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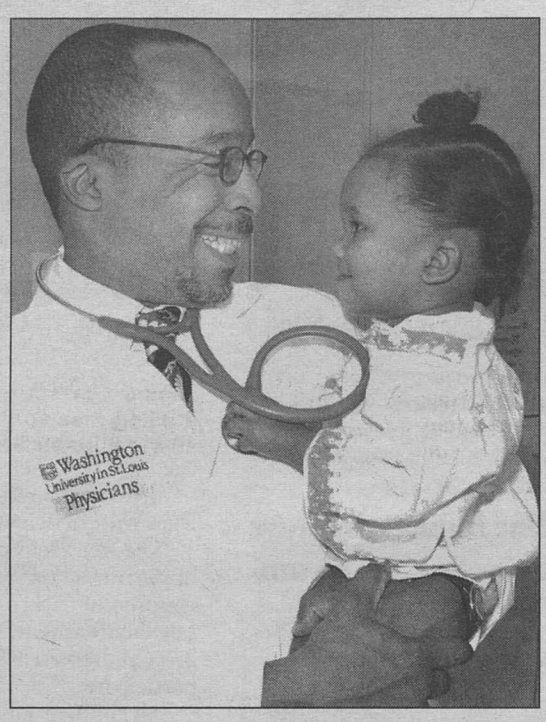
Record

Oct. 24, 2003

Volume 28 No. 11

Treasuring the Past Washington University in St. Louis *Shaping the Future*

Celebrating 150 Years



Michael R. DeBaun, M.D., shares a smile with Randice Reed. Randice has sickle cell disease, which affects one in 400 African-American infants — and 20 percent of those children will suffer a silent stroke before they finish high school.

BOB BOSTON

Battling sickle cell disease

Grant is most ever awarded to a WUSTL pediatrician

By Kimberly Leydig

Children across the world with sickle cell disease will benefit from an $18.5 million National Institutes of Health (NIH) grant awarded to School of Medicine researchers to determine the effectiveness of blood transfusion therapy as a treatment for preventing silent strokes.

Silent strokes, which frequently go unrecognized, are one of the most serious afflictions associated with sickle cell disease. They can cause declines in school performance, increased forgetfulness and a diminished ability to follow even simple instructions.

"Regardless of the outcome of the study, our results will change the standard of care for children with sickle cell disease throughout the world," said lead investigator Michael R. DeBaun, M.D., associate professor of pediatrics and of biostatistics. "At the end of the study, we will know whether blood transfusion therapy will prevent silent strokes in children with sickle cell disease.

"If there is a significant benefit, the standard of care will be changed for these vulnerable patients. And even if no benefit is detected, then patients will not be subject to unnecessary therapy."

The grant — the most ever awarded to a pediatrician at the medical school — will fund a six-year international clinical trial at 22 sites, including ones in France, Canada and England.

DeBaun's preliminary research at St. Louis Children's Hospital over the past decade has revealed that silent strokes seriously affect children's educational attainment and can lead to further neurological damage. His team recently completed a pilot trial showing that blood transfusion therapy is a safe and potentially effective therapy for children with silent strokes.

See **Sickle cell**, Page 6

The end of jet lag?

Study: Temperature changes can affect our biological clocks

By Teresa Shipley

Getting over jet lag may be as simple as changing the temperature — your brain temperature, that is.

That's a theory proposed by Erik Herzog, Ph.D., assistant professor of biology in Arts & Sciences. Herzog has found that the biological clocks of rats and mice respond directly to temperature changes.

Biological clocks, which drive circadian rhythms, are found in almost every living organism. In mammals, these clocks are responsible for 24-hour cycles such as alertness and hormone levels.

The control panel for these daily rhythms is the suprachiasmatic nucleus (SCN), otherwise known as "the brain's Timex."

The SCN, located above the roof of the mouth in the hypothalamus, is normally synchronized to local time by light signals carried down the optic nerves. Herzog worked directly with mice SCN cells located in vitro, grown in a dish.

Herzog's findings were recently published in the *Journal of Neurophysiology*.

"We found that we can rapidly change the phase of the pacemaker — we can shift its timing to a new time zone," Herzog said. "This paper shows for the first time that we can take control of the clock in a dish. We can tell it what time we want it to think it is."

His work was funded by the National Institute of Mental Health.

The findings have significant implications. If brain temperature can be controlled, travelers might never again have to deal with jet lag. Shifting to a new time zone might be accomplished with relative ease.

Herzog said that brain temperature is relatively immune to environmental temperature, but can be affected by bursts of physical activity, fever, nursing, or a dose of aspirin or melatonin, a drug already used to lessen the effects of jet lag.

In his study, Herzog first needed to establish that the SCN would function normally over a wide range of constant temperatures.

He tested the cells in a range from 24 degrees Celsius to 370 degrees Celsius. With each change in temperature, the SCN cells continued to operate like clockwork.

"Just like a good watch, the SCN needs to be accurate over a range of temperatures," Herzog said. "Your wristwatch would be of no use to you if it sped up every time it became warm. Biological clocks work the same way.

"Amazingly enough, the SCN can oscillate over a wide range of temperatures."

But Herzog was keeping the cells in constant temperature and, he noted, this is not the way your brain really works. Normally,

See **Clocks**, Page 6

This Week In WUSTL History

Oct. 26, 1899

The Buildings Committee of the Board of Directors and three outside experts, all well-known architects, selected Cope and Stewardson of Philadelphia to be the architects of the new Hilltop Campus.

Oct. 30, 1908

Chancellor David F. Houston gave a lecture to the Commercial Club, titled "A University for the Southwest," in which he sketched a vision for Washington University as a great national institution.

This feature will be included in each 2003-04 issue of the Record *in observance of Washington University's 150th anniversary.*

JOE ANGELES

Unveiling a portrait of Uncas A. Whitaker at the Oct. 20 dedication of Uncas A. Whitaker Hall for Biomedical Engineering are (from left) William H. Danforth, chancellor emeritus and vice chairman of the Board of Trustees; David W. Kemper, vice chairman of the Board of Trustees; G. Burtt Holmes, chair of The Whitaker Foundation; and Chancellor Mark S. Wrighton.

Uncas A. Whitaker Hall dedicated

By Tony Fitzpatrick and Barbara Rea

The dedication of Uncas A. Whitaker Hall for Biomedical Engineering Oct. 20 was a major step forward in a plan begun more than a decade ago to launch a nationally prominent department in this rapidly growing field.

It also crystallizes the ongoing collaboration of researchers in the University's School of Engineering & Applied Science and the School of Medicine, which started more than 40 years ago.

"The schools of engineering and medicine have experienced a great tradition of working together in this dynamic field, and it is a privilege to dedicate this facility to teaching and research in biomedical engineering," Chancellor Mark S. Wrighton said. "We are greatly indebted to The Whitaker Foundation and to the Danforth Foundation for their significant support in providing the lead gifts for this building."

Wrighton also expressed his gratitude for the many additional supporters of Whitaker Hall.

Participants in the ceremony included University Trustee Stephen F. Brauer, chairman and chief executive officer of Hunter Engineering and former U.S. ambassador to Belgium, who delivered the keynote address; G. Burtt Holmes, O.D., chairman of the board of The Whitaker Foundation; and Y.C. Fung, Ph.D., professor emeritus of bioengineering at the University of California, San Diego, widely known as the "father of biomechanics."

JOE ANGELES

Known as the "father of biomechanics," Y.C. Fung, Ph.D. (left), is greeted by William A. Peck, M.D. (right), the Alan A. and Edith L. Wolff Distinguished Professor of Medicine and former dean of the School of Medicine, and Frank C.P. Yin, M.D., Ph.D., chair and the Stephen F. and Camilla T. Brauer Professor of Biomedical Engineering.

Whitaker Hall sits at the

See **Whitaker**, Page 7

MARY BUTKUS

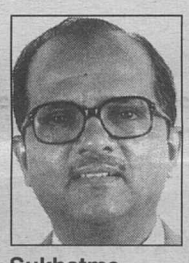
A roof over your head School of Architecture students Jordan Thompson (left) and Shawn Walsh apply finishing touches to the roof of a "koshikake machiai" — a traditional Japanese teahouse waiting bench — in the Elizabeth Danforth Butterfly Garden. They and other architecture students constructed the bench with guidance from Japanese master carpenter Tamotsu Edo, whose visit was sponsored by the Visiting East Asian Professionals Program in Arts & Sciences and the School of Architecture.

Environmental Initiative 'Colloquium on Energy' Oct. 31

By Robert Batterson

A "Colloquium on Energy" will be held from 10 a.m.-noon Oct. 31 at the Charles F. Knight Executive Education Center.

The symposium is part of the University's Environmental Initiative, an effort to help better understand the role that research universities can play in addressing issues related to the environment.



Sukhatme

A keynote address on "Alternate Energy Sources: The Indian Context," will be presented by S.P. Sukhatme, chair of the Atomic Energy Regulatory Board in India and professor emeritus and former director of the Indian Institute of Technology in Bombay.

Sukhatme is known for his outstanding contributions both in teaching and research, in the areas of heat transfer and energy. He is the author of nearly 70 academic articles and two widely known textbooks.

As the director of the Indian Institute of Technology, Sukhatme took the initiative in establishing schools in management and information technology. He took over as the chair of India's Atomic Energy Regulatory Board in January 2000.

A panel discussion on energy-related issues will follow the keynote lecture.

University panelists will be Pratim Biswas, Ph.D., the Stifel and Quinette Jens Professor in chemical engineering; Ambar Rao, Ph.D., the Fossett Distinguished Professor of Marketing; and Jeroen Swinkels, Ph.D., the August A. Busch Jr. Distinguished Professor of Managerial Economics and Strategy.

Other panelists will include Deborah Chollet, director of the Missouri Botanical Garden's Gateway Center for Resource Efficiency; Dennis Houston, executive vice president of Exxon-Mobil Refining and Supply; Martin J. Lyons, vice president of Ameren UE; and Jason Makansi, president of Pearl Street Inc.

The colloquium is co-sponsored by the Olin School of Business and the School of Engineering & Applied Science's Environmental Engineering Science Program.

The event is open to the public, but attendance is limited. Register by e-mailing rsvp-olin@olin.wustl.edu or calling 935-6300.

For more information, go online to env.wustl.edu/seminars/abstracts/sukhatmefo3.htm.

George Eberle to lecture for Grace Hill's 100th anniversary

By Jessica Martin

George Eberle, former president and chief executive officer of Grace Hill Settlement House and Health Center, will lecture on "The Impact of Professionalism and Elitism on Neighborhood Capacity Building From the Settlement House Perspective" at 1:10 p.m. Oct. 30 in Brown Hall Lounge.

The lecture is co-sponsored by Grace Hill and the George Warren Brown School of Social Work in honor of Grace Hill's 100th anniversary.

After Eberle's keynote address, there will be a panel discussion featuring representatives from the United Way, Urban Strategies Inc., the St. Louis community and GWB.

Lecture

"The Impact of Professionalism and Elitism on Neighborhood Capacity Building From the Settlement House Perspective" by George Eberle

1:10 p.m. Oct. 30, Brown Hall Lounge

Eberle, a GWB Distinguished Alumni Award recipient in 1994, served as president of Grace Hill for 40 years and created the time-dollar system, in which low-income residents can trade community service for grocery items or services such as child care and tutoring.

Grace Hill develops and provides services — from health care to community development — through a "neighbors helping neighbors" approach.

