**Medical News:** Obesity best treated with long-term approach

**Washington People:** Joan C. Downey's world experiences inspire faculty, students

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**Gravity waves**

Signals open completely new sense

**BY TONY FITZPATRICK**

Sometine within the next two years, researchers will detect the first signals of gravity waves—weak ripples from the far edges of the universe passing through our bodies every second.

Proposed by Einstein’s theory of general relativity, gravity waves are expected to reveal previously unanswerable mysteries of the universe. Wave-Mo Suen, Ph.D., professor of physics in Arts & Sciences, is collaborating with researchers nationwide to develop waveform templates to comprehend the signals to be analyzed. In this manner, researchers will be able to determine what the data represent—a neutron star collision, for instance, or black holes colliding.

“In the past, whenever we expanded our bandwidth to a different wavelength region of electromagnetic waves, we found a very different universe,” Suen said. “But now we have a completely new kind of wave.

“...It’s like we have been used to walking...and now we are opening up a new world.”

Gravity waves may provide information about our universe that is either difficult or impossible to obtain by traditional means. Our present understanding of the universe is based on the observations of electromagnetic radiation, which is emitted by individual electrons, atoms or molecules and is easily absorbed, scattered and deflected in all sorts of ways.

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**See Gravity, Page 6**
Board of Trustees elects three new members

A t its May 2 meeting, the University’s Board of Truste es elected three new members — Maxine Clark, chief executive officer of Build-A-Bear Workshop, and William R. Neaves, president and chief executive officer (CEO) of the Stowers Institute for Medical Research in Kansas City, Mo.; and John D. Weil, president of the Clayton Management Co. Chancellor Mark S. Wrighton made the announcement.

Re-elected to the board for 2003-04 were Chairman John F. McDonnell, retired chairman of the board of McDonnell Douglas Corp.; John R. Emery, chairman, president and CEO of Commerce Bancshares Inc.; and R. Jay Ketner, Jr., managing member of Bennett, Hut & Co. LLC; Barbara Schaps Thomas, senior vice president and chief financial officer of HBO Sports/PPV; and Ann Rubenstein Tisch, chairman of the board and CEO of Gateway Associates LP; and Gordon W. Philpott, M.D., newly elected chair of the Alumni Board of Governors, who will serve his second year as an alumni representative to the Board of Trustees. He is professor emeritus of surgery in the School of Medicine.

The board named student representatives for 2003-04. Announced as undergraduate student representatives were Ryan Lawson, School of Arts Class of 2004, and Elizabeth Snelloss, Math & Sciences Class of 2004. Named graduate student representatives were Xin Xia Du, B.S., candidate in systems science and mathematics in engineering, Class of 2004; and David E. Taylor, B.S., candidate in electrical engineering, Class of 2004.

Among his comments to the trustees, Wrighton noted that the Office of Undergraduate Admission will hold a banquet May 31.

Midwest Geometry Conference hosted by WUSTL

By Tony Fitzpatrick

The University will host an annual break from your daily routine — a two-day Midwest Geometry Conference convenes May 30-June 1.

The conference, which has been held at Midwest institutions annually since 1991, is sponsored by the National Science Foundation (NSF) and the University. The conference organization committee includes lunches May 31 and June 1 as well as an evening banquet May 31.

The conference will continue from Noon-5 p.m. On the night of May 31, there will be a panel discussion on future directions and problems in the field. Presentation topics include three-manifolds, hyperbolic geometry and geometric group theory; geometry, analysis and probability on discrete groups; minimal submanifolds, and surface immersions in space. Registration is free, and participation includes lunches May 31 and June 1 as well as an evening banquet May 31.

For more information, go online to math.wustl.edu/geometry.

A little higher ... ooh, right there!

Patrick Morris of the Burke Mountains Massanutten is a victim of the "lower" tension out of senior Paula Rijos during the Stress Free Zone, April 29 in The Garphyll in Mallinckrodt Student Center.

