Seminar Series. "Regulation of Receptor Function by Signaling Adaptors." Alec M. Cheng, asst. prof. of medicine and of pathology. Eric P. Newman Education Center. 362-2763.

4 p.m. Mathematics analysis seminar. Xiang Fang, graduate student in

Aging and Dementia of the Alzheimer's Type on the Ability to Spell Short Words." Michael J. Cortese, postdoctoral fellow, psychology dept. East Pavilion Aud., Barnes-Jewish Hospital Bldg. 286-2881.

Noon. Molecular Microbiology and Microbial Pathogenesis Seminar Series. "Adhesion in Malaria." Artur Scherf, prof. of immunology, Institut Pasteur, Paris. Cori Aud., 4565 McKinley Ave. 362-8873.

4 p.m. Anesthesiology research seminar. "Cerebrocortical Damage Induced by Common Anesthetic Agents When Used in Combination." Vesna Jevtovic-Todorovic, asst. prof. of anesthesiology and of psychiatry. Room 5550 Clinical Sciences Research Bldg. 362-8560.

4 p.m. Chemistry seminar. "Ring-opening Polymerization as a Route to Transition Metal-based Polymers With Controlled Architectures." Ian Manners, prof. of chemistry, U. of Toronto. Room 311 McMillen Lab (coffee 3:40 p.m.). 935-6530.

Wednesday, April 26

8 a.m. Obstetrics and Gynecology Grand Rounds. "Trauma - An Overview." Timothy G. Buchman, prof. of anesthesiology and the Harry Edison Prof. of Surgery, burn/trauma/surgical critical care dept. Clifton Aud., 4950 Children's Place. 362-1016.

3:30 p.m. Mathematics wavelet seminar. "Divergence Free Fields and Wavelets on Rectangles." Joe Lakey, prof. of mathematics, N.M. State U. Room 199 Cupples 1 Hall. 935-6726.

3:45 p.m. Physics colloquium. "Viscous Nonlinear Dynamics of Elastic Filaments: Twist, Kinks and Drag." Thomas R. Powers, engineering and applied sciences div., Harvard U. Room 204 Crow Hall (coffee 3:30 p.m., Room 241 Compton Hall). 935-6276.

4 p.m. Biochemistry and molecular biophysics seminar. "Regulation of Actin Filament Dynamics at the Leading Edge of Motile Cells by Arp2/3 Complex and WASP-family Proteins." Thomas D. Pollard, prof. of structural biology, Salk Inst. for Biological Studies, La Jolla, Calif. Cori Aud., 4565 McKinley Ave. 362-0261.

4 p.m. Music lecture and demonstration. "Second-Viennese-School Atonality and Modern Jazz Harmony." Student Ben Looker will speak and also perform jazz on piano with Jeff Lash, drums, and Ben Wheeler, bass. Room 102 Music Classroom Bldg. 935-4841.

4:30 p.m. School of Art slide lecture. Tom Huck, drawing candidate. Steinberg Hall Aud. 935-6571.

5:15 p.m. Mothers and Babies Research Center conference. "PPAR γ and Placental Trophoblast Differentiation." W. Timothy Schaiff, research asst. in obstetrics and gynecology. Room 36, third floor south, St. Louis Children's Hospital. 747-0739.

7 p.m. Architecture's Cannon Lecture for Excellence in Architecture and Engineering. James Stewart Polshek, architect, N.Y. Steinberg Hall (reception 6:30 p.m., Givens Hall). 935-6200.

Thursday, April 27

1 p.m. Mathematics doctorate oral presentation. "Anisotropic Hardy Spaces and Wavelets." Marcin Bownik, doctoral candidate in mathematics. Room 199 Cupples 1 Hall. 935-6726.



Portraying a wish Ling-Wen Tsai's "Wish," from which this performance view is taken, is part of the School of Art's annual "Master of Fine Arts Thesis Exhibition," on view through May 3 in the Gallery of Art, Steinberg Hall. Tsai, a second-year master's candidate in sculpture, is one of 20 students featured in the exhibit.

7:30 p.m. St. Louis Astronomical Society lecture.

"By Volcano, River and Stream: The Early History of Mars." Roger J. Phillips, prof. of earth and planetary sciences. Room 162 McDonnell Hall. 935-4614.



mathematics. Room 199 Cupples 1 Hall. 935-6726.

4 p.m. Physics' condensed matter/materials seminar. "Metallic Nanowires Studied by First-principles Electronic Structure Calculation." Daniel Sanchez-Portal, physics dept. and material research lab., U. of Ill., Urbana-Champaign. Room 241 Compton Hall (coffee 3:45 p.m.). 935-6276.

4:30 p.m. School of Art painting slide lecture. "Guerrilla Curating: From New York to Normal." Barry Blinderman, dir. of U. Galleries, Ill. State U. Steinberg Hall Aud. 935-8664.

Tuesday, April 25

Noon-1 p.m. Alzheimer's Disease Research Center seminar. "Effects of

Monday, April 24

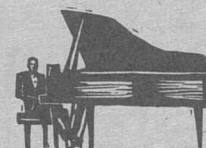
10 a.m. Center for Mental Health Services Research Seminar Series. "Analysis of Non Simple Random Samples (SRS): How to Deal With Weights and Clusters." Edward L. Spitznagel Jr., prof. of biostatistics, of mathematics and of psychiatric epidemiology. Room 39 Goldfarb Hall. 935-5687.

Noon. Lung biology conference. "Characterization of Adenoviral E1A Determinants Critical for the Inhibition of Stat1 Mediated Immunity." Yael G. Alevy, research assoc. of pulmonary and critical care medicine div. Room 801 Clinical Sciences Research Bldg. 362-8983.

Noon-1 p.m. Molecular biology and pharmacology seminar. "Acyl Tales of G-protein Signaling." Maurine Linder, assoc. prof. of cell biology and physiology. Room 3907 South Bldg. 362-2725.

1 p.m. Chemistry's Leopold Marcus Memorial Lecture. "Dendrimers: From Concepts to Applications." Jean M. J. Frechet, prof. of chemistry, U. of Calif., Berkeley. Graham Chapel (reception following, Millstone Lounge, McMillen Lab). 935-6696.

1 p.m. Work, Families and Public Policy Seminar Series. "Marriage and the Retirement Savings Puzzle." Shelly Lundberg, prof. of economics, U. of Wash. Room 300 Eliot Hall. 935-4918.