Its philosophy is based on the belief that neighbors who are provided with tools and resources can help not only themselves but also each other, no matter how disadvantaged they might be.

The lecture and panel discussion are free and open to the public.

For more information, call Barbara Levin, director of the Alliance for Building Capacity at GWB, at 935-6661.

Campus Watch

The following incidents were reported to University Police **Oct. 15-21**. Readers with information that could assist in investigating these incidents are urged to call 935-5555. This information is provided as a public service to promote safety awareness and is available on the University Police Web site at police.wustl.edu.

Oct. 16

5:37 p.m. — Over the previous few days, an unknown person removed a picture of John F. Lee from the dorm area of Lee Residence Hall by unknown means.

Oct. 18

2:08 p.m. — Students saw a man going through belongings in a locker room of the Athletic Complex. The subject was stopped on the second floor of the Field House and arrested for trespassing.

Oct. 20

12:27 p.m. — A graduate student reported that unknown person stole a microwave from Jolley Hall, Room 534. There was no forced entry observed. The theft occurred between noon Oct. 12 and 7 p.m. Oct. 18. Total loss is estimated at $100.

Oct. 21

8:41 a.m. — An unknown person stole a black Dell laptop computer and a carrying case from Prince Hall.

Additionally, University Police responded to three reports of larceny, three alarms, two reports of suspicious persons and one report each of fraud and disturbance.

News Briefs

T.S. Eliot Lecture: author Cannadine Nov. 10

Author David Cannadine will be the featured speaker at the fourth annual T.S. Eliot Lecture in St. Louis at 4:30 p.m. Nov. 10 in Holmes Lounge.

The title of his talk will be "Churchill and America." A reception will follow.

Cannadine is the first Queen Elizabeth The Queen Mother Chair of British History at the Institute of Historical Research at University of London. He has authored several books on British history and has held appointments as a fellow of the British Academy of the Royal Society of Literature and as a fellow at St. John's College, Cambridge, among others.

Eliot, the grandson of Washington University co-founder William Greenleaf Eliot, helped to transform modern poetry with such works as "The Waste Land" and "The Four Quarters." The T.S. Eliot Lecture is delivered in both London and St. Louis by influential writers, scholars or other public figures.

The lecture is free and open to the public. Call 935-4003 to register.

Airline industry's future is topic of public forum

The "Future of the Airline Industry" will be the topic of a public forum from 7:30-11:30 a.m. Oct. 31 in the Bryan Cave Moot Courtroom in Anheuser-Busch Hall.

The discussion will be timely because it comes one day before American Airlines implements a major downsizing of its St. Louis hub, a reduction expected to cut the airline's daily departing flights from 417 to 207.

The program will begin with an address on "Federal Policy and the Future of the Airline Industry" by Michael Levine, noted authority on airline industry trends. His talk will be followed by panel discussions that will address challenges to federal policy toward airlines and will explore St. Louis airline industry issues, including economic implications of the hub reduction.

Registration will begin at 7:30 a.m., and the program will start promptly at 8 a.m.

The event is free and open to the public and is sponsored by the Weidenbaum Center on the Economy, Government, and Public Policy.

For more information, contact Melinda Warren (935-5652; warren@wc.wustl.edu) or go online to wc.wustl.edu.

Safe Trick-or-Treat in South 40 Oct. 29

The Campus Y's annual Safe Trick-or-Treat will be held from 6-8 p.m. Oct. 29 in the South 40, and faculty and staff are encouraged to bring their children.

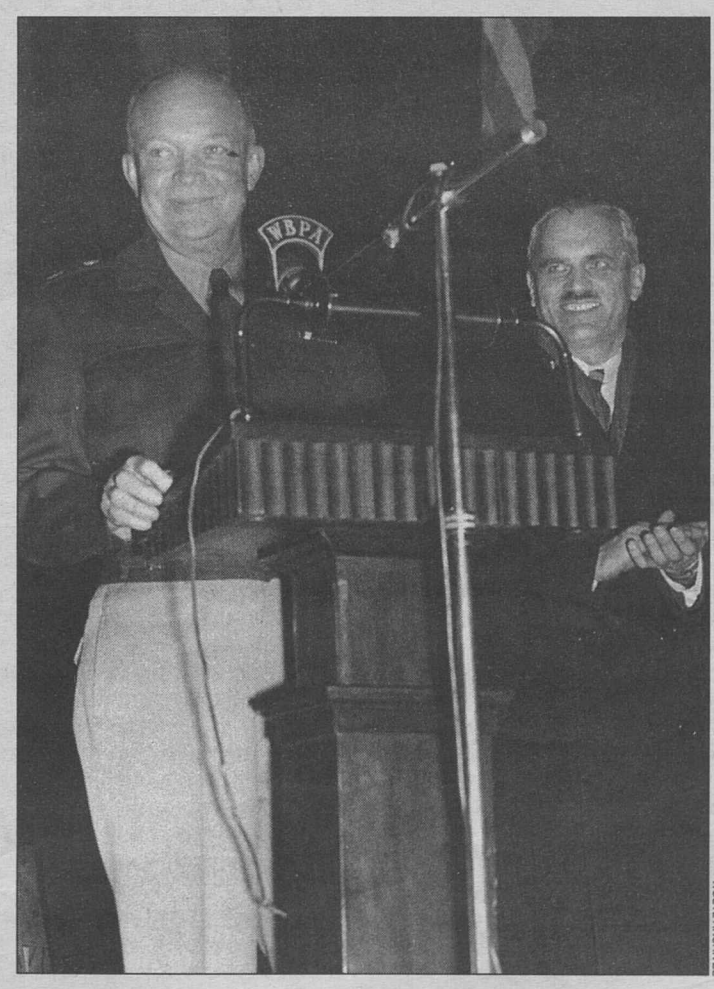
Most of the residential colleges will participate.

The free event provides an opportunity for St. Louis-area children to trick-or-treat in a safe environment. More than 275 children are expected to participate.

All children must be accompanied by a parent or guardian. There will be games, haunted houses, refreshments and lots of fun.

For more information and to register, call 935-5010.

Picturing Our Past

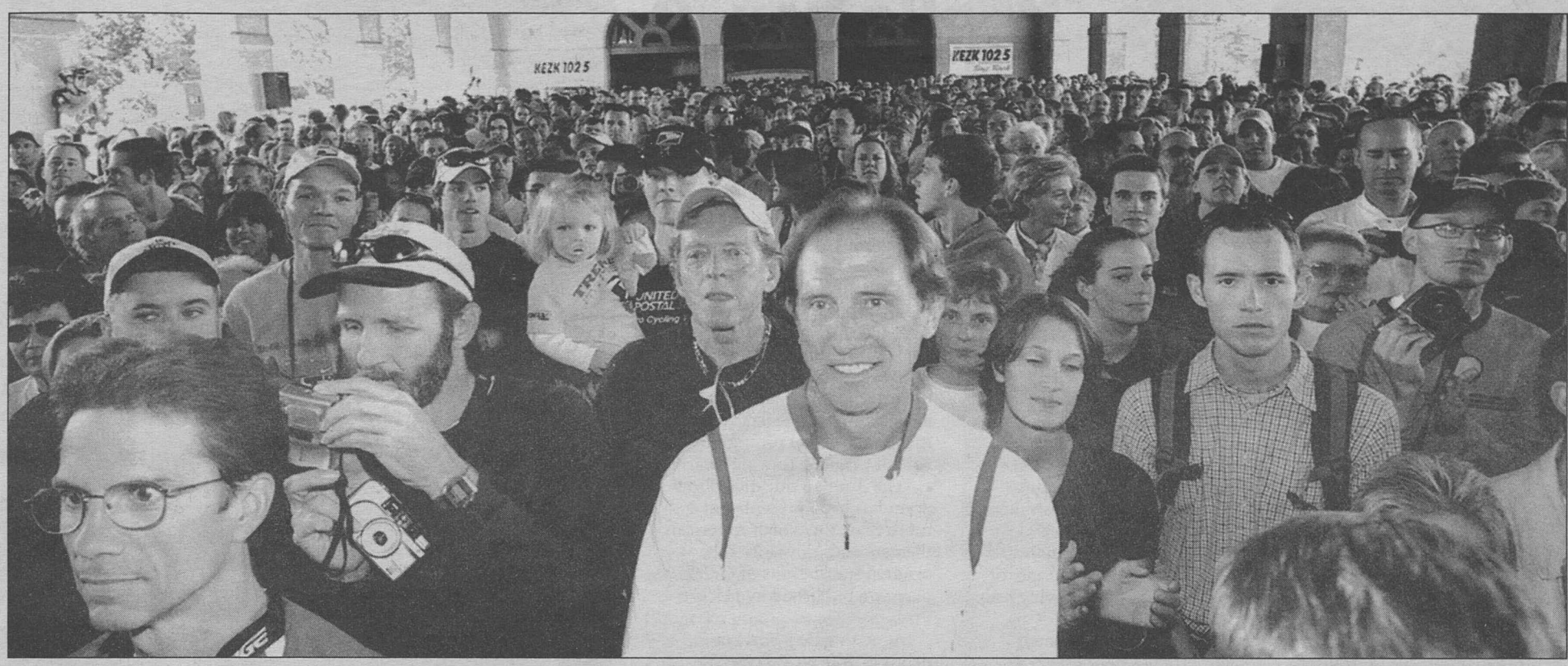


WUSTL ARCHIVES

Gen. Dwight D. Eisenhower addresses a standing-room-only crowd at the Field House Feb. 25, 1947, as Chancellor Arthur Holly Compton looks on. Eisenhower gave a 15-minute speech to more than 5,000 students, faculty and staff, saying "If I were to define democracy with one word, I would call it 'cooperation.' People of all classes must understand the necessity for cooperation to produce world order." Eisenhower commanded the Allied forces landing on North Africa in November 1942, and on D-Day he was Supreme Allied Commander of the troops landing at France. Eisenhower would go on to become the 34th president of the United States, serving consecutive terms from 1953-1961.

Washington University is celebrating its 150th anniversary in 2003-04. Special programs and announcements will be made throughout the yearlong observance.

School of Medicine Update



A crowd of more than 1,300 eagerly awaits to hear Lance Armstrong and Tour of Hope members speak about their experiences with cancer at the World's Fair Pavilion Oct. 15.

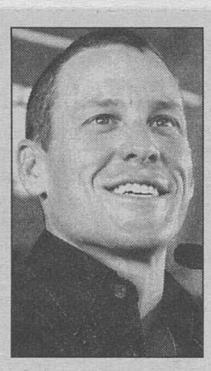
Armstrong visits Siteman Cancer Center

Tour of Hope team promotes cancer research and clinical trials

STORY BY KIMBERLY LEYDIG — PHOTOS BY BOB BOSTON

Five-time Tour de France champion Lance Armstrong insists he's not a hero.

"A hero is a person who's perfect — and I'm far from perfect," Armstrong says. "Cancer is a bastard. If it wants to take the biggest, strongest, fittest guy, it will. Athletes aren't in the spotlight forever; I have a small window. Now is my time to tell my story and make a difference in the world."



As they embarked on an unprecedented 3,200-mile journey across America, Armstrong and the Tour of Hope team stressed one simple message: "Cancer research is our only hope for a cure."

Armstrong urged a crowd of more than 1,300 people who packed into the World's Fair Pavilion in Forest Park Oct. 15 to sign the Tour of Hope's Cancer Promise, a personal commitment to learn about cancer and the vital importance of cancer research.