The two-day event, co-sponsored by the Office of Student Resources, Health Promotion and Wellness and the South 40 Fitness Center, attracted nearly 100 students who were looking to de-stress and take a break from studying for finals. In addition to massages, healthy snacks, games, movies and arts and crafts were offered.

Staff Day to offer awards, lunch, activities

By Andy Clendennen

The annual break from your routine is right around the corner, as the University’s Staff Day will be May 19.

The event, in its 28th year, honors personnel for their contributions to the University’s success and will kick off at 10:30 a.m. with the Staff Service Award and Recognition Ceremony in Edison Theatre.

Chancellor Mark S. Wrighton will host the program and will be assisted by the University’s vice chancellors and deans. The ceremony will honor those with 10, 15, 20, 26 and 30-plus years of service.

Also presented will be the sixth annual Gloria W. White Distinguished Service Award, recognizing a staff member for exceptional effort and contributions that result in the enhancement of the University.

A buffet lunch and social gathering will follow at noon in Bowdoin Plaza. In case of inclement weather, lunch will be in Mallinckrodt Student Center.

From 1-3 p.m., open activities for staff members include wallyball and racquetball, swimming, running on Bushyhead Track and use of the fitness center in the Athletic Complex. Those preferring something less strenuous can have a caricature drawn or try their luck at bingo, bridge and other games in Holmes Lounge.

A new event will be offered this year. Tyson Research Center personnel will be offering tours of the facility, a bird-watching event and a visit to the abandoned Misreck Hollow mining town and quarry cave. For information on the tours, call Joyce Duncan at 935-8430.

In addition, the following group activities will be available:

• Golf at Forest Park: Call Bev Owens at 935-8462. Goldens will have box lunches at the park before their 12:15 p.m. tee time.

• A Hilltop Campus tour: Call Jim Burmeister at 935-5801.

• A bike ride in Forest Park: Call Bobbe Winters at 935-6241.

• Softball: Call Tom Lauman at 935-5967.

• A hike ride in Forest Park: Call Paula Moms of 935-8691.

• Volleyball: Call Janine Prost at 935-7383.

• A bike ride in Forest Park: Call Bev Owens at 935-8462. Goldens will have box lunches at the park before their 12:15 p.m. tee time.

For more information, call 935-7736.
Obesity problems best treated with long-term approach

O'Leary neuroscience prizes announced

The departments of Neurology and Thoracic and Cardiovascular Surgery recently named the winners of the 2003 James L. O'Leary Research Prizes in Neuroscience, Torsion and Nutrition. The winners included the following researchers:

- Sydney J. McCormick, M.D., for his work on the role of neuronal plasticity in the control of body weight.
- Robert A. Langer, Ph.D., for his work on the development of biodegradable microspheres for drug delivery.
- David A. Aguayo, M.D., for his work on the role of inflammation in the development of obesity.

BY JIM DRYDEN

It's time to get ready for winter swim season. It's not unusual for people to feel like they are getting fat. But with the right attitude, behavior therapy, and exercise programs, patients can learn to lose weight and adopt healthier lifestyles.

The center's new behavioral therapy clinic, the center's new behavioral therapy clinic, is dedicated to helping people lose weight safely and effectively.

More than one of every three Americans has medically significant obesity. The problem has become a major public health crisis.

O'Leary neuroscience prizes announced

BY JILZ Z. RECKERS

Joel D. Cooper, M.D., the Graves A. Graham Professor of Surgery and chief of the Division of Cardiothoracic Surgery, was recently elected the 69th president of the American Association for Thoracic Surgery. Cooper, an internationally recognized surgeon, is known for his long career in surgery. The association is the nation's oldest and foremost cardiothoracic surgery professional organization. It includes more than 1,000 members representing the leadership of academic and clinical thoracic surgery practice worldwide. Consisting primarily of academic physicians, the association facilitates educational and research opportunities in academic and clinical medicine. Cooper is the fourth faculty member from the School of Medicine to be elected president of the association. The first three were Graham, M.D., former Bixby Professor of Surgery and head of the Department of Surgery (1927), Tom Burford, M.D., former president of the American College of Surgeons, who had been president of the association since 1983, and Tom Burford, M.D., for his work on the development of new surgical techniques.