Music

Saturday, April 22

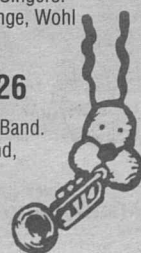
8 p.m. Voice recital. Andrew Fitzpatrick, baritone, and Lisa Campbell, piano. Music of Broadway - Porter, Rodgers & Hammerstein and Brel. Steinberg Hall Aud. 935-4841.

Monday, April 24

7 p.m. Jazz concert. WU Jazz Singers. Ross Bell, dir. Friedman Lounge, Wohl Center. 935-4841.

Wednesday, April 26

8 p.m. Jazz concert. WU Jazz Band. Music of Coltrane, McPartland, Rodgers and Gillespie. Chris Becker, dir. Holmes Lounge, Ridgley Hall. 935-4841.



Sophomore wins Hotchner competition

BY LIAM OTTEN

Peter J. Hanrahan, a sophomore in Arts & Sciences, has won the 2000 A.E. Hotchner Playwriting Competition. The annual competition, which is sponsored by the Performing Arts Department (PAD) in Arts & Sciences, selects one work each year for a full theatrical production. The competition is open to current University students and graduates of the prior year.

Hanrahan won for his play titled "Caught in Carnation," which follows a pair of priests in Carnation, N.Y. Next fall, Hanrahan will take part in the A.E. Hotchner Play Develop-

ment Lab and spend one week working with Liz Engelman, dramaturg and literary manager for Seattle's renowned A Contemporary Theatre. The full production will debut in January 2001 as part of the PAD's studio theater season.

Marisa B. Wegrzyn, a freshman in Arts & Sciences, was named runner-up for her work "Polar Bears on U.S. 41."

"The Hotchner is not necessarily awarded to the 'well-made play,' but to the unique voice within the play," said Carter Lewis, artist in residence in the PAD and director of the Hotchner competition. "What I mean is, you don't really want the author to introduce the characters; it's much

more interesting if the characters introduce the author. Such is the case with Peter Hanrahan's 'Caught in Carnation' and with Marisa Wegrzyn's 'Polar Bears on U.S. 41.'"

The competition is named in honor of A.E. Hotchner, a 1940 graduate of the University and author of numerous screenplays, novels, plays and memoirs, including the 1966 volume "Papa Hemingway," which recounts his long friendship with the famous writer. His memoir "King of the Hill," which recounts growing up in St. Louis during the Great Depression, was made into a feature film in 1993.

Hanrahan is a native of St. Louis. His parents live in Oakville.

'Olin Follies' spoofs business school — all for a good cause

When students at the John M. Olin School of Business present the fifth annual Olin Follies April 28, they'll not only be poking fun at school traditions, administrators, faculty and students, but they also will be raising money for a good cause.

Proceeds will go to the Sunshine Mission in downtown St. Louis, according to Paul Hunter, MBA '00 candidate and show coordinator. The mission provides shelter, a drug-treatment and rehabilitation program, counseling sessions, a thrift store and after-school computer programs. (Directors of the mission are Jim and Carol Clarkson, whose son, Anthony, received an MBA from the business school in 1995.)

Tickets for "The Olin Zone," a

takeoff on "The Twilight Zone," are \$5 per person for admission only or \$10 per person for admission and a T-shirt. About 300 persons are expected to attend the show, held at 7 p.m. in Simon Hall's May Auditorium. The public is invited.

Eight skits, live and video, will include "The \$27,500 Pyramid," roasting the cost of tuition, and a spoof on rankings revealing that People magazine has named the school's dean, Stuart I. Greenbaum, as the "sexiest b-school dean alive."

Skits for the show, entirely student-run, were written by about 15 MBA students; and students, as well as a few chosen faculty and administrators, will perform in the skits.

For more information, call Paul Hunter, 533-7907.

Saturday, April 29

8 p.m. Piano recital. Glen Pine, piano. Music of Bach, Bartók, Chopin and Schumann. Graham Chapel. 935-4841.

On stage

Wednesday, April 26

8 p.m. Performing Arts Dept. play. "gitanjali." Sakena Abedin, author, and Henry I. Schvey, dir. (Also April 27 and 29, same time, and April 29 and 30, 3 p.m.). Cost: \$10, \$8 for senior citizens and WU faculty, staff and students. A.E. Hotchner Studio Theatre, Mallinckrodt Center. 935-5858.

Worship

Thursday, April 20

7 p.m. Catholic Student Center's Holy Thursday Mass. Catholic Student Center, 6352 Forsyth Blvd. 935-9191.

Friday, April 21

7 p.m. Catholic Student Center's Good Friday service. Catholic Student Center, 6352 Forsyth Blvd. 935-9191.

Saturday, April 22

8 p.m. Catholic Student Center's Easter Vigil Mass. Graham Chapel. 935-9191.

Sunday, April 23

11 a.m. Catholic Student Center's Easter Sunday Mass. Graham Chapel. 935-9191.

Sports



Friday, April 21

2 p.m. Women's softball vs. Mo. Baptist College. Softball field. 935-5220.

Saturday, April 22

1 p.m. Men's baseball vs. DePauw U. Kelly Field. 935-5220.

Egg-citement on tap April 22

Children of faculty, staff and alumni — plus fun-loving adults — are invited to hop along the bunny trail 11 a.m. to 1 p.m. Saturday, April 22, for an Easter egg hunt. Sponsored by Circle K International and Alpha Phi Omega service organizations, the egg and candy hunt will be held outside Graham Chapel.

Advance registration is preferred. To register, contact Vu Le at 935-2578 or via e-mail (vhle@artsci.wustl.edu).

Monday, April 24

3 p.m. Men's baseball vs. Westminster College. Kelly Field. 935-5220.

Saturday, April 29

10 a.m. Men's and women's track and field. UAA Championships (also April 30, same time). Bushyhead Track and Francis Field. 935-5220.

Noon. Men's baseball vs. Case Western Reserve U. Kelly Field. 935-5220.

1 p.m. Women's softball vs. Millikin U. Softball field. 935-5220.

And more...