When Armstrong was 25, cancer nearly killed him. Testicular cancer spread to his abdomen, lungs and brain, requiring two surgeries and four cycles of chemotherapy to rid his body of the disease.

Armstrong's stunning recovery culminated in his winning the 1999 Tour de France. Since then, he's won the grueling three-week race four more times, tying the record.

But in the wake of all the fame and fanfare of being one of the world's most admired athletes, Armstrong insists he's still a regular hardworking, T-shirt-and-jeans-wearing guy from Texas.

He tells cancer patients to "be brave and fight like hell. You can be the strongest fighter in the world, but if you don't go out and fight, it doesn't matter."

Timothy J. Eberlein, M.D., director of the Siteman Cancer Center, also stressed to the crowd the importance of clinical trials, especially at this time in cancer care.

"We're seeing an explosion of basic science discoveries that are opening up opportunities to have earlier diagnosis, less toxic and more effective treatments and improved prevention strategies," Eberlein says.

"It's admirable that Lance is embarking on this critical campaign, and we are honored he has chosen to include the Siteman Cancer Center. Hopefully, this event will encourage more people to participate in cancer research."

> **"If (cancer) wants to take the biggest, strongest, fittest guy, it will. Athletes aren't in the spotlight forever; I have a small window. Now is my time to tell my story and make a difference in the world."**
>
> LANCE ARMSTRONG

According to the National Cancer Institute, up to 90 percent of children with cancer enroll in clinical trials, but fewer than 5 percent of adults participate.

Currently, the Siteman Cancer Center offers more than 350 clinical trials, which involve more than 2,000 patients each year. The center also has more than $100 million in annual cancer-related research funding.

Tour of Hope cyclist Eric Miller knows that participating in a clinical trial can mean the difference between life and death. Miller's son, Garrett, was diagnosed with a malignant brain tumor when he was 5.

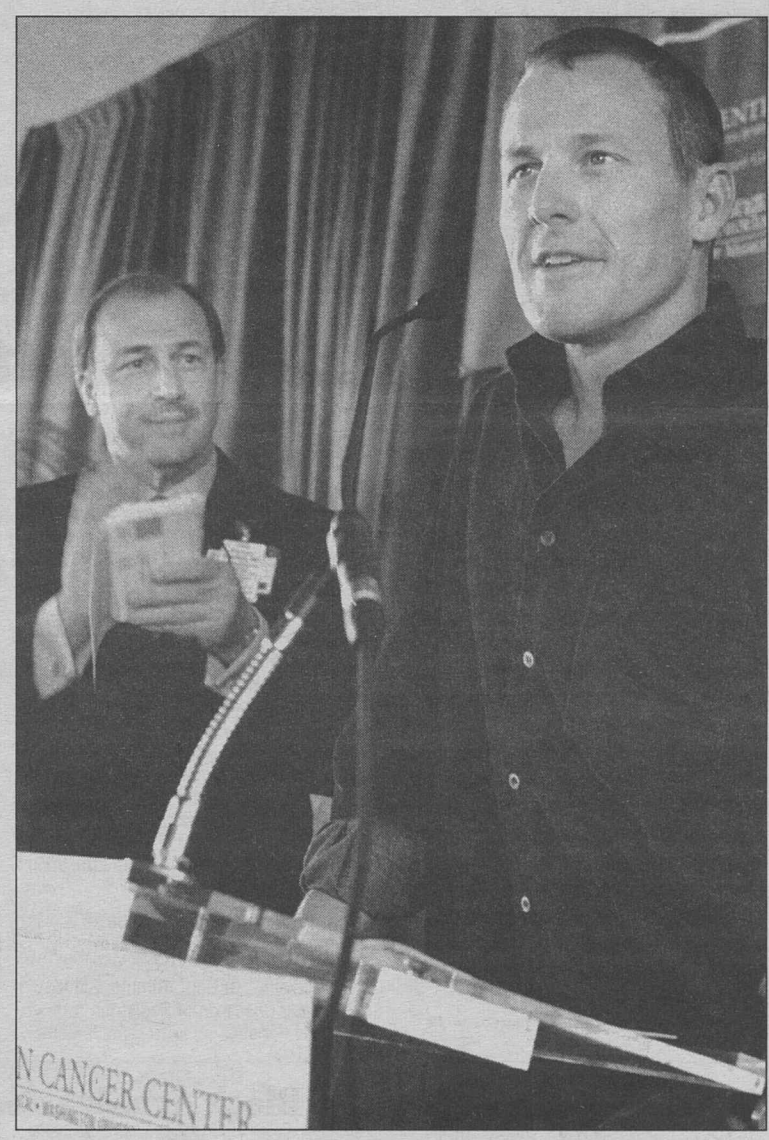
"I was watching him play T-ball one day and the next day he was having brain surgery," Miller says.

Garrett participated in a clinical trial and is now a cancer survivor, but the disease left him blind.

"My son is alive today because of the doctors and cancer survivors before him," Miller says.

Although, Armstrong did not participate in a cancer trial, he says the Bristol-Myers Squibb Tour of Hope ride is a tribute to the heroes before him who participated in cancer research.

"Winning the Tour de France, makes Lance a champion," Eberlein says. "But what he does for cancer survivors makes him a hero."



Timothy J. Eberlein, M.D., director of the Siteman Cancer Center, introduces Lance Armstrong at the World's Fair Pavilion.

Tour of Hope team members (from left) Eric Miller, Beth Strauss and Patrick Reilly visit with 12-year-old patient Christian Richardson at the Hale Irwin Center for Pediatric Hematology/Oncology at St. Louis Children's Hospital.

University Events

Shakespeare's *Othello* Nov. 2

Aquila Theatre Company to open 31st Edison Theatre OVATIONS! Series

BY LIAM OTTEN

A traitorous friend, an innocent accused, a noble soul destroyed amidst racial jealousy, mistrust and hatred. The tragedy of *Othello*, first performed in 1604, remains one of William Shakespeare's darkest and most compelling works, its dissection of power and anxiety all too contemporary.

Next month, the Aquila Theatre Company, one of the nation's finest producers of touring classical drama, will launch the 31st annual Edison Theatre OVATIONS! Series with a new adaptation of *Othello* set on a military base on modern-day Cyprus.

Aquila's production, created by Aquila associate artistic director Robert Richmond and producing artistic director Peter Meineck, combines the Bard's peerless language with an original score, inventive staging and epic, film-like visual flair.

A special one-night-only performance will begin at 8 p.m. Nov. 2 and is part of "Shakespeare in American Communities," a nationwide, 100-community touring initiative sponsored by the National Endowment for the Arts and The Sallie Mae Fund in cooperation with Arts Midwest.

Othello, a Moor and mercenary for the Venetian army, has secretly married Desdemona, daughter of a high-powered senator. Iago, Othello's trusted ensign — envious of Othello's success defending Cyprus against Turkish attack and enraged at being passed over for promotion — plants seeds of doubt about Desdemona's fidelity in Othello's mind.

Meanwhile, with Machiavellian cruelty, Iago advises Desdemona to act in ways that only increase her husband's suspicions.

Throughout the play, Iago boldly confesses his plotting — "the net that shall enmesh them all" — to the audience. Thus, *Othello* becomes a fascinating psychological study not only of the title character's growing jealousy and rage, but also of an almost gleeful yet ultimately impenetrable villainy.

Veteran British actor Lloyd Notice, who has previously appeared with the Royal Shakespeare Company, stars as Othello, with Aquila composer/musical director Anthony Cochrane as Iago and Kathryn Merry, who recently appeared as Ophelia in Ravi Jain's *Hamlet*, as Desdemona.

The Aquila Theatre Company was founded by Meineck in London in 1991 and is Professional Company in Residence at the Center for Ancient Studies at New York University. Comprising both British and American players, the troupe has won critical and academic acclaim worldwide, with extensive touring throughout Europe, the United States and Canada and special performances at such venues as the British Museum, the McNay Art Museum and the Folger Shakespeare Library.

Aquila's many honors include the prize for Dramatic Excellence from the Greek government and several prestigious British Council Touring awards.

The Aquila Education Program has been presented at more than 150 North American theaters and universities. Its original translations of Greek plays are published by Hackett Press.

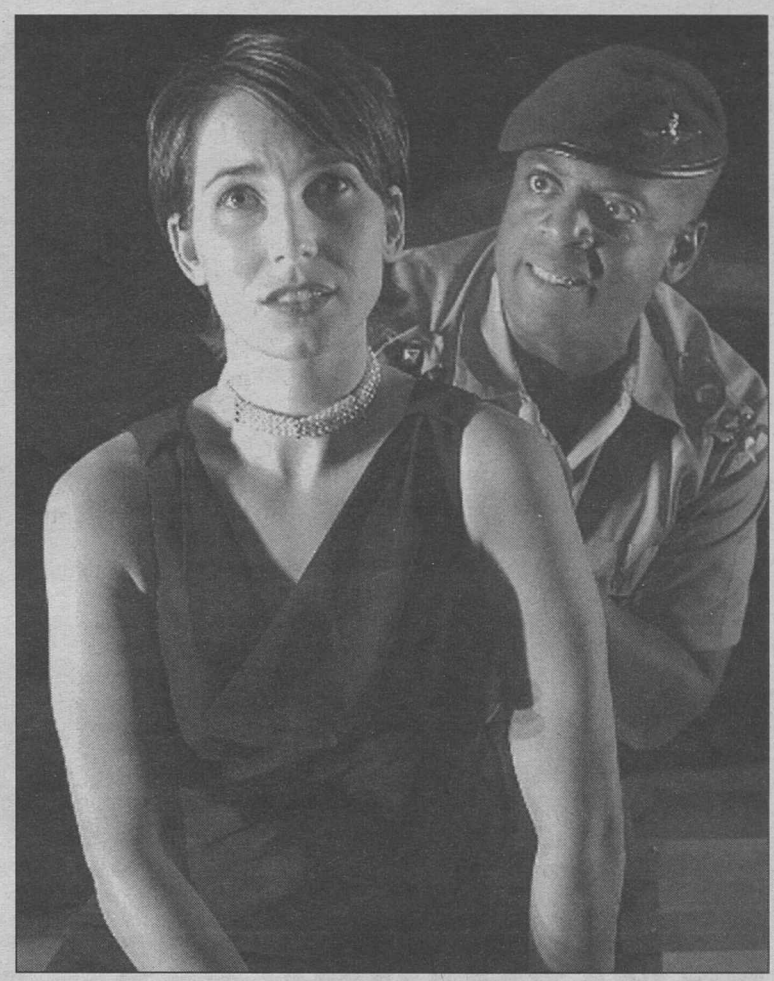
Aquila made its St. Louis debut in 2002 at Edison Theatre with Shakespeare's *The Tempest* and *The Wrath of Achilles*, which re-set Homer's *The Iliad* during World War II. Other previous tours have included *Agamemnon* (1991); *Ajax* (1992); *Coriolanus* (1993); *Julius Caesar* (1997-98); *The Odyssey/The Comedy of Errors* (1998-99); *King Lear/The Iliad/Oedipus Tyrannus* (1999-2000); and *Much Ado About Nothing/Cyrano De Bergerac* (2000-01).

Edison Theatre programs are supported by the Missouri Arts Council, a state agency, and the Regional Arts Commission, St. Louis.

Tickets are $28 for the general public; $23 for seniors, students and subscriptions of four or more OVATIONS! events; and $14 for WUSTL students and children under 12.

Tickets are available at the Edison Theatre Box Office and through all MetroTix outlets. For more information, call 935-6543.

For more information on the Shakespeare in American Communities initiative, go to www.nea.gov/national.