The lecture will be given by .

Cooper earned a bachelor's degree from Harvard College in 1960 and a medical degree from Harvard Medical School in 1964. He joined the University in 1968 after serving on the faculty at the University of Toronto for 16 years. His research has led to significant advances in the surgical treatment of lung cancer. For example, he developed lung-volume reduction surgery, in which surgeons remove sections of lung damaged by emphysema.

Cooper is investigating the use of airplane stems to treat emphysema.

In addition to authoring more than 350 scientific publications, Cooper has received several international honors and awards, including the Jacobs Innovation Award from the American College of Surgeons and an honorary doctorate from Bar Ilan University.

He is also a member of the Society of Cardiothoracic Surgeons of Great Britain and Ireland, an honorary fellow of the Royal College of Surgeons of Edinburgh and an honorary fellow of the Russian Academy of Science.

Distinguished honors

(From left) Harvey A. and Doriseman Friedman chat with John C. Morris, M.D., director of Center for Aging, at the third annual Friedman Lecture and Center for Aging Update May 6 in Anheuser-Busch Hall. Chancellor Mark S. Wrighton presented the three with medallions in recognition of the Friedman's recent endowment of the Harvey A. and Doriseman Friedman Distinguished Professor of Neurology, which Morris holds. The Friedmans also recently funded the new Friedman Award — given to non-physicians who have made "outstanding contributions to patient-oriented research on aging" — presented this year to Mary A. Coeis, research instructor in neurology.


### Tuesday, May 13


**Friday, May 16**

**4 p.m. Radiation Oncology Lecture.** "Tiyong.” Stephen H. Terry, prof, of radiation oncology. Harry Stewart Building, Rm. 602. 362-8566.

**3:45 p.m. Molecular Microbiology & Pharmacology Seminar Series.** *‘The Functional Ramifications of Zinc Toxicity in Neurodegeneration and Imaging’* Thomas Sollner, asst. prof, of cellular physiology and genetics. Clopton Aud. 4950 Children’s Place. 454-8560.

**Monday, May 19**

**Nonn, Molecular Biology & Pharmacology Seminar Series.** *‘The Role of the Prodomain in BMP-4 Within the Prodomain Regulates BMP-4 Activity’* Steven B. Scholnick, asst. prof, of molecular and cell biology, U. of Calif., San Diego. Rebstock Hall, Rm. 426. 454-8566.

### Monday, May 22

**Nonn, Molecular Microbiology & Pharmacology Seminar Series.** *‘The Role of the Prodomain in BMP-4 Within the Prodomain Regulates BMP-4 Activity’* Steven B. Scholnick, asst. prof, of molecular and cell biology, U. of Calif., San Diego. Rebstock Hall, Rm. 426. 454-8566.

### Monday, May 29

**4 p.m. Ophthalmology & Visual Sciences Seminar.** *‘Beyond Intensive Insulin Therapy.’* Jay J. Krieger, prof, of internal medicine. 475-8720.

### Commencement Week

**For more information, check the University Events Calendar online or visit the Commencement Office at 935-5985.**

**Wednesday, May 14**


**Thursday, May 15**

**8:30 a.m. Radiation Oncology Lecture.** "Tiyong.” Stephen H. Terry, prof, of radiation oncology. Harry Stewart Building, Rm. 602. 362-8566.


**10 a.m. Diploma Hooding Ceremony.** Diploma hooding and recognition ceremony in Graham Chapel. 3 p.m.; reception following in Graham Chapel. 454-8566.

**11 a.m. School of Business: Undergraduate Diploma distribution and recognition in the Athletic Complex, Events Center, 9 a.m.** 454-8566.