Thursday, April 20

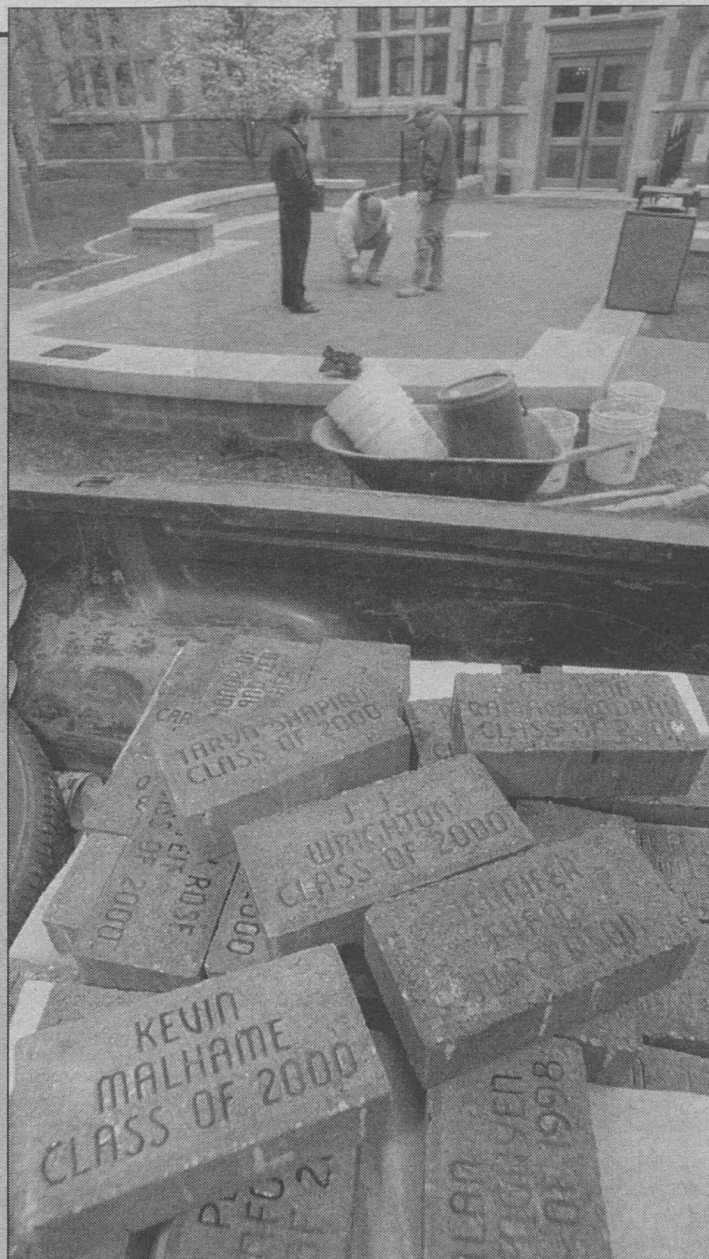
4:30 p.m. Undergraduate Political Science Assoc.'s forum.

"Women in Politics."

Panel discussion featuring Harriett Woods, former lt. gov. of Mo.; Vivian Eveloff, dir. of the Sue Shear Inst. for Women in Public Life; and Barbara Fraser, Mo. House of Rep. Co-sponsored by Council of Students in Arts & Sciences, political science dept. and Action for Women's Rights and Equality. Room 215 Rebstock Hall. 367-7113.

Monday, April 24

6 p.m. Hillel's annual meeting and Passover dinner. Holmes Lounge, Ridgley Hall. 935-9040.



JOE EVANS

Brick by brick Construction manager John Rozycki (left) discusses the installation of an additional 152 engraved Campaign for Washington University bricks with two employees of Pluchinski Stone Contracting. The second round of bricks was installed last week in Joe Evans Plaza, just north of Holmes Lounge. Faculty, staff and parents of students can name a brick for each \$500 given to the \$1 billion campaign. For more information or to make a pledge, call Pam Henson at 935-7074.

Tuesday, April 25

4 p.m. School of Art awards ceremony. Class of 2000. Steinberg Hall Aud. 935-6532.

Thursday, April 27

8 a.m. STD/HIV training center course. "STD Update." (Continuing Thursdays through May 11.) Cost: \$65. Lucas Hall, U. of Mo., St. Louis. To register, call 747-0294.

8:30 a.m. Take our Daughters to Work Day. Girls, ages 9-15, visit campus. Women's Bldg. Lounge. To register, call 935-5994.

Friday, April 28

5 p.m. English dept. reading. Michael Longley, Irish poet, will read from his latest volume, "The Weather in Japan." Co-sponsored by the Creative Writing Program. Hurst Lounge, Room 201 Duncker Hall. 935-7130.

7 p.m. Olin Follies. "The Olin Zone." Eight skits performed by business students, faculty and administrators to benefit the Sunshine Mission. Cost: \$5, \$10 for admission and a T-shirt. May Auditorium, Simon Hall. 533-7907.

Sports Section

Women's track ties for team title; men place fourth

The women's track and field team continues its push towards their first-ever University Athletic Association Championships as the Bears tied for the team title at the McKendree College Bearcat Invitational Saturday, April 15. The men's team finished fourth. The women won only one event — Natasha Richmond captured the hammer throw with a toss of 140 feet, 4 inches — but WU scored well in almost every event. Richmond and Missy Kline finished second and third in the shot put, while Richmond scored a fifth-place finish in the discus. Junior Susan Chou earned a provisional qualification for next month's NCAA championships, finishing second in the 3,000 meters with a time of 10 minutes, 12.42 seconds. Hannah Moore was second in the 1,500 meters, Julie Riley was second in the pole vault

and Kristin Meade was second in the triple jump.

On the men's side, Richard Greene captured the 110 hurdles and finished second in the 400 hurdles, while senior Brian Sivitz qualified provisionally for the NCAA championships by winning the 3,000 meter steeplechase with a time of 9:20.24. Pat MacDonald and Craig Beisel crossed the finish line first and second in the 10,000 meters, and Tim Julien was second in the 1,500 meters.

Softball team wins four of five

The University's first-year softball team continues to play like a veteran group as the Bears won four of five games last week to improve to 16-6 on the year. The team split a doubleheader with Fontbonne College April 11, dropping the first game 6-4 before rallying for a 7-1 win in game two. The Bears took game one of a doubleheader with Greenville College Friday, April 14, winning 8-1, but the second game was called

due to technical difficulties with the lights. The Bears swept past Westminster College, 6-1 and 5-1, Sunday, April 16, to push their winning streak to four. Liz Smith tossed complete games in all five contests, winning four. Only a five-run rally in the top of the last inning by Fontbonne in game one kept her from a perfect week. Anne Gregory smacked the first home run at the WU softball field, a grand slam, in game one against Fontbonne. Smith struck out a career-high 10 batters against Greenville; Sue Tucker hit an inside-the-park home run.