COURTESY PHOTO

Kathryn Merry plays Desdemona and Lloyd Notice portrays the title character in the Aquila Theatre Company's production of *Othello*, which will launch the 31st annual Edison Theatre OVATIONS! Series.

Earth Under Stress • Putting Atoms Together • Gender Pay Gap

"University Events" lists a portion of the activities taking place at Washington University Oct. 24-Nov. 6. Visit the Web for expanded calendars for the Hilltop Campus (calendar.wustl.edu) and the School of Medicine (medschool.wustl.edu/calendars.html).

Exhibits

150 years ***History of Adult Education at Washington University, 1854-2004.*** Through May 31. January Hall, Rm. 20. 935-4806.

150 years ***Influence 150: 150 Years of Shaping a City, a Nation, the World.*** Through Dec. 7. Gallery of Art. 935-4523.

Inscriptions of Time/Topographies of History: The Photographs of Alan Cohen. Through Dec. 7. Gallery of Art. 935-5423.

Matthew Carter Exhibit. Through Nov. 28. Des Lee Gallery, 1627 Washington Ave. 621-8735.

150 years ***New Beginnings: The First Decade of the Washington University Medical Campus, 1915-1925.*** Through May 31. Glaser Gallery, Becker Medical Library, 7th Fl. 362-4236.

Lectures

Friday, Oct. 24

7:30 a.m.-3:45 p.m. Academic Women's Network CME Course. "Annual Contemporary Women's Health Issues." Cost: $160 for physician, $110 for allied health professionals. Eric P. Newman Education Center. 362-6891.

9:15 a.m. Pediatric Grand Rounds. Alexis Hartmann Lecture. "The Skeletal Dysplasias: Clinical — Molecular Correlations." David L. Rimoin, Steven Spielberg Chairman of Pediatrics & dir., Medical Genetics — Birth Defects Center, Cedars-Sinai Medical Center, prof. of pediatrics, medicine and human genetics, David Geffen School of Medicine, U. of Calif., Los Angeles. Clopton Aud., 4950 Children's Place. 454-6006.

Noon. Cell Biology & Physiology Seminar. "Genetic Analysis of Organogenesis in the Mouse." Jeffrey H. Miner, asst. prof. of internal medicine. McDonnell Medical Sciences Bldg., Rm. 426. 362-3964.

2:30-7 p.m. Siteman Cancer Center CME Course. "Leukemia, Lymphoma, Bone Marrow Transplant: Biology and Management of Patients With Hematologic Malignancies." (7 p.m. reception.) Cost: $35. Eric P. Newman Education Center. To register: 362-6891.

4 p.m. Anatomy & Neurobiology Seminar. "Synaptic Specificity in the Visual System." Joshua Sanes, prof. of anatomy & neurobiology. McDonnell Medical Sciences Bldg., Rm. 928. 362-7043.

Saturday, Oct. 25

10 a.m. Physics Science Saturdays Lecture Series. "Putting Atoms Together — Materials Science Through the Ages." Ken Kelton, prof. of physics. Crow Hall, Rm. 201. 935-6276.

Monday, Oct. 27

11 a.m. Center for the Humanities Discussion. "A Reconsideration of W.E.B. Du Bois' *The Souls of Black Folk* at Its Centenary." Stanley Crouch, author, critic and commentator. Gerald L. Early, Merle Kling Professor of Modern Letters, moderator. Co-sponsored by the Dept. of English. Graham Chapel. 935-5576.

Noon. Molecular Biology & Pharmacology Research Seminar. "A Mechanism of Negative Cooperativity Revealed by Asymmetric Quaternary Hybrid Enzymes." Gregory A. Grant, prof. of internal medicine. South Bldg., Rm. 3907, Philip Needleman Library. 362-0183.

Noon. Neurology & Neurosurgery/CSNSI Seminar. John M. Zempel, instructor in neurology. Maternity Bldg., Schwarz Aud. 362-9462.

Noon-1:10 p.m. Work, Families, & Public Policy Seminar Series. "The U.S. Gender Pay Gap in the 1990s: Slowing Convergence." Francine Blau, Frances Perkins Professor of Industrial and Labor Relations, Cornell U. Eliot Hall, Rm. 300. 935-4918.

2 p.m. Center for the Humanities Reading. "A Reconsideration of W.E.B. Du Bois' *The Souls of Black Folk* at its Centenary." Stanley Crouch, author, critic and commentator. Co-sponsored by the Dept. of English. Graham Chapel. 935-5576.

4 p.m. Biology Seminar. "Clock Genes and Circadian Timing in the Brain and Beyond." Mick Hastings, dept. of neurobiology, U. of Cambridge, England. Rebstock Hall, Rm. 322. 935-8635.

4 p.m. Immunology Research Seminar Series. "STAT5-dependent Regulation of Lymphocyte Development, Homeostasis, and Activation." Michael A. Farrar, asst. prof. of immunology, U. of Minn. Eric P. Newman Education Center. 362-2763.

4 p.m. Physics Lecture. "Biochemical Computing in Neurons." Terry Sejnowski, prof. and head of computational neurobiology, Salk Inst., La Jolla, Calif. (3:45 p.m. coffee.) Compton Hall, Rm. 241. 935-6276.

4 p.m. Psychology Colloquium. "Suppressing Unwanted Memories: Cognitive and Neural Systems." Mike Anderson, prof. of psychology, U. of Ore. Psychology Bldg., Rm. 216 A&B. 935-6520.

6 p.m. Architecture Monday Night Lecture Series. "360°" Randy Brown, architect, Randy Brown Architects LLC, Omaha, Neb. (5:30 p.m. reception, Givens Hall.) Steinberg Hall Aud. 935-6200.

Tuesday, Oct. 28

Noon. Molecular Microbiology & Microbial Pathogenesis Seminar Series. "The Cell Cycle: Spatial and Temporal Control of a Multicomponent Genetic Network." Lucy Shapiro, prof. of developmental biology, Stanford U. Cori Aud., 4565 McKinley Ave., 362-3692.

6 p.m. School of Engineering Connection Series Speaker Event. "Rebuilding Baghdad: Can It Be Done? Are We the Ones to Do It?" Barbara K. Bodine, senior adviser, Bureau of Political-Military Affairs. (5:15 p.m. reception, Whitaker Hall Atrium.) Whitaker Hall Aud. 935-8213.

7:30 p.m. University Libraries Lecture. "Spoils of War: Building Libraries in the 17th Century." Jill Bepler, head, fellowship program, Herzog August Library (Germany). Brookings Hall, Rm. 300. 935-5151.

Wednesday, Oct. 29

8 a.m. Obstetrics & Gynecology Grand Rounds. "Sickle Cell Disease: A Challenge for the African-American Community." Michael R. DeBaun, assoc. prof. of pediatrics and assoc. prof. of biostatics. Clopton Aud., 4950 Children's Place. 362-1016.

11 a.m. Assembly Series. Black Arts & Sciences Festival Lecture. Dick Gregory, comedian. Graham Chapel. 935-5285.

4 p.m. Biochemistry & Molecular Biophysics Seminar. "Circular Dichroism of Proteins: Analysis and Prediction." Robert W. Woody, prof. of biochemistry & molecular biology, Co. State U. Cori Aud., 4565 McKinley Ave. 362-0261.

Thursday, Oct. 30

7:30 a.m.-3:30 p.m. Infectious Diseases CME Course. "ID 2003: Clinical Management of Infectious Diseases for the Primary Provider." Cost: $135 for physicians, $105 for allied health professionals. Eric P. Newman Education Center. 454-8275.

10 a.m.-noon. John M. Olin School of Business Sesquicentennial Environmental Initiative Colloquium. 150 years "Colloquium on Energy." Co-sponsored by the Environmental Engineering Science program. Charles F. Knight Executive Education Center. To register, call 935-6300.

Noon. Chemistry Seminar. "Development and Synthetic Applications of Electron Transfer Initiated Cyclization Reactions." Paul Floreancig, asst. prof. of chemistry,

Activist Gregory to deliver Black Arts & Sciences Festival Lecture

BY NADEE GUNASENA

Acclaimed civil and human rights activist Dick Gregory will deliver the Black Arts & Sciences Festival Lecture as part of the Assembly Series at 11 a.m. Oct. 29 in Graham Chapel.

Gregory is known for his many achievements in the field of global human rights. Using unique means of nonviolent protest, he has mobilized support for many social injustices worldwide, including the Civil Rights Movement, the Vietnam War, the African famine of the 1980s and, most recently, America's war on drugs.

He has also authored 15 books on injustice and racism, including his best-selling autobiography, *Nigger*, and his most recent work, *Callus On My Soul*.

Gregory's involvement in activism began at Southern Illinois University at Carbondale, where he rallied fellow students against inequality, leading a campaign to fund and build a new student union. After college, he began performing comedy, using society's racial problems as fodder for jokes.

Assembly Series

Who: Dick Gregory

What: Black Arts & Sciences Festival Lecture

Where: Graham Chapel

When: 11 a.m. Oct. 29

Despite his biting comic routines, his popularity rose, and he became the first African-American comedian to work in first-class white nightclubs. During the 1950s, he enjoyed widespread fame, and he is credited with creating many opportunities for African-American entertainers.

In the 1960s, Gregory was heavily involved in the Civil Rights Movement and worked alongside leaders such as Martin Luther King Jr., who taught him how to further the idea of nonviolence.

Although his activism caused his entertainment career to suffer, Gregory continued to use his high profile to promote causes he believed in. He began fasting to draw attention to important social problems.

Gregory also developed the 4X Formula in 1974 to combat world hunger. This nutritional formula, designed to prove that starving people need nutrition more than just food to fill their stomachs, reduced the cost of rehabilitating a starving child in Ethiopia from $4 to 45 cents a day.

It was so effective that the Ethiopian government made the formula available in all of its rehabilitation centers.

Gregory's lecture is free and open to the public. For more information, call 935-4620 or go online to wupa.wustl.edu/assembly.

Bang! Scrap Arts Music at Edison

Launches 2003-04 ovations! for young people series Nov. 1

BY LIAM OTTEN

Scrap Arts Music, a Vancouver-based percussion ensemble that performs on instruments built from recycled and salvaged materials, will return to the University in November to launch Edison Theatre's 2003-04 ovations! for young people series.

The one-time-only performance begins at 11 a.m. Nov. 1 at Edison Theatre.

Scrap Arts Music is the brainchild of composer and inventor Gregory Kozak, who concocts the group's Dr. Seuss-like instruments — or "creatures," as he calls them — from an eclectic array of industrially produced junk. Discarded sewer pipes, old artillery casings and giant steel springs (rescued from a derelict playground ride) are transformed into gongs, xylophones, steel drums and other startlingly well-tuned apparatus.

A treat for both the ears and the eyes, Kozak's elegantly ramshackle creations take the stage like a futuristic combination of alien machinery, tribal artifact and mythical animal.

As a performer, Kozak heads a team of five "action percussionists" through an energetic, highly choreographed show that is equal parts drumming, theater and dance. Whether performing original works like "Synthesoid Plasmatron" and "Engine of the Future" or making up new songs on the spot, the Scrap Arts Music's repertoire fuses world- and pop-music sensibilities with utterly unpredictable 21st-century sounds.