**11:30 a.m. School of Engineering & Applied Science: Undergraduate diploma distribution in Lothrop Hall.** 1 p.m.; reception following in the Gargoyle, Recreational Sports Center, 454-8566.

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**Monday, May 22**

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**Men's tennis head to quarters final**

The No. 11 men’s tennis team advanced to the national quarterfinals for the second time in school history by defeating No. 15 Keryn College, 3-0, in the NCAA Tournament second round, at the Vetts Sports Chlo. WUSTL will now have a week off before competing in the quarterfinals, May 14-16, at Gustavus Adolphus College in St. Peter, Minn. Washington U. (14-10) took the early lead by taking all three doubles matches to claim the doubles point. Freshmen Neil Kotecha and Goldi Ahmad improved to 17-2 as they rolled in No. doubles. In singles, the Bears won all four matches that were completed.

**Other updates**

The baseball team wrapped up another successful campaign as the Bears went 3-3 last week to finish the regular season 23-16. WUSTL will now have a week off with a split against Webster University. The Bears dropped the opener as she fell to 13-4 on the season. The Bears went 3-3 last week to finish the regular season 23-16.

**New E.M.B.A. program meets once a month**

A new residential executive master of business administration (E.M.B.A.) degree program is beginning in September at the Olm School of Business. Classes will meet just once a month from 8:00 a.m. to 5:30 p.m. on a Thursday, Friday and Saturday at the Charles K. Knight Executive Education Center. The program grants a master of business administration degree in only 18 months.

**Trustees**

Medical school's Peck, Stahl give presentations — from Page 2

BY ROBERT BATTERSON

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**Phase III Housing**

Roof trusses, metal deck and porches have been completed. The first floor and second floor and roof installation work is under way. Masonry work has begun on the east and west sides of the building. The northeast quadrant of the building is near completion.

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Reactions
Understanding mechanisms may provide valuable insight — From Page 1

WOODY KERN"...and thus turn the reaction on."

Loomis said. "We center on the cluster so that we can see geometries changing, delay times between the lasers, a movie of the reaction at the reaction pathway."

starting with a single ultrashort laser pulse, a computational genetic learning algorithm is used to generate a very complicated reaction scheme. This could be especially important for industrial applications of chemical reactions which could generate millions of dollars in profit. Simulating a reaction pathway by blocking the formation of halogen waste products, which are formed in conjunction with industrial processes, also may provide valuable insights into research directions are not limited to molecular reaction schemes. In collaborations with the research group of William E. Reiter, Loomis and graduate student He and graduate student David Hold are able to control the internal motion within small molecules, and they have begun to characterize the evolution of small bonds within molecules. "Several research groups have recently gotten to this ability level where they can use the fine tuning of electronic properties for applications. There is a large investment from federal government into industry to develop semiconductor nanostructures that devices with faster and more efficient electronic properties can be developed," Loomis said. "However, now scientists are still in the early stages of understanding how positive and negative charges behave in these small systems, whereas quantum mechanics dictates the energetics and relaxation of the charge distribution. Loomis plans on using single molecule spectroscopy to image a new possibility in chemistry.

Smoking
Genetic factors correlate with withdrawal symptoms — From Page 1

studied twins to evaluate factors that may contribute to addiction: genetics, shared environmental factors and unique environmental factors. The data came from the Vietnam Era Twin Registry, a national pool of physical and behavioral information drawn from 4,000 pairs of male twins—identical, fraternal and singletons (a twin whose co-twin could not be reached for questioning) — and the University of Illinois to do follow-up telephone interviews that included questions about smoking habits. The researchers measured the direction of genetic factors by comparing sets of identical and fraternal twins who share exactly the same genes, to fraternal twins, who are more genetically similar than other siblings. Shared environmental factors address experiences shared by twins which are raised by the same parents, living in the same neighborhood, going to the same school — that might influence both identical and fraternal twins. Between the variables of elimination, unique environmental factors, or non-shared experiences, account for any remaining influence.