Baseball wins two

The baseball team stretched its winning streak to six games with a doubleheader sweep of Maryville University, 7-5 and 5-3, April 11 at home. The Bears, now 21-9 on the year, led 5-1 after three innings in game one before Maryville rallied to tie the score, 5-5. WU tallied a pair of runs in the bottom of the sixth, though, to pull out

Poet, scholar on campus for lecture, reading

The Department of English and the Creative Writing Program, both in Arts & Sciences, will sponsor a pair of events with Irish poet Michael Longley and his wife, the distinguished scholar Edna Longley.

Edna Longley will speak on "Commemoration and Elegy in Northern Ireland" at 3 p.m. April 28. The talk will be followed by a discussion and break for coffee. At 5 p.m., Michael Longley will read from his latest volume, "The Weather in Japan." Both events are free and open to the public and take place in Hurst Lounge, Room 201 Duncker Hall.

For more than two decades, Michael and Edna Longley have lived in Belfast, where they've been active participants in what has been characterized as a "second Irish literary Renaissance." Edna Longley writes widely on 20th-century Irish, English and American poetry. Her books include "The Living Stream: Literature and Revisionism in Ireland," "Louis MacNeice: A Study," "Poetry in the Wars" and "Essays." In addition, she is the editor of "Across a Roaring Hill: The Protestant Imagination in Modern Ireland" and "The Selected Paul Durcan."

Michael Longley is the author of more than a dozen collections, including "The Ghost Orchid," "No Continuing City," "Broken Dishes," "The Echo Gate: Poems 1975-79," "Fishing in the Sky: Love Poems," "Man Lying on a Wall: Poems 1972-75" and "Under the Moon, Over the Stars." In 1991 he won the Whitbread Prize for Poetry for his volume "Gorse Fires," which also was chosen as one of the Notable Books of the Year by the New York Times Book Review.

Writing in the Times Literary Supplement, Douglas Dunn praised Longley's work for "its skill, its cadences and the naturalness of the voice speaking within it ... it is that release into gentleness and into an affection which seems bewildered but always benevolent, always strange, always at an imagined angle to reality, that makes his work a crucial and instructive part of our contemporary poetry."

For more information, call 935-7130.

the win. Kurt O'Neal got the win in relief, tossing three innings of two-hit, no-run ball. Graham McBride and Greg Davis each had a pair of hits, and Steve Steinbruegge had two RBIs. Pitcher John O'Connell came on in relief in the first inning and went the rest of the way to earn his first win of the season in game two.

Men's tennis 2-2

The men's tennis team stretched its winning streak to seven matches with wins over Saint Louis University, 5-2, April 10 and Illinois Wesleyan University, 6-1, April 12 before suffering consecutive losses to Gustavus Adolphus College, 5-2, April 15 and DePauw University, 5-2, April 16. Mike Feldman was strong all week, posting seven wins in eight attempts. He was 4-0 in singles, two each at No. 3 and No. 4 singles, and 3-1 at No. 2 doubles. Arun Nanjappa had a pair of singles wins and was 3-1 at No. 3 doubles. Pat Doyle had two wins at No. 5 singles.



Standing tall Deemed considerably healthier than his skeletal counterpart, sophomore John Russell receives a posture evaluation from Susan S. Deusinger, Ph.D., assistant professor and director of the Program in Physical Therapy at the School of Medicine. The screening was part of Wellness Fest 2000, an interactive health fair organized by the Emergency Support Team April 10 at the Gargoyle.

Origins

Researchers develop theoretical calculations — from page 1

should be integral in analyzing Martian meteorites. They could, in fact, help settle controversy about the 1996 analysis of a Martian meteorite, which bore evidence of the same kinds of organics found in many terrestrial volcanic lava, magma and ash samples.

Shock and Zolotov published their results in the Journal of Geophysical Research. Their work was supported by the National Science Foundation and NASA.

The calculations show that life can arise not only from the gaseous crucible of present-day terrestrial volcanoes, but that it was even more likely to have developed billions of years ago on early Earth, Mars and Jupiter's satellite, Europa.

There is a solid body of evidence that shows the temperature of magma then would have been about 200 degrees Celsius hotter than it is now and that the atmosphere would have been less oxidized. The Shock-Zolotov calculations show that higher initial temperatures of spewing volcanic gases are more favorable for organic synthesis once the gases dilute and cool to the hydrocarbon-forming zone

of 150-300 C.

"These conditions might have contributed to the production of organic compounds required for the emergence of life," said Shock, who first rose to prominence in the "origins of life" debate in 1992 when he performed calculations showing that life could have first emerged chemosynthetically — without sunlight — at hot water vents on the ocean floor. "Our work began with an eye toward understanding the hydrocarbons found in Martian meteorites, but we soon realized that there are plenty of gas compositions from Earth's volcanoes, and we thought we should study the full range of possibilities. So, with this paper we analyzed the hard physical evidence from the Earth, and from that we think we can extrapolate to Mars.

"The calculations prove what *can* happen thermodynamically, but not necessarily what *will* happen. Developing them is an important first step in understanding this process. For the first time, we now have a quantified temperature zone in which hydrocarbons can form and a framework to understand what conditions lead to hydrocarbon formation from volcanic gas. There have been a number of experiments in this area over the years, but not a framework to better understand the process. Misha's calculations predict what kinds of chemical clues one should see based on the organic compounds that are present."

Zolotov gathered data from volcanoes ranging from Mount St. Helen and Iceland's Surtsey to Sicily's Mount Aetna and Hawaii's Kilauea. All of the volcanoes arose from different geological settings and produced initial gas temperatures of varying ranges.

"The calculations show that there is a potential for hydrocarbons to form during the cooling process, and that this condition also is promising for amino acids to develop," Zolotov said. "The process is not very efficient today. For instance, at Kilauea, the hydrogen and carbon monoxide amounts of the gases are no more than 2 percent. But it still is a steady source for hydrocarbons to form."

As for the origins of life — on Earth, at least — there are two basic competing views: one suggests that life was brought here by comet or meteorite impacts or interplanetary dust; the other that life was generated here, either at the ocean floor, or through a chain of events sparked by lightning, or in volcanic gases.

"Unlike spark discharge scenarios, the processes we are pursuing to study the origins of life here or on Mars are normal, daily geological processes," Shock said. "The volcanic gas scenario is one of the most approachable. The evidence is readily accessible, and we know we can extrapolate from evidence here to Mars and other bodies without much ambiguity."

HR seminars offer help with retirement planning

By Christine Farmer

For the first time, the Office of Human Resources is conducting brown bag seminars to help faculty and staff better understand their tax-deferred annuity maximums — the Internal Revenue Service limits on employee contributions to the University's Retirement Annuity Plan. Eligible employees were mailed a letter during the week of April 17 indicating the results of their personalized maximum calculation. Employees should take their letters to the seminars.