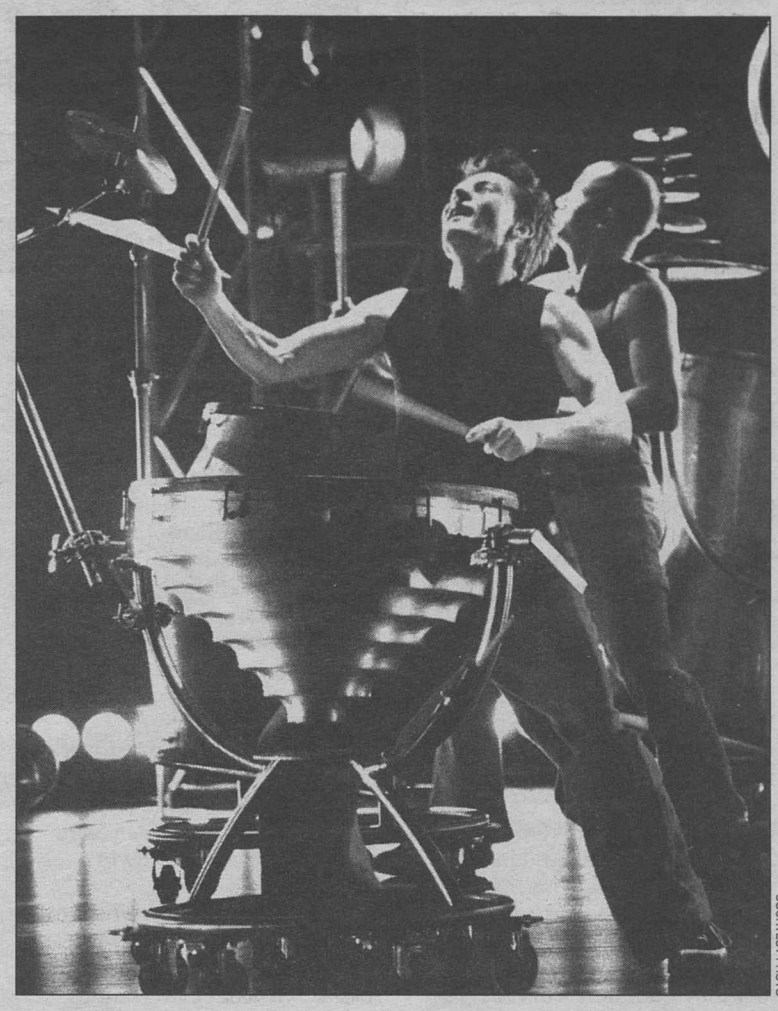
Formed in 1999, the ensemble has performed at theaters and festivals throughout the United States and Canada. In addition to Kozak, the men and women of Scrap Arts are Scott Bishop, Sarka Kocicka, Malcolm Shoolbraid and Rahim Gaidhar.

Ovations! for young people presents affordably priced — and family friendly — matinee shows by nationally and internationally recognized performing artists. Upcoming performances include Brooklyn-born choreographer Ron K. Brown and his company, Evidence (Nov. 22), and the delightful blend of mime, dance and puppetry that is Teatro Hugo & Ines (Jan. 17).

Ovations! for young people compliments Edison Theatre's signature OVATIONS! showcase. Edison Theatre programs are supported by the Missouri Arts Council, a state agency, and the Regional Arts Commission, St. Louis.

Tickets are $7 and are available at the Edison Theatre Box Office and through all MetroTix outlets.

For more information, call 935-6543.



COURTESY PHOTO

Scrap Arts Music will return to the University Nov. 1 to launch Edison Theatre's 2003-04 ovations! for young people series. The Vancouver-based percussion ensemble performs on instruments built from recycled and salvaged materials.

Sounds at an exhibition *Music at the Gallery of Art* series begins Oct. 24

BY LIAM OTTEN

The Department of Music in Arts & Sciences will present on Oct. 24 "Borders and Boundaries in 20th-Century Music," the first concert of *Music at the Gallery of Art*, a series of three chamber recitals echoing exhibitions at the University.

The concert is free and open to the public and begins at 7 p.m. in the Gallery of Art.

Sue Taylor, concert coordinator for the music department, noted that the *Music at the Gallery of Art* series "offers a chance to relax at the end of the school (week) and workweek and to take advantage of the Gallery of Art's extended Friday-evening hours. Art lovers are treated to an hour or so of challenging, entertaining music, while music lovers can spend time with fine exhibitions."

The "Borders and Boundaries" program corresponds to *Inscriptions of Time/Topographies of History: The Photographs of Alan Cohen*, which is on view at the Gallery of Art through Dec. 7. The exhibition examines the overlapping waves of stone, earth, asphalt, brick and concrete — the geologic and manmade ground — that both demark and obscure national borders and other historic (and perceptual) sites.

"*Inscriptions of Time* presents a wonderful opportunity to construct a concert of 20th-century music focusing on the theme of boundaries," Taylor said. "While no direct parallels are drawn between the music and particular photographs, both explore the concept of borders, whether physical, psychological or conceptual in nature."

Paul Garritson and Maryse Carlin, instructors in clarinet and piano, respectively, and Yuko Naito, violinist with the Saint Louis Symphony Orchestra, will begin the performance with *Contrasts* by Béla Bartók (1881-1945). The Hungarian composer immigrated to London in 1938 and spent the final years of his life in rebellion against fascism — he prohibited performances of his music in Italy and Germany.

Bartók composed *Contrasts* for Benny Goodman and recorded it in New York in 1940 with Goodman and violinist Joseph Szigeti. The piece emphasizes the disparate timbres of violin, clarinet and piano, exploiting their capabilities for new effects while combining traditional musical forms used by Hungarian gypsies with sounds that echo the gongs, drums and struck metal bars of Indonesian gamelan music.

Mezzo soprano Noël Prince, instructor in voice, will sing selections from *Banalités*, composed by Francis Poulenc (1899-1963) in France in 1940. The songs are set to texts reflecting the locale and boundaries of battle and the passions for which men are willing to die.

Alla Voskoboynikova, instructor in piano, will then perform selected *Preludes* (1951) by Dmitry Shostakovich (1906-1975).

The dominant Russian composer of the Communist era, Shostakovich was condemned in 1948 for "anti-democratic tendencies alien to the Soviet people." Historical perceptions blur and controversy still rages over the question of Shostakovich's compliance or disguised noncompliance with the Soviet regime.

The program will conclude with *Gazebo Dances* — a title suggesting an ambiguous division between inside and outside spaces — composed in 1973 by American John Corigliano. The piece is a lighthearted work for four-hand piano and will be performed by the husband-and-wife team of Maryse Carlin and Seth Carlin, professor of music.

Subsequent *Music at the Gallery of Art* concerts are "19th-Century American Popular Music/19th-Century American Art" Nov. 7 and "Music from the 1980s/Art of the '80s" Feb. 20.

For more information, call 935-4841.

U. of Pittsburgh. McMillen Lab., Rm. 311. 935-6530.

Noon. Genetics Seminar Series. "Catalytic RNA Meets Selfish DNA: The Group I Introns of Bacteria and Bacteriophages." David Shub, prof. of biological sciences, State U. of N.Y. at Albany. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

1:10 p.m. George Warren Brown School of Social Work Fall Lecture Series. "The Impact of Professionalism and Elitism on Neighborhood Capacity Building from the Settlement House Perspective." George Eberle, former president and chief executive officer, Grace Hill. Co-sponsored by Grace Hill Settlement House, St. Louis. Brown Hall Lounge. 935-6661.

4 p.m. African and Afro-American Studies Lecture. "Frederick Douglass and the Aesthetics of Freedom." John L. Loeb, assoc. prof. of the humanities, Harvard U. Co-sponsored by the Dept. of English, American Culture Studies and the Program in Literature & History. Duncker Hall, Rm. 201, Hurst Lounge. 935-8556.

4 p.m. Chemistry Seminar. "Understanding How Batteries and Fuel Cells Work: NMR Studies of Disordered Materials." Clare P. Grey, prof. of chemistry, State U. of N.Y. at Stony Brook. McMillen Lab., Rm. 311. 935-6530.

4:15 p.m. Earth & Planetary Sciences Colloquium. "Earth Under Stress: Mantle Flow, Plate Dynamics, and Surface Deformation." Carolina Lithgow-Bertelloni, asst. prof. of geological sciences, U. of Mich., Ann Arbor. McDonnell Hall, Rm. 362. 935-5610.

Friday, Oct. 31

9:15 a.m. Pediatric Grand Rounds. "Cleft Lip and Palate: Epidemiology, Gene Finding and Clinical Trials of Prevention/Treatment." Jeff Murray, prof. of pediatrics and biological sciences, U. of Iowa. Clopton Aud., 4950 Children's Place. 464-6006.

Noon. Cell Biology & Physiology Seminar. "The Nucleus as a Site of Tumorigenic Fates." Jason D. Weber, asst. prof. of internal medicine. McDonnell Medical Sciences Bldg., Rm. 426. 362-3964.

4 p.m. Anatomy & Neurobiology Seminar. "Reproductive Patterns of Muriqui Monkeys." Karen Strier, prof. of anthropology and zoology, U. of Wisc. McDonnell Medical Sciences Bldg., Rm. 928. 362-7043.

Monday, Nov. 3

Noon. Molecular Biology & Pharmacology Research Seminar. "Copper-64 Radiopharmaceuticals for PET Imaging of Cancer." Carolyn J. Anderson, assoc. prof. of radiology and of molecular biology & pharmacology. South Bldg., Rm. 3709, Philip Needleman Library. 362-0183.

4 p.m. Immunology Research Seminar Series. "Regulation of T Cell Activity: To Go or Not to Go, Who Is in Charge?" Osami Kanagawa, prof. of pathology & immunology. Eric P. Newman Education Center. 362-2763.

4 p.m. Physics Lecture. "Wavefunction Engineering of Nanostructured Devices — Or How to Get Things Right the First Time!" L. R. Ram-Mohan, prof. of physics and of electrical & computer engineering, Worcester Polytechnic Inst., Mass. (3:45 p.m. coffee.) Compton Hall, Rm. 241. 935-6276.

6 p.m. Architecture Monday Night Lecture Series. "Motopia." Jennifer Siegal, architect, Office of Mobile Design, Los Angeles, Calif. (5:30 p.m. reception, Givens Hall.) Steinberg Hall Aud. 935-6200.

Tuesday, Nov. 4

Noon. Molecular Microbiology & Microbial Pathogenesis Seminar Series. "Dynamics of Granuloma Formation in Response to *M. tuberculosis* Infection in the Lung." Denise Kirschner, assoc. prof. of microbiology & immunology, U. of Mich. Cori Aud., 4565 McKinley Ave. 362-3692.

Noon. Program in Physical Therapy Research Seminar. "Approach to Physical Therapy in Patients with Chronic Kidney Failure." Brent Miller, asst. prof. of medicine. 4444 Forest Park Blvd., Rm. B108/B109. 286-1404.

Wednesday, Nov. 5

11 a.m. Assembly Series. Holocaust Memorial Lecture. "The Holocaust in the Congo — Then and Today." Adam Hochschild, author and journalist. Graham Chapel. 935-5285.

4 p.m. Biochemistry & Molecular Biophysics Seminar. "From Genome to Organism: A Virus-world View." John Yin, assoc. prof. of chemical engineering, U. of Wisc. Cori Aud., 4565 McKinley Ave. 362-0261.

Thursday, Nov. 6

Noon. Genetics Seminar Series. "Coupling of Cell Growth and Division." Mike Tyers, Samuel Lunenfeld Research Inst., Mount Sinai Hospital, Toronto. McDonnell Medical Sciences Bldg., Rm. 823. 362-2139.