Xian and his colleagues studied more than 1,400 pairs of twins who were lifetime smokers and both twins both had attempted to quit at least once. The twins were asked whether they had ever experienced any of 12 symptoms of nicotine withdrawal ranging from restlessness, anxiety and headache to nausea. Using statistical analysis, the researchers then calculated the odds of having at least one of these smoking symptoms. They found that smoking correlated with the overall severity of nicotine withdrawal and severe symptoms, and that they varied across individuals. The researchers then calculated the association between nicotine withdrawal symptoms and failure to quit smoking. By categorizing the groups of identical versus fraternal twins, the researchers were able to make conclusions about the degree to which genes control the results. Somewhat surprisingly, results were statistically equivalent whether shared environmental factors were included or not. The researchers determined that shared environmental factors did not significantly contribute to either failed attempts to quit smoking or to nicotine withdrawal, so they eliminated them from their final results. But unique environmental factors seemed very important in determining a person's odds of quitting.

For example, whose parents are smokers might have a more difficult time to stop smoking than others who don't smoke. One twin was born with a close friend or family member who recently stopped smoking, who stopped smoking due to a smoking-related illness such as lung cancer might have an easier time to stop smoking.

Reduced genes influence failed smoking cessation and nicotine withdrawal, it does mean that we can't influence our own choices.

Xian said. "People will still have free will in all cases, they can always stop smoking, even if their genetic makeup might make it very difficult."

But genetic factors correlate strongly with nicotine withdrawal, and the various symptoms that By smoking, they attempt to quit a go long way to explain why their attempt will be successful.

Xian said recently developed drugs for smoking cessation, by alleviating some of the discomforts of withdrawal, may help smokers. But unique environmental factors include or not. The researchers determined that shared environmental factors did not significantly contribute to either failed attempts to quit smoking or to nicotine withdrawal, so they eliminated them from their final results. But unique environmental factors seemed very important in determining a person's odds of quitting.

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**Awards to be presented**

**Arts & Sciences**

**Distinguished Alumni Awards**

trustee, Cornelius, with his wife, taught an evening course on the thesis on nuclear weapons. He the new opportunity irresistible, and religious history. Other writings on civil rights, and enrolled in the Women's renovated conference room in the 2001 reunion. He is a member of the Arts & Sciences National Council and recipient of the University's Distinguished Alumni Award.

**Group Creativity: Music, Theater, Collaboration**

A jazz quartet. The cast of a stage play. A work team, a classroom discussion seminar, or a family planning a summer vacation. In all of these groups, creativity and collaboration are essential. And perhaps the most creative collaborating groups are music and theater ensembles. How each action function in the ongoing flow of the performance, and how it relates to the context that emerges during the performance. The author explores participants' choice of language and self-perception, the sub-Group Creativity is essential for anyone interested in collaboration and creativity. Sawyer, who has been studying group creativity in jazz and theater set-Group Creativity in Conversation; Improvisation and Braque," he said.

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An encompassing view of the world

Pediatrician Joan C. Downey's rich experiences inspire students and physicians

By Kimberly LeYing

From a small petroleum camp, John fell in love with the windy Magdalena River to receive medical supplies to the impoverished villages along the Magdalena River. Every year, Graciela organized reunions. A young man from a sailing club, John was drawn to neonatology during his medical career work.

After a year at Harvard, the couple married and took 18 medical programs and worked in a lab for his applications to M.D./Ph.D. programs and went to work in lab for a year so he and Downey could apply to medical school together. A year later, both were admitted to Harvard Medical School. After a year at Harvard, the couple married and took 18 members of Downey's extended family to a monthlong Colombian honors program. While they traveled, the couple was escorted by 40 armed guards to protect them from kidnappings and drug-related violence.

The focus on family is deeply rooted in Downey's Latin American heritage and was stressed to her growing up both in the United States and South America. "St. Louis is a fabulous place for us to live because Midwestern values prioritize the family, which is consistent with Latin values," she says. "We all work hard for our achievements but never at the expense of family."