"These limits are quite confusing, and as a result we felt that we needed to go a step further than printed materials for our employees," said Tom Lauman, director of benefits. "The limits apply differently to each person based on various factors. It's important that employees attend to see where they fit in on this maximizing track."

Four seminars have been scheduled for the Hilltop, Medical and West campuses. They are:

- April 25 — 12:30 to 1:30 p.m. in Erlanger Auditorium on the **Medical Campus**;
- April 26 — 11:30 a.m. to 12:30 p.m. in the Library Conference Center, Room C, at **West Campus**;
- April 27 — 11:00 a.m. to noon

in Room 110 January Hall on the **Hilltop Campus** and 1:00 to 2:00 p.m. in Cori Auditorium, McDonnell Medical Sciences Building on the **Medical Campus**.

At the seminars, a consultant from TIAA-CREF, the Teachers Insurance and Annuity Association-College Retirement Equities Fund, will explain how the limits are determined, how they apply to employees and how increasing contributions now can make a dramatic effect on retirement savings later. Reservations are not required.

Upon their hiring, full-time and part-time employees working 20 or more hours per week can enroll in the University's 403B plan at any time. After two years on the job, they are eligible for the University's matching contribution to the plan. Employees younger than 45 contributing at least 5 percent of their salary to the plan will receive a match of 7 percent of their salary from the University. For those 45-49 the University will match 8.5 percent, and those 50 and older get an 11.5 percent match.

About 87 percent of employees eligible for the University match participate in the retirement plan. For more information about the seminars or enrolling in the retirement plan, call your campus benefits office.

Policy sets out required, permitted uses of 'wustl.edu' domain name

Recently there have been moves to register some units of the University under ".com" addresses on the Internet, though they should be in the "wustl.edu" domain. These moves have reinforced the need to document the policy governing the University's domain name. A seven-person committee developed the following policy, which specifies all uses of the domain name.

Washington University in St. Louis is a tax-exempt educational institution that uses wustl.edu as its Internet domain name.

Schools, departments, divisions, centers or other fiscal or operating units of the University, as well as faculty or staff carrying out University functions, may not obtain or operate under other domain names but rather must use only the wustl.edu domain name for Web sites or other uses of the Internet.

The wustl.edu domain name as well as servers and related equipment of the University may not be used for any purposes other than to promote the exempt missions of the University (education, research and patient care). Commercial endeavors and educational or

charitable organizations that are not part of the University must obtain their own domain names and have their Web pages reside on servers other than those of the University, even though they may be located on the campus of the University and/or provide goods or services to the University.

Washington University in St. Louis is a trademark of the University. The University aggressively polices its trademarks and tradenames. Individuals or organizations obtaining their own domain names are advised not to select ones which are confusingly similar to trademarks or tradenames of the University, unless the University in its discretion has given its advance written consent.

Please consult the Computer Use Policy of the University (<http://www.wustl.edu/policies/compolicy.html>) for further information regarding use of the University's computer resources by faculty, staff or students of the University for personal purposes.

For questions about this policy, contact Shirley K. Baker, Vice Chancellor for Information Technology, 935-5400 (baker@wustl.edu).

Employment

Use the World Wide Web to obtain complete job descriptions. Go to cf6000.wustl.edu/hr/home (Hilltop) or medicine.wustl.edu/wumshr (Medical).

Hilltop Campus

Information regarding positions may be obtained in the Office of Human Resources, Room 130, West Campus. If you are not a WU staff member, call 935-9836. Staff members call 935-5906.

Reading Specialist (part time) 980130
Medical Science Writer 980189
Manager 990233
Gift Accountant 990244
Contract Management Liaison 990262
Director/Executive Faculty Liaison 990280
Engineering Librarian 990364
Counselor 000014
Regional Director of Development 000057

LAN Engineer 000094
Library Assistant 000099
Secretary/Technical Typist 000102
Assistant University Webmaster 000118
Supervisor, Help Desk and E-mail Administration 000144
Assistant Director, Management Systems 000149
Administrative Coordinator 000160
Communications Technician I 000188
Researcher 000190
Research Assistant 000191
Seismic Data Analyst (part time) 000203
Department Secretary 000209
Researcher 000212
Accountant 000220

Department Secretary 000222
Assistant Director of Admissions 000224
Sales Associate (part time) 000229
Manuscripts Cataloger (temporary) 000230
Systems Manager 000239
Manager of Employer Relations 000240
Lab Technician III 000241
Administrative Aide 000244
Residential College Director 000248
Department Secretary 000251
Associate Director of Capital Projects 000253
Research Technician 000256
Contract Management Liaison 000258

Administrative Coordinator, External Relations 000259
Administrative Secretary 000261
Watchman (licensed) 000262
Secretary/Receptionist 000265
Admissions Assistant 000266
Customer Assistance Clerk 000267
Deputized Police Officer 000272
Administrative Assistant 000273
Library Technical Assistant 000275
Manager of Systems Support and Development 000277
Administrative Assistant 000278
Assistant Director of the Writing Program (part time) 000279

Administrative Receptionist 000280
Sponsored Projects Specialist 000281
Department Secretary 000283
Lab Technician 000284
Accounts Receivable Service Representative 000288
Assistant to the Director 000289
Senior Shelving Assistant 000290
Assistant Sports Information Director 000291

Medical Campus

This is a partial list of positions at the School of Medicine. Employees: Contact the medical school's Office of Human Resources at 362-7196. External

candidates: Submit resumes to the Office of Human Resources, 4480 Clayton Ave., Campus Box 8002, St. Louis, MO 63110, or call 362-7196.
Professional Rater (part time) 000299
Research Technician 001003
Insurance Billing and Collections Assistant II 001056
Medical Secretary I (part time) 001272
Staff Scientist 001358
Research Technician II 001385
Clerk II (part time) 001476
Research Patient Assistant 001548
Systems Manager 001575
Senior Research Technician 001600

Campus Watch

The following incidents were reported to University Police from April 10-16. Readers with information that could assist in investigating these incidents are urged to call 935-5555. This release is provided as a public service to promote safety awareness and is available on the University Police Web site at rescomp.wustl.edu/~wupd.

April 14

8:38 a.m. — Unknown persons destroyed three chairs in the commons area of Dauten Residence Hall.

April 16

6:31 a.m. — A Washington University student cut a lock securing a bicycle at the Athletic Complex and took the bicycle; the same student then

broke a rack on the northwest side of Olin Library and took another bicycle. The bicycles were recovered.