1:10 p.m. George Warren Brown School of Social Work Fall Lecture Series. "Integrity, Spirit, and the Pursuit of Excellence." Sister Mary Jean Ryan, president and chief executive officer, SSM Health Care. Brown Hall Lounge. 935-6661.

4 p.m. Assembly Series. ICSB Conference Lecture. "A New Kind of Science." Stephen Wolfram, author and chief executive officer of Wolfram Research Inc. Graham Chapel. 935-5285.

4 p.m. History Lecture. "Politics, Planning, Society: Building Subways in New York City — and MetroLink in St. Louis." Clif Hood, chair of history, Hobart and William Smith College. McMillan Hall, Rm. 149. 935-5450.

Music

Friday, Oct. 24

7 p.m. Music at the Gallery of Art. "Borders and Boundaries in 20th-Century Music: A Recital to Parallel *Inscriptions of Time/Topographies of History: The Photographs of Alan Cohen.*" Silvian Iticovici, violin instructor; Paul Garritson, clarinet instructor; Alla Voskoboynikova, piano instructor; Maryse Carlin, harpsichord instructor; and Seth Carlin, prof. of music. Gallery of Art. 935-4841.

Sunday, Oct. 26

3 p.m. Reformation Choir Festival. Performances by five area choirs. Sponsored by Lutheran Campus Ministry. Graham Chapel. 863-8140.

Thursday, Oct. 30

8 p.m. Jazz at Holmes. Dave Stone Trio with Eric Markowitz. Ridgley Hall, Holmes Lounge. 935-4841.

Thursday, Nov. 6

8 p.m. Jazz at Holmes. Ptah Williams Group. Ridgley Hall, Holmes Lounge. 935-4841.

On Stage

Saturday, Nov. 1

11 a.m. ovations! for young people. Scrap Arts Music. Cost: $7. Edison Theatre. 935-6543.

Sunday, Nov. 2

8 p.m. OVATIONS! *Othello.* Aquila Theatre Company. Cost: $28, $23 for seniors, students, WUSTL faculty & staff, $14 for WUSTL students and children under 12. Edison Theatre. 935-6543.

Sports

Monday, Oct. 27

7 p.m. Men's Soccer vs. Westminster College. Francis Field. 935-4705.

Friday, Oct. 31

5 p.m. Men's Soccer vs. U. of Rochester. Francis Field. 935-4705.

7 p.m. Volleyball vs. Ill. College. WU Classic. Athletic Complex. 935-4705.

7:30 p.m. Women's Soccer vs. U. of Rochester. Francis Field. 935-4705.

Saturday, Nov. 1

10 a.m. Volleyball vs. Webster U. WU Classic. Athletic Complex. 935-4705.

2:30 p.m. Volleyball vs. Westminster College. WU Classic. Athletic Complex. 935-4705.

6 p.m. Football vs. U. of Rochester. Francis Field. 935-4705.

Sunday, Nov. 2

11 a.m. Men's Soccer vs. Case Western Reserve U. Francis Field. 935-4705.

1:30 p.m. Women's Soccer vs. Case Western Reserve U. Francis Field. 935-4705.

And more...

Thursday, Oct. 30

8 p.m. Writing Program Reading Series. Jaimy Gordon, fiction writer. Women's Building Formal Lounge. 935-7130.

Friday, Oct. 31

7:30-11:30 a.m. Weidenbaum Center Conference. "The Future of the Airline Industry." Anheuser-Busch Hall, Bryan Cave Moot Courtroom. 935-5652.

7 p.m. Gallery of Art Public Exhibition Tour. Led by student docents. Gallery of Art. 935-4523.

Thursday, Nov. 6

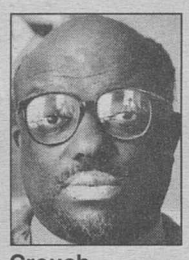
8 p.m. Writing Program Reading Series. Jaimy Gordon, fiction writer. Duncker Hall, Rm. 201, Hurst Lounge. 935-7130.

Author, critic Stanley Crouch to host W.E.B. Du Bois forums

BY LIAM OTTEN

Author, critic and commentator Stanley Crouch will host "A Reconsideration of W.E.B. Du Bois' *The Souls of Black Folk* at its Centenary" at 11 a.m. and 2 p.m. Oct. 27.

Both hour-long sessions will take place in Graham Chapel and are sponsored by The Center for the Humanities and the Department of English, both in Arts & Sciences.


Crouch

The core text for this year's Freshman Writing and Argumentation Program, *The Souls of Black Folk* (1903) collects 14 influential essays by William Edward Burghardt Du Bois (1868-1963) — the foremost African-American intellectual of his time — on conditions African-Americans faced in the years after emancipation.

At 11 a.m., Crouch will discuss the work's continuing importance and his own responses to it, followed by questions from the floor. The session's moderator will be Gerald L. Early, Ph.D., the Merle Kling Professor of Modern Letters in Arts & Science and director of The Center for the Humanities.

At 2 p.m., Crouch will read from and comment on selected passages.

With Playthell Benjamin, Crouch co-authored *Reconsidering the Souls of Black Folk*, which explores such topics as Du Bois' evocation of the "double consciousness" of African-Americans in a racist society; his advocacy of the African-American "talented tenth"; and his challenge to Booker T. Washington's nonconfrontational program of downplaying African-American civil and political rights in favor of economic advancement.

Crouch's other works include *Notes of a Hanging Judge* (1990), *The All American Skins Game* (1995) and *Always in Pursuit* (1998).

In February, he will return to the University for a conference on public intellectuals, part of the Arts & Sciences Conversations Series.

Crouch's Oct. 27 sessions are open to the University community. For more information, call 935-5576.

Clocks

Fluctuation exists even without outside cues

– from Page 1

brain temperature fluctuates by about 1.5 degrees Celsius every day. Temperature is at its minimum at daybreak, at its maximum during mid-day.

This fluctuation exists even in the absence of any environmental cues, such as light and dark.

"If you lived in a cave," Herzog noted, "you'd still have a daily rhythm in temperature.

"So we asked the question if that cycling of temperature, if that 1.5 degrees Celsius, would have any effect on the pacemaking of the SCN."

The answer was a resounding yes.

Herzog simply warmed the isolated SCN during the day and cooled it during the night, reversing the rat's normal daily fluctuation. He found that he could change the time at which the SCN "peaked."

"It shows that the SCN synchronized to the temperature cycle," he said. "The temperature cycle entrained it. We fooled the clock by giving it a novel daily schedule, saying 'This isn't the end of the day. This is morning.'"

Herzog's research also sought to disprove the notion put forth in 1998 that shining light on the backs of the knees would be enough to adjust circadian rhythm to a new time zone.

The idea was that by sensing light at the appropriate time, people can become synchronized to a new time zone. So Herzog wanted to know: Does the SCN by itself have any light sensitivity?

"We took the SCN out of the animal, put it in a dish, and exposed it to light at night and dark during the day," he said. "We asked: Does it synchronize to that light-dark schedule? The answer was no."

The human biological clock requires the signals from eyes to synchronize to the local light cycle.

Taken together, Herzog's findings indicate that, to avoid jet lag on your next trip to Paris, you should be sure to see the dawn while keeping your brain cool.

Future work might lead to a better understanding of what changes brain temperature and why.

Sickle cell

– from Page 1

Sickle cell disease, an inherited disorder of the red blood cells, is the most common genetic disorder in African-Americans. The disease affects one in 400 African-American infants — and 20 percent of those children will suffer a silent stroke before they finish high school.

In sickle cell disease, red blood cells change to a curved, or sickle-shaped, instead of the normal, round shape. Sickle cells become stuck in blood vessels, causing damage to tissues and organs, which can be extremely painful.

In addition to pain, the most common afflictions associated with sickle cell disease are silent and overt strokes, kidney and spleen dysfunction, chronic anemia and increased risk of bacterial infection.

The only way to detect a silent stroke is to take pictures of the brain by using magnetic resonance imaging (MRI). Until now, there has been no systematic strategy to identify or treat children with silent strokes.

"It is crucial to recognize and treat children with silent strokes, because kids who have them are at a 24 percent risk over the next three years for further silent and overt strokes, which leave marked physical defects and cognitive deficits," DeBaun said.

The standard treatment for overt strokes in children with sickle cell disease is blood transfusion therapy. The NIH grant will allow DeBaun and his international team of researchers to investigate whether blood transfusion therapy will also prevent silent strokes.

For three years, DeBaun's group will randomly allocate blood transfusion therapy to 50 percent of the study participants, and the other half will be observed.

"If blood transfusion therapy is effective, the magnitude of this benefit for children with silent strokes will be tremendous," DeBaun said.

The groundbreaking trial will enroll 1,880 children from around the world. All the children will have an MRI performed on their brains to detect silent strokes.

In addition, a blood sample will be collected to establish the world's largest DNA repository for children with sickle cell disease — which will allow future genetic research to explore the genetic basis for stroke and other sickle cell-related diseases.

Patients receiving the preventive blood transfusion therapy will be transfused at three-to-four week intervals as needed to maintain healthy hemoglobin levels. MRIs will also be performed to detect new strokes and the progression of brain lesions at the beginning of the study, again at 12 months to 18 months and at the study's completion.

"We have a once-in-a-lifetime opportunity to not only improve the quality of life for children currently afflicted with this disease," DeBaun said, "but to also change the treatment and understanding of the disease for future generations of both patients and pediatricians."

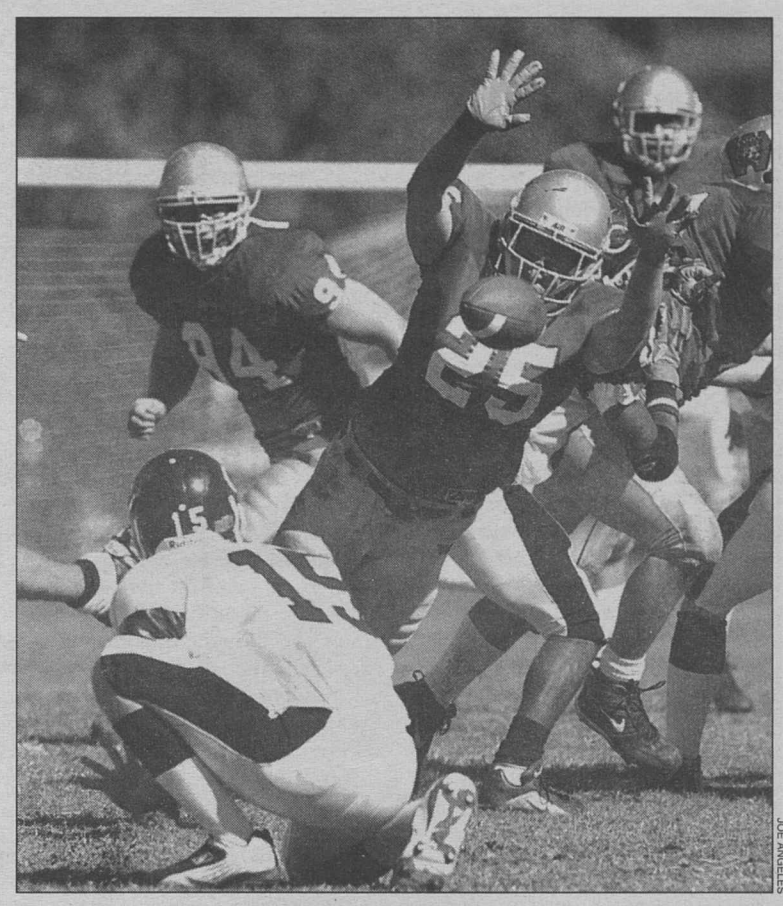
Sports

Bears blank Maroons in Homecoming tilt

The football team won its 10th straight University Athletic Association opener with a 28-0 win against the University of Chicago Oct. 18 in front of 2,652 fans at Francis Field. The victory also means the Bears keep possession of the Founder's Cup, which commemorates the first game played between the two schools.

Defense was the big story in the game as the Bears had four interceptions, four sacks, a safety and a blocked field goal. On Washington U.'s second offensive possession, junior quarterback Adam Meranda capped a 12-play, 74-yard drive with a 26-yard touchdown strike to junior Jeff Buening. On the Bears' next possession, sophomore A.C. Dike capped a nine-play, 52-yard drive with a 1-yard touchdown run.

Meranda finished the day 16 of 31 for 216 yards and one touchdown. Buening had a season-high seven catches for 125 yards as he eclipsed 1,000 receiving yards for his career (1,044). Brad Duesing added eight receptions for 63 yards as he moved into a tie for third place in school history with 124 career receptions.


JOE ANGELES

Junior defensive back Jon Kuerzi blocks a field-goal attempt by the University of Chicago during the Oct. 18 Homecoming Game at Francis Field. The Bears notched a 28-0 shutout in the University Athletic Association opener.

Other updates

The **volleyball** team secured the No. 1 seed in the UAA Championships Nov. 7-8 after winning all four matches last weekend at the UAA Round Robin 2 in Rochester, N.Y. WUSTL defeated No. 15 Emory University (3-2), Carnegie Mellon University (3-0), Brandeis University (3-0) and No. 9 New York University (3-1) to improve to 7-0 in UAA play and 24-3 overall. Against Emory, sophomore setter Kara Liefer posted her second straight triple-double with 12 kills, 10 digs and 39 assists. Senior Katie Quinn also registered 10 kills in the match, while sophomore Nicole Hodgman had 25 digs.

The **men's soccer** team recorded its seventh shutout of the season as the Bears defeated Brandeis, 1-0, in UAA play Oct. 19 in Waltham, Mass. Washington U. completed a weekend sweep of NYU and Brandeis with a goal in the 62nd minute. Senior midfielder Steve Bujarski sent a through ball ahead to classmate Scott Siebers, who beat Brandeis goalie Ben Doyen-Charon to the ball and chipped it home for his team-leading third goal of the season. The Bears trailed 1-0 at the half against NYU before notching consecutive goals to take a 2-1 lead in the second half. Siebers scored his second goal of the season to tie the score at 1-1 and sophomore John Horky headed home his first goal of the season to put WUSTL up 2-1. The Violets answered as they sent the game to overtime with a goal in the 88th minute. Seven minutes into the first overtime, junior Allen Gleckner scored the game-winner on a breakaway.

The **women's soccer** team moved into a tie for second place in the UAA with a tie and a win. The Bears opened its trip to the East Coast with a 2-0 victory at NYU Oct. 17. After a scoreless first half, junior Stephanie Ackerman and freshman MeghanMarie Fowler-Finn netted goals for the Bears in the second half as WUSTL posted its ninth win of the year. Junior Charlotte Felber posted her seventh shutout of the year in goal. Two days later, the Bears rallied from a 1-0 deficit to post a 1-1 tie at Brandeis. Brandeis got the game's first goal in the 19th minute, but the Bears answered barely three minutes later when Fowler-Finn scored her seventh goal of the season when she intercepted a Brandeis error deep in the Judges zone and sent it home. Felber made a career-high 17 saves in the victory, the third-most saves in school history.

The **men's** and **women's cross country** teams swept the team titles Oct. 17 at the Millikin Cross Country Classic at the Hickory Point Golf Club in Forsyth, Ill. The men's team was the top finisher of 18 teams, while the women were tops of 17 squads. Sophomore Brennan Bonner paced the men with his third-place finish in the five-mile run, clocking 25:00.94. Classmate Greg Reindl followed close behind, finishing fourth in 25:07.19. Junior Maggie Grabow led the women with a fifth-place finish, registering a time of 21:54.20 in the 6K race.

The **men's** and **women's swimming and diving** teams were swept at Drury University Oct. 18. The men fell, 151-91, and the women lost, 127-109. Despite the loss, sophomore Michael Slavik had a solid outing, posting a pair of individual wins. Slavik won the 50-yard freestyle in 22.15, and he also finished first in the 200 backstroke (1:58.82). On the women's side, sophomore Tracey Hendrickson placed second in the 500 free and 200 free.

Men's tennis senior Brian Alvo advanced to the semifinals of the ITA National Small College Tennis Championships before dropping his final two matches en route to a fourth-place finish. Alvo posted a 7-5, 4-6, 6-3 win over No. 29 Kevin Casey of the University of California, Santa Cruz, in the quarterfinals before dropping a 3-6, 6-3, 6-2 loss to the eventual champion.

The No. 13 **women's doubles** team of Rathi Mani and Lauren Zwick placed sixth of eight teams at the ITA National Small College Tennis Championships in Corpus Christi, Texas. The Bears dropped their opening match to 11th-ranked Whitney Henderson and Kelli Howard of Pomona-Pitzer Colleges, 5-7, 7-6 (3), 1-0 (10-7). In the consolation semifinals, Mani/Zwick posted a 6-4, 6-0 win over Jackie Govornik and Kristen Klepacki of the College of New Jersey before dropping a 6-2, 6-1 match to Erin Coughlin and Lauren Gerlach of Denison University in the consolation finals.

Record

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Washington University in St. Louis

Notables

Introducing new faculty members

The following are among the new faculty members at the University. Others will be introduced periodically in this space.

Peter S. Hovmand, Ph.D., joins the George Warren Brown School of Social Work as assistant professor. He earned a master's degree in social work and an interdisciplinary doctorate in social science with concentrations in social work, psychology and cognate in feminist philosophy/women's studies from Michigan State University. Before coming to Washington University, Hovmand was an instructor at Michigan State University and a male outreach coordinator for Michigan State University's Safe Place. His teaching interests include system dynamics, research methods, human behavior in social environments and social work and oppression. Hovmand's research focuses on domestic violence, system dynamics and "flight simulators" for social work.

Deborah M. Megivern, Ph.D., joins the George Warren Brown School of Social Work as assistant professor. She earned master's degrees in social work and in personality psychology from the University of Michigan. Megivern earned her doctorate in social work and psychology from the University of Michigan in 2001. Prior to joining GWB, Megivern was a postdoctoral research fellow with the Center for Mental Health Services Research at GWB and a program evaluator for the Great Lakes Area Supported Education Replication. She was also a mental health policy instructor at GWB. Her research interests include economic and social disadvantage as factors for development of mental illness, access to social/economic capital for people with mental illness and early intervention and recovery from mental illness. Megivern's teaching focuses on mental health; diversity, social justice and multiculturalism; social policy, research and evaluation methods; and poverty and economic justice.

Carolyn Kornfeld Lesorogol, Ph.D., joins the George Warren Brown School of Social Work as an assistant professor. She earned a master's degree in African studies from the University of California, Los Angeles and a master's degree in anthropology from Washington University. In 2002, Lesorogol earned a doctorate in anthropology from the University. Before joining the GWB faculty, Lesorogol was an instructor in the Washington University Department of Anthropology. Her research interests focus on the political and economic dynamics of social and cultural change. She has conducted fieldwork among semi-nomadic pastoralists in Kenya, where she has lived and worked for more than ten years. Seven of those years were spent doing applied work in the fields of community development, rural development and participatory development.

MARY BUTKUS

Bear-y big Junior Adam Schaffer (left) and senior George Schweitzer put some finishing touches on a 6 1/2-foot-tall bear head, part of a 35-to-45-foot-tall monument on the grounds of the Theta Xi fraternity house. Members of the fraternity teamed with Chi Omega sorority members to build the massive bear out of wood, wire and tissue paper to celebrate Homecoming Oct. 17-19.

Campus Authors

Joel Seligman, J.D., dean of the School of Law and the Ethan A.H. Shepley University Professor

The Transformation of Wall Street (Third Edition): A History of the Securities and Exchange Commission

(Aspen Publishers, 2003)

Seligman

Before the creation of the Securities and Exchange Commission (SEC), sales of stock and bonds were dominated by private investment banks such as J.P. Morgan and Co.

Bear raids and stock market pools were often reported in the press. Shortly later, the New York Stock Exchange was characterized as a private club.

After the stock market crash of 1929-1932, congressional hearings unearthed evidence of fraudulent bond sales, preferred stockholder lists, stock pool operations, corporate officials who used inside information for their own benefit, and journalists who touted securities to manipulate prices.

In response, the SEC was created in 1934.

Since then, the investment community has witnessed the abolition of fixed commission rates, the establishment of a national electronic securities market system and the enactment of important legislation — most recently, the Sarbanes-Oxley Act of 2002.

In the third edition of *The Transformation of Wall Street*, Joel Seligman once again draws on extensive personal interviews to provide a comprehensive examination of the origins, accomplishments, successes and failings of the SEC, from its creation to the Sarbanes-Oxley Act.

— *From the book jacket*

The third edition of *The Transformation of Wall Street* is available at the Campus Store in Mallinckrodt Student Center (935-5500) and the Washington University Medical Bookstore (362-3240) in the McDonnell Pediatric Research Building.

Whitaker

– from Page 1

northeast corner of the Hilltop Campus. Construction began in June 2001 and was completed in December 2002 at a cost of $41 million. Classes have been held in the building since this spring.

The Whitaker Foundation gave Washington University $10 million for the building. It is named after Uncas A. Whitaker, an inventor, engineer and philanthropist who encouraged and supported collaborative medical research involving engineers, scientists and physicians.

The Danforth Foundation's support of Whitaker Hall was part of the lead gift to the Campaign for Washington University in 1997. At the time of the gift's announcement, Wrighton noted that one of the major needs this core campaign gift would address would be the support of biology and biomedical sciences.

Christopher I. Byrnes, Ph.D., the Edward H. and Florence G. Skinner Professor of Systems Science and Mathematics and dean of the School of Engineering & Applied Science, oversaw the Department of Biomedical Engineering's creation and development, along with William A. Peck, M.D., the Alan A. and Edith L. Wolff Distinguished Professor of Medicine and former dean of the School of Medicine.

"Jim McKelvey, former dean of engineering and now senior professor of chemical engineering, helped pioneer the early cooperation between engineering and medicine," Byrnes said.

"Washington University now operates one of the best biomedical engineering departments in the country. With the support of Larry Shapiro, dean of the School of Medicine, this department will continue to make great advances and will have a significant impact on enhancing the region's scientific base."

Frank C.P. Yin, M.D., Ph.D., chair and the Stephen F. and Camilla T. Brauer Professor of Biomedical Engineering, heads a dynamic department just 6 years old yet already flourishing. With 10 full-time faculty and more than 270 undergraduates and nearly 70 graduate students — including 50 at the doctoral level — biomedical engineering is one of the most popular fields of study at the University.

Shepley Bulfinch Richardson and Abbott, a Boston firm specializing in buildings for the fields of education and medicine, was the architect for this three-story, 55,000-net-square-foot structure. The design emphasizes interactive spaces and allows flexibility in the research laboratories. McCarthy Building Cos. provided construction management services.