University Police also responded to 10 reports of theft, nine reports of minor injuries, two auto accidents and one report each of newspaper fire, peace disturbance, public indecency, suspicious person and a fraternity house fight.

Notables

Architecture school to honor distinguished alumni April 28

The School of Architecture will honor outstanding alumni at its seventh annual Distinguished Alumni Awards Dinner April 28 at the Saint Louis Woman's Club.

James F. Barker, FAIA; Jay S. Bauer, FAIA; Cindy L. Harden; Thomas H. Teasdale, FAIA; and Charles A. Wolf will receive Distinguished Alumni awards for their contributions to the practice and the school. Fred M. Kemp will be awarded the 2000 Dean's Medal for service to the school.

The school also will award its first Givens Hall Award for faculty and staff to registrar Myrl L. Funk, who will retire this year after 42 years of dedicated service. Throughout her career as secretary, administrative assistant and now registrar, Funk has supported four deans for nearly half the school's existence. She also has assisted numerous faculty and played a crucial role in advising students. Funk was awarded the University's first Gloria W. White Distinguished Service Award in 1998 for her

exceptional efforts and contributions to the betterment of the University.

Barker is the newly inaugurated president of Clemson University in Clemson, S.C., and a principal of the firm James F. Barker, AIA, Architect. Until January, he served as dean of Clemson's College of Architecture, Arts and Humanities. He also has taught at the University of Tennessee and Mississippi State University, where he was dean. Past president of the Association of Collegiate Schools of Architecture, he has lectured throughout the world and been published widely. He earned a master of architecture and urban design degree in 1973.

Bauer is a founding partner of Bauer and Wiley Architects in Newport Beach, Calif. He previously worked for Walt Disney Enterprises and the international design firm of CRSS Architects Inc. His work has received numerous design awards and been published extensively. Bauer is a founding member of

the school's National Council and a member of the Major Gifts Committee for the Campaign for Washington University. He received a bachelor of arts degree with a major in architecture in 1970 and master of architecture degree in 1972.

Harden is a principal at the New York City-based Harden-Van Arnham Architects, specializing in community-related work including housing for the homeless and those with special needs. She began her career with the Pratt Center for Community and Environmental Development, a grassroots organization assisting tenant/owners in "gut" rehabilitation of buildings to provide housing in New York City. Her award-winning work has been published in numerous architectural journals. She received a master of architecture degree in 1979.

Teasdale, an independent architectural consultant in St. Louis, previously was partner, managing partner and then president at the Kenneth E.

Wischmeyer firm in St. Louis. Among his numerous projects are the planning and design of St. Louis Community College at Florissant Valley and the Arthur Holly Compton Laboratory of Physics at Washington University. He has held numerous leadership positions with the American Institute of Architects, including vice president, chair of the Practice and Design Commission, president of AIA-St. Louis and chancellor of the College of Fellows. He received a bachelor of architecture degree in 1956.

Wolf is a principal and founder of Dean/Wolf Architects and an adjunct professor at the Columbia University Graduate School of Architecture and the Parson's School of Design in New York City. After receiving a bachelor's degree with a major in architecture in 1979 from the University, he earned a master of architecture degree from the University of Oregon. He then worked as a project designer for James Stewart Polshek and Partners in New York City.

Through a Dinkeloo Fellowship, he traveled abroad and attended the American Academy in Rome. His New York City firm's work has been published widely and received many awards. The firm has built a reputation for experimenting with new finishing techniques and assembly methods and for their experience in detailing and crafting materials.

Kemp, president and founder of Kemp Homes Inc. in St. Louis, has earned a reputation as one of the most successful developers of residential communities in the Midwest. Since 1953, Kemp has striven to develop well-designed, affordable housing. Today, more than 8,700 families live in Kemp homes in this area. Past president of the Home Builders Association of Greater St. Louis, Kemp has received numerous awards including the association's Excellence of Achievement Builder Award. Co-chair of the Major Gifts Committee and a member of the National Council, he received a bachelor of architecture degree in 1950.

Obituaries

Bernetta Jackson, professor emerita of English and of education

Bernetta Jackson, professor emerita of English and of education, both in Arts & Sciences, died Thursday, April 6, 2000, at Swansea Care Center in Swansea, Ill. She was 86.

Jackson joined the University in 1956 as a lecturer in English. She was promoted to assistant professor in 1967 and then was appointed as associate professor in both English and education in 1974. She was named a full professor in both departments in 1980 and then received emeritus status upon retiring in 1981. Despite her formal retirement, she continued to teach in the English department through 1992. She

co-authored the College English Reference Handbook, which was published during her time at the University.

Born in O'Fallon Township, Ill., in 1913, Jackson began her schooling in a one-room schoolhouse. She earned a bachelor's degree from McKendree College in 1933, after only two years of study, during which time she attained the highest grade point average ever achieved at McKendree.

She began teaching at the O'Fallon Grade School and, in 1935, at the O'Fallon Township High School. She met her husband-to-be while he was stationed at Scott Air Force Base; the couple

was wed in 1944.

Jackson earned a master's degree in 1949 from the University of Illinois.

She was a member of the O'Fallon Historical Society, the Richmond Heights Library Board, as well as several University-oriented associations.

Jackson, who was preceded in death by her husband, Stonewall "Jack" Jackson, in 1977, requested that her body be donated to the Washington University School of Medicine. In lieu of flowers, memorial donations may be made to the O'Fallon United Church of Christ or to the St. Joseph Cemetery.



University Trustee I.E. Millstone congratulates fellow board member Mary Dell Pritzlaff April 11 at the annual dinner of the William Greenleaf Eliot Society, where she was honored with the society's Search Award for her exceptional service to the University. Millstone is a former Search Award recipient.

Mary Dell Pritzlaff receives Eliot Society's 'Search Award'

By BARBARA REA

Mary Dell Pritzlaff received the University's 2000 William Greenleaf Eliot Society Award April 11 at the society's 33rd annual dinner, held at the Ritz Carlton Hotel in Clayton. The award was given in recognition of Pritzlaff's exceptional service to Washington University.

William H. Danforth, chancellor emeritus, presented Pritzlaff with a silver replica of "The Search," a sculpture designed by Heikki Seppä, professor emeritus in the School of Art. The sculpture is part of the collection of the University's Gallery of Art.

"I am delighted that the Search Award was given to Mary Dell Pritzlaff this year," said Chancellor Mark S. Wrighton. "She is a dedicated and enthusiastic member of the board of Washington University. During my years as chancellor, Mary Dell has provided extraordinary leadership as one of the most distinguished trustees, and she is a valued personal adviser. She has served in areas ranging from the Medical School National Council to the Educational Policy Committee of the board. I am grateful for her wise counsel and generous support of the mission of the University."