Whitaker Hall's features include a 250-person auditorium, a 2,000 square-foot, three-story atrium, 22,000 square feet of wet and dry laboratory space for research and teaching, a nanofabrication room, a library and a landscaped courtyard on the building's south side.

The building also contains student and faculty lounges, several classrooms and five faculty office "pods." Each pod contains offices, a conference room and a support staff area.

"We in the biomedical engineering department are delighted to have this wonderful facility that enables us to work with our many students and collaborators and provide them with the best resources available in an ideal working environment," Yin said.

"Uncas A. Whitaker Hall for Biomedical Engineering is named for a remarkable man. We hope that the work we do here honors him, and we anticipate that many discoveries and breakthroughs will occur in this building in the future."

Of note

Michael L. McDaniel, Ph.D., professor of pathology and immunology, has received a one-year, $45,000 Postdoctoral Fellowship Award from the American Diabetes Association. …

Christopher Nichols, M.D., research fellow, has received a one-year, $9,330 grant from the American Society for Surgery of the Hand for research titled "Determinants of Motor Neuron Pathway Specificity." …

Lingchei Letty Chen, Ph.D., assistant professor of Asian and near eastern languages and literatures in Arts & Sciences, has received a one-year, $25,000 grant from Chiang Ching-Kuo Foundation for International Scholarly Exchange for research titled "Globalizing the Self: Writing China, Cultural Authenticity, and Hybridity." …

Tzyh-Jong Tarn, D.Sc., professor of systems science and mathematics in engineering, has received a three-year, $260,000 grant from the National Science Foundation for research titled "Collaborative Research: Theory and Simulation Study for Communicating Autonomous Underwater Vehicles." …

Kurt Thoroughman, Ph.D., assistant professor of biomedical engineering in engineering, has received a three-year, $239,477 grant from the Whitaker Foundation for research titled "System Identification of Force Generation as Humans Learn Novel Dynamic Environments." …

Lihao Xu, Ph.D., assistant professor of computer science in engineering, has received a three-year, $202,152 grant from the National Science Foundation for research titled "NR: Collaborative Research: Scheduling for Efficient and Reliable Data Broadcast." …

James A. Conder, Ph.D., research associate of earth and planetary sciences in Arts & Sciences, has received a one-year, $95,133 grant from National Science Foundation for research titled "A Numerical Investigation of the Relative Importance of Different Melting Mechanisms at Volcanic Arcs." …

Sally A. Goldman, Ph.D., assistant chair and professor of computer science in the School of Enginering & Applied Science, has received a three-year, $314,999 grant from the National Science Foundation for research titled "Applying Multiple-Instance Learning to Content-Based Image Retrieval." …

Maxine Lipeles, J.D., professor of law, has received a two-year, $60,000 grant from the Educational Foundation of America for research titled "Air Quality Project." …

Chenyang Lu, Ph.D., assistant professor of computer science and engineering in engineering, has received a three-year, $499,957 grant from the National Science Foundation for research titled "ITR: Collaborative Research: Spatiotemporal Protocols and Analyses for Wireless Sensor Networks." …

Carolyn J. Anderson, Ph.D., associate professor of radiology, has received a two-year, $382,500 grant from the National Cancer Institute for research titled "Targeting Matrix Metalloproteinases for Tumor Imaging."

Obituary

Marvin L. Oftedahl, former supervisor of the undergraduate chemistry laboratories at the University and senior researcher at Monsanto Co., died Monday, Oct. 13, 2003, of renal failure at his home in Warson Woods, Mo. He was 72.

Washington People

DAVID KILPER

Ashley Lucas, a senior in civil engineering, and Diego Giraldo, a graduate student in civil engineering, examine a model bridge with their mentor, Shirley J. Dyke, Ph.D., associate professor of civil engineering.

A real mover & shaker

Shirley J. Dyke's research sends vibrations across the world in the fields of structural dynamics and control

BY TONY FITZPATRICK

It's strictly an observation, but Shirley J. Dyke, Ph.D., associate professor of civil engineering, thinks that structural and dynamics engineers like her sometimes develop an interest in vibrations based on an attraction to music.

"I played numerous instruments when I was younger — guitar, violin, piano — and I think being a musician can make you intrigued about dynamics," Dyke says. "I've found that people with interests in structures and dynamics often have musical backgrounds.

"Vibration is the phenomenon that captivates you."

In just seven years, Dyke has sent rippling vibrations throughout her field, university and community with her internationally renowned contributions to a better understanding of structural dynamics, structural control, vibration and earthquake engineering, and with her teaching and outreach activities.

She continually makes innovations that enable buildings and bridges to become "smart" structures — ones that can adapt to physical changes. She is a popular teacher and colleague with involvement in numerous University programs and national and international research initiatives.

For instance, she co-founded and directed REUJAT — Research Experiences for Undergraduates in Japan in Advanced Technology — a program that allows 10 civil engineering undergraduates from universities nationwide to travel to Japan and collaborate on original research projects. REUJAT is an extension of the National Science Foundation's (NSF) domestic Research Experience for Undergraduates (REU) program, in partnership with professors at Florida A&M and Tokyo universities.

This summer, one of Dyke's graduate students, Diego Giraldo, accompanied Washington University senior Ashley Lucas to Japan, where Lucas worked with Japanese professors, completed a paper and made presentations on her research project.

"This collaboration is very valuable," says Dyke, who travels to Japan each summer to mentor the REUJAT Washington University undergraduate for two weeks.

"To an engineer, especially one in structural dynamics, Japan is like a toy store. Infrastructure is of vital interest to the Japanese, and there are many structural innovations that American students really need to see. They also experience a unique culture."

Dyke is director of the Structural Control and Earthquake Engineering Laboratory, located in Urbauer Hall, where researchers seek ways to reduce losses and property damage from earthquakes.

With her colleagues in the School of Engineering & Applied Science, she is involved each summer with undergraduates participating in the NSF's Research Experience for Undergraduates program, where students at Washington University and other institutions benefit from working with faculty mentors on special research projects.

Dyke's prominence in structural engineering arose from her research on a device called the magnetorheological (MR) damper. In the mid-1990s, she was the first civil engineer to develop ways to use this device for seismic protection.

The MR damper is a device that acts like a shock absorber on a structure. Three horizontal metal plates are sandwiched together on a 6-foot-tall model building in her lab, with the outer two plates connected to one end of the building, the middle one connected to the other end. When a hydraulic system moves the model building (simulating an earthquake), the middle plate slides back and forth between the two outer plates.

An MR fluid coats the middle plate, turning into a solid when a small electrical current is applied from a battery. The electrical current creates a magnetic field, which causes iron particles in the fluid to join together, solidifying the fluid and making the three plates stick together, reducing the shaking.

The whole process happens in fractions of a second, and when the current is removed, the solid turns back to liquid. The process thus dampens the vibration so that it cannot accelerate through and up the floors of a building or structure.

Sensors are attached to the building's floors to measure the swaying when the shaking occurs. This data are immediately relayed to a computer that calculates where to turn the power on and put the dampers to work to lessen the shaking.

Early in her research, Dyke found that MR dampers reduce the peak acceleration by an impressive 50 percent.

Today, MR dampers are in place on a bridge in China and in a museum in Tokyo.

Dyke is not finished testing the devices, however. She's moved on to experiments and analytical studies on torsion (twisting) response and fault tolerance — where a system can function even when the hardware malfunctions.

"We're trying to make smart buildings," she says.

She's collaborating with Japanese researchers on what's known as structural health monitoring, in which sensors are placed onto a structure and can tell what kind of damage occurred to the structure following a large, dynamic event such as an earthquake. The data gathered by these sensors allows a before-after kind of comparison.

She is conducting similar structural-health monitoring projects as close as Cape Girardeau, Mo., and as far off as Cali, Colombia. There she and her collaborators are using sensors previously installed on a spectacular bridge (one of the landmarks of the country) that provide them with real-time data to do structural-health monitoring on the fly.

One of Dyke's biggest contributions to her field is her formation and directorship of the University Consortium on Instructional Shake Tables (UCIST), funded by NSF's Division of Undergraduate Education, and headquartered at Washington University.

Begun in 2001 to encourage more formal training in structural dynamics and earthquake hazard mitigation at the undergraduate level, 23 institutions drawn from the three national earthquake centers began cooperating in the purchase of bench-scale, earthquake-simulating "shake tables."

The equipment is used to integrate earthquake engineering into the undergraduate curriculum. Classroom demonstration and "hands-on" experiments are conducted at all levels to have a significant impact on the entire civil engineering curriculum. The experiments are distributed to interested parties and made available on the UCIST Web site.

Additional consortium opportunities include nationwide student competitions and undergraduate research experiences. UCIST has grown to include nearly 70 institutions in just three years and is considered a model for future nationwide educational efforts.

"We're really pleased with the growth and development and high-quality projects of the consortium," Dyke says. "It was formed because we recognized the field of earthquake engineering at the undergraduate level needed a vigorous curriculum to meet the challenges of preventing or lessening earthquake damage to structures."

Dyke is a true mover and shaker, not only in her field but also in her community.

Last year, she participated in "Moving and Shaking … An Introduction to Engineering," a program coordinated by University colleagues Ruth Okamoto, D.Sc., assistant professor of mechanical engineering, and Shelly Sakiyama-Elbert, Ph.D., assistant professor of biomedical engineering. This learning laboratory, sponsored by the St. Louis Area Gifted Resource Council, is a series of hands-on lab sessions designed to interest middle-schoolers, especially girls, in engineering.

Together with civil engineering department Chair Kevin Z. Truman, Ph.D., Dyke founded the Graduate Teaching Fellows in K-12 Education (GK-12). Engineers from diverse departments are represented in this community outreach effort that gives fellowships to 10 engineering graduate students and several undergraduates each year.

These students work with middle-school teachers and students at Gateway Middle School in St. Louis and Steger 6th Grade Center in Webster Groves, Mo., on engineering projects that also involve other science areas.

"I consider Shirley to be at the forefront of young researchers in the world in the field of structural dynamics and control," says Phillip L. Gould, Ph.D., the Harold D. Jolley Professor in civil engineering. "Her ability to interact with many colleagues, some much her senior, and also many students to address very important problems and to respond to opportunities in the fields of structural control, health monitoring and education are particularly impressive."

That Dyke is an international star in engineering is all the more remarkable considering she was initially drawn to the veterinarian profession as a high-schooler in Palos Heights, Ill., a southwestern suburb of Chicago. She credits a high school teacher for pointing her toward engineering.

At the University of Illinois, Dyke majored in aerospace engineering because of a longtime love of the space program. Structural control and vibration apply to aerospace equipment as well as buildings and bridges.

She credits Larry Bergman, Ph.D., her academic adviser at Illinois, with getting her in touch with Bill Spencer, Ph.D., who worked in structural control and vibration at the University of Notre Dame. While she intended to pursue only a master's, she ended up with a doctorate from Notre Dame in 1996 and came to WUSTL shortly after graduation.

She calls Bergman and Spencer her mentors and role models.

"They've been wonderful," she says. "I call on them for advice to this day.

"Washington University has been very supportive. It's the perfect size and has a great reputation."

Shirley J. Dyke

Hometown: Palos Heights, Ill. (southwest suburb of Chicago)

Education: B.S., aerospace engineering, University of Illinois, with honors, 1991; Ph.D., civil engineering, University of Notre Dame, 1996

Courses she teaches: "Probability and Statistics for Civil Engineers" (juniors and seniors); "Advanced Structural Dynamics"; "Experimental Methods in Structural Dynamics" (both graduate-level)

Hobbies: Biking, swimming, reading science fiction