Pritzlaff has had a long association with the University, primarily through her 20-year membership on the Board of

Trustees. She continues to serve on the board's Educational Policy Committee and has been a member of the National Council for the School of Medicine since 1995.

Pritzlaff's interest in and support of the University have contributed greatly to many initiatives and programs on both the Hilltop and Medical campuses. As a member of the board of trustees of the Monticello College Foundation, she has helped provide important support for the Mr. and Mrs. Spencer T. Olin Fellowships for Women in Graduate Study at the University. "This is one of our great programs," Danforth noted. "It supports women in graduate school who show great promise of being leaders in their fields."

As a director of the Spencer T. and Ann W. Olin Foundation, Pritzlaff continues the philanthropic tradition of her parents. Over the years, the University has benefited in many significant ways from the foundation's support.

A former resident of Alton, Ill., and St. Louis, Pritzlaff and her husband, John, a former Arizona state legislator, now reside in Santa Barbara, Calif. She was educated at Monticello and Briarcliff colleges. An active community volunteer, Pritzlaff also is a trustee of Claremont-McKenna College in California and a director of Stratford Hall Plantation in Stratford, Va.

Campus Authors

The late Nancy L. Grant, Ph.D., associate professor of history in Arts & Sciences

"African Americans and Jews in the Twentieth Century: Studies in Convergence and Conflict"

(University of Missouri Press, 1999)

Before her 1995 death from cancer at age 46, Nancy L. Grant spent a lifetime building a greater understanding of racial issues in American history. Now, her life's work continues with the recent publication of a volume of essays based on a conference Grant organized here to explore African-American and Jewish interaction.

Titled "African Americans and Jews in the Twentieth Century: Studies in Convergence and Conflict," the volume includes more than a dozen essays from leading experts on the complex relationship of blacks and Jews in America. Published by the University of Missouri Press, the volume was first proposed by Grant as a way to preserve and circulate the innovative research and ideas presented at the 1993 conference.

Grant's initial compiling and editing work on the volume was completed by a

team of editors led by V.P. Franklin, a professor of history at Drexel University in Philadelphia, with assistance from Genna Rae McNeil, a professor of history at the University of North Carolina at Chapel Hill, and from Grant's husband, Harold M. Kletnick, a programmer analyst at Washington University.

The compilation has been well-received in scholarly circles, including lengthy discussion in an essay on "Jews and Blacks in America" by David Brion Davis of Yale University, which appeared late last year in The New York Review of Books.

Described as "an invaluable resource for the study of race relations in the United States," the book provides an intellectual foundation for continued dialogue and future cooperative efforts to improve social justice in society. It continues the discourse of a conference that brought together a diverse range of leading historians, sociologists and political scientists, including such

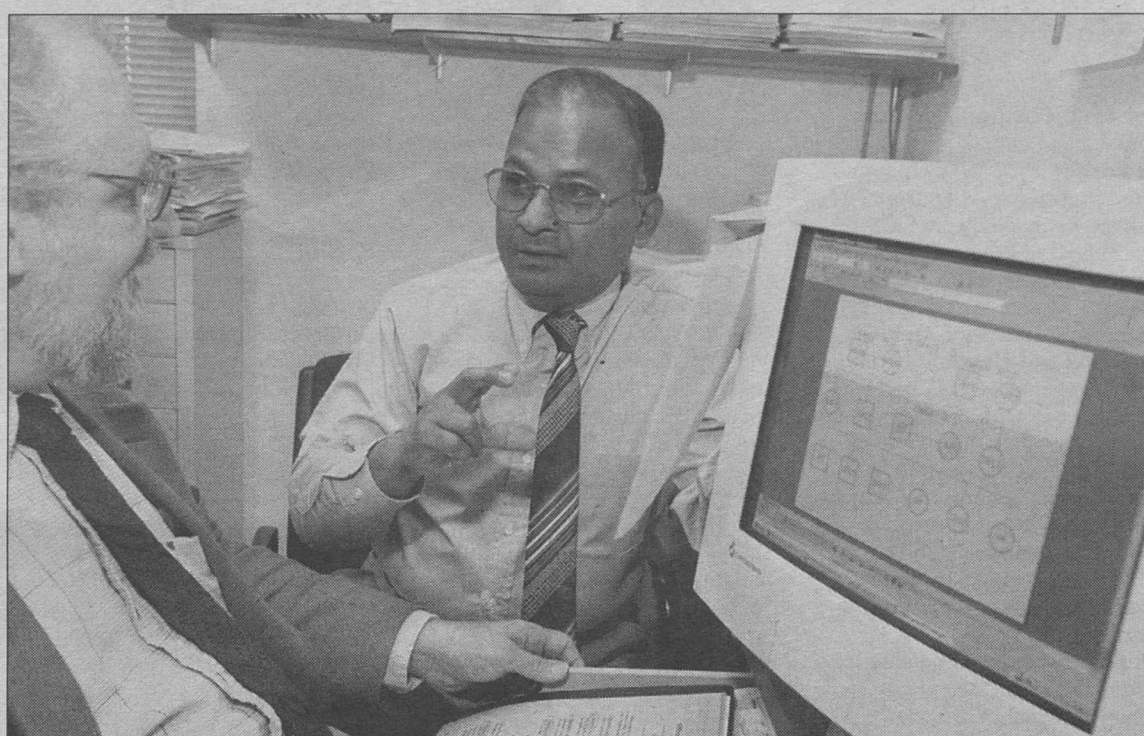
luminaries as noted black scholar Cornel West and Murray Friedman, former vice chairman of the U.S. Commission on Civil Rights and Middle Atlantic States director of the American Jewish Committee.

While previous scholarship has tended to focus on areas of conflict between blacks and Jews, Grant's conference examined how these two groups often worked as allies in both the labor and civil rights movements. Essay topics include such issues as "Black Zionism: Marcus Garvey and the Jewish Question" and "Black Sacrifice, Jewish Redemption: From Al Jolson's Jazz Singer to John Garfield's Body and Soul."

Both the conference and the resulting essays reflect Grant's devotion to scholarship on multicultural relations and the continuing struggle for racial equality in the United States, a lifelong passion that McNeil sums up eloquently in the book's opening article, "Remembering Nancy Louise Grant (1949-1995)."



Washington People



Dabeeru C. Rao, Ph.D. (right), director of biostatistics, talks with J. Philip Miller, professor of biostatistics, about optimum ways to link families with heart disease from independent studies.

Propelling a biostatistical powerhouse

Dabeeru C. Rao, Ph.D., is 'giant of genetic epidemiology'

BY BARBRA RODRIGUEZ

Dabeeru C. Rao, Ph.D., a professor of biostatistics and director of the School of Medicine's Division of Biostatistics, studies how genes and environmental factors shape people's lives — in particular, their risk of developing diseases. But the native of a small village in southeast India attributes his own success to less tangible factors: luck, determination to succeed and perseverance born of gratitude for family members who made sacrifices to help him achieve.

Rao's father moved to Santabommali, Andhra Pradesh, when he was 17. He took with him a new wife, a widowed sister, a widowed mother, and no money or job prospects. By underbidding contractors for construction jobs in the area and investing in farm land, he was able to save money. Against his neighbors' advice, he spent it all sending Dabeeru, known as D.C., and his other 11 children away to college.

"My father used to say, 'If we have money, we will spend it on something, or one day, we may be robbed,'" Rao said. "But if we put this money into education, nobody can take it away."

Choosing statistics

The elder Rao's sacrifice came with strings attached. For example, he insisted that his children only play with other children who were college-bound. Rao's siblings became professionals in a variety of fields. Rao, the

seventh-oldest child, followed the advice of his physician brother and became a statistician. "His vision was that I would do something nontraditional as a tribute to my father," said Rao.

Several of Rao's colleagues would argue that he has done much more than that. Theodore Reich, M.D., the Samuel and Mae S. Ludwig Professor of Psychiatry and a genetics professor at the medical school, noted that Rao has made the biostatistics division nationally renowned while helping found the field of genetic epidemiology. "He is one of the giants of genetic epidemiology and one of its first great lights," Reich said.

Rao received a bachelor's, master's, and doctoral degree at the prestigious Indian Statistical Institute in Calcutta. He had to place in the top 25 on a national exam to gain entry. Once at the institute, Rao soon became fascinated with the application of statistics to questions in genetic epidemiology, the study of the genetics and inheritance of disease and other traits. "I would say it was pure luck that I landed at the institute, and once I was there, it was the gravity of the intellectual atmosphere and the inspiring mentoring of C. R. Rao, the institute's director, that turned me on to genetic epidemiology,"

Rao said. The two are not related.

He took the few courses available on statistical genetics and set his sights on leaving India to train with a leading genetic epidemiologist in Hawaii.

"... it's genes and environmental factors and the way they work together that influence who develops certain diseases."

DABEERU C. RAO

In 1971, Rao received a letter from the Hawaiian researcher, Newton Morton, Ph.D., and was soon on his way to the University of Hawaii in Honolulu. "I didn't think twice. I just took the offer and spent a wonderful eight years in Hawaii," he said.

Rao worked with Morton developing statistical tools to determine the influence of genetic factors on human traits. To test out new models, Rao analyzed data from studies of intelligence in different races. He discovered using his early modeling work that the influence of genes on intelligence varied from 20 percent to 80 percent. Rao's subsequent work suggested that genes likely account for about 30 percent of IQ.

He is best known for his work on a statistical method called path analysis, which is used heavily in genetic epidemiology studies to identify factors responsible for complex human traits and complex diseases. And Rao developed methods used to link specific genes to the risk of developing diseases.

His efforts also have helped researchers determine what role environmental factors — what people eat, where they live and so on — play in disease. "It took no time for me to become convinced that it's genes and environmental factors and the way they work together that influence who develops certain diseases," Rao said.

Luck and diligence worked in Rao's favor again when he visited the continental United States to interview on the East Coast in 1979. Reich and C. Robert Cloninger, M.D., the Wallace Renard Professor of Psychiatry and a professor of genetics here, convinced Rao to stop over in St. Louis. The medical school's Department of Preventive

Medicine and Public Health needed a new director for its biostatistics division. Rao, who had directed the Population Genetics Laboratory in Honolulu when needed, was asked if he would accept this new challenge.

He jumped at the opportunity and, in the past two decades, has built the division into a powerhouse of biostatistics, specializing in cutting-edge genetic epidemiology methods and analyses of factors influencing disease development.

Division faculty analyze the results from studies that address everything from how genetic and environmental factors affect the development of obesity to what causes dangerously high blood pressure in pregnant women. Rao and his colleagues helped design such studies to ensure that their data provide reliable

conclusions. The biostatistics faculty also oversee these studies, many of which involve thousands of volunteers and dozens of physicians and researchers at sites across the

United States. And they advise medical school faculty and other researchers on study design and analysis.

Far-reaching impact

Rao also has had a far-reaching impact on the genetic epidemiology field. "Rao is the founding editor of the leading journal in the field of statistical genetics, has received many honors for his efforts in statistics and biostatistics and has been a very important person for fostering the careers of younger investigators," said Jean MacCluer, Ph.D., a genetic epidemiologist at the Southwest Foundation for Biomedical Research in San Antonio.

Michael Province, Ph.D., a mathematician-turned statistician under Rao's tutelage, agreed. Rao was his thesis adviser in the 1980s. Despite Rao's hectic schedule, he was always accessible, said Province, a professor of biostatistics. "At first I was somewhat intimidated to interact with him because of his stature in genetic epidemiology," Province said, "but I realized that he really likes a good scientific argument and will challenge you to hold up your theories to the cold light of reality."

In his spare time, Rao gardens, takes pictures and spends time with his two children and wife, Sarada, with whom he recently celebrated a 25th wedding anniversary. Sarada stopped working in 1974 to support his career, and Rao credits his success and well-being to her unfailing support.

Province and others believe they owe as much to Rao for his support of their personal and professional growth. "He talks about the division as his family, and that's not rhetoric," Province said. "He really believes it."



With Big Ben in the background, the Rao family — Dabeeru, Sarada, Ravi (back row) and Lakshmi — pause for a photo during a vacation in London.

Dabeeru C. Rao, Ph.D.

Education Indian Statistical Institute, B.S., 1967; M.S., 1968; Ph.D., 1971

Family Wife, Sarada; son, Ravi, 21; daughter, Lakshmi, 17

Accomplishments Editor-in-chief, Genetic Epidemiology, 1984-1991; currently on the editorial boards of three epidemiology-related journals

Honors "Most Admired Man of the Decade" award, 1992, and "Five Hundred Leaders of Influence" inclusion, 1996, the American Biographical Institute; "Outstanding Achievements in Science" award, Telugu Association of North America, 1993; and "IGES Leadership Award," International Genetic Epidemiology Society, 1997