

*Devoted to noteworthy happenings  
at the medical school*

## Organ Donations from the ER

Ordinarily, ER patients aren't eligible to be organ donors, mostly because of logistical, but also ethical, concerns pertaining to withdrawal of care. But the University of Pittsburgh's Michael DeVita says, "We have a moral obligation to allow those who want to donate to do so." The MD professor of critical care medicine and internal medicine is leading a Health Resources and Services Administration-funded project called Condition T (the "T" stands for "transplant"). It's intended to develop protocols to harvest much-needed transplantable organs, particularly livers and kidneys, after cardiac death in the ER.

DeVita emphasizes that Condition T in no way compromises patient care and involves only patients who've indicated an intention to be an organ donor.

Emergency rooms aren't typically equipped for organ donation procedures, so DeVita has his work cut out for him. "We're going to need the same level of attention to detail that we use for our living patients," he says.

DeVita expects to implement a pilot version of Condition T at UPMC Presbyterian this summer. That may serve as a national model. —Joe Miksch



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## FOOTNOTE

More than 60 University of Pittsburgh students gyrated, shook their respective tail feathers, and/or got down for 24 consecutive hours in December. Their long-term limbo raised \$60,000 for the University of Pittsburgh Cancer Institute. The marathon was part of a five-year Office of Fraternity and Sorority Life effort to raise \$500,000 for cancer research.

Participants were proud of the sum raised; turns out though, boogying for 24 can be more demanding than you might think. Pitt student Jeffrey Bergman summed it up for the *Pittsburgh Tribune-Review*: "Not pleasant."

## CLUE TO SUDDEN CARDIAC ARREST

In 1996, a man was having lunch at his workplace in Erie. Then he fainted. After a series of tests, doctors diagnosed the man with Brugada syndrome, a recently discovered and rare inherited arrhythmia. More than a decade later, after studying the man's family genetics, the University of Pittsburgh's Barry London led a team that found the mutation that causes the disease.

London, an MD/PhD who is Pitt's chief of cardiology and director of the UPMC Cardiovascular Institute, says that the identification of the mutated gene GPD1-L may provide clues to treating all kinds of arrhythmias, which lead to more than 250,000 sudden cardiac deaths per year. He believes the gene plays a role in stabilizing heart rhythm by regulating sodium channel traffic to the cell membrane. Finding other genes that affect rhythm, London says, will lead to a deeper understanding of how the heart keeps ticking in time. —JM



## A&Q

### On Autism's Origins

The cause of autism isn't known, but the disorder affects one in 150 children worldwide. For more than two decades, Nancy Minshew (shown above) has sought to untangle autism's complexities. She is an MD professor of psychiatry and neurology at the University of Pittsburgh and directs Pitt's center devoted to understanding the disorder. Her group recently received a \$9.6 million National Institutes of Health grant to establish an Autism Center of Excellence. We caught up with her this spring after she'd been energized by advances reported at international scientific meetings.

#### On recent advances

There is movement toward identifying a genetic link. Recent studies have found mutations in a number of genes coding for synapse formation and maintenance as well as the formation of neuronal connections. Also, promising progress has been made in possible treatment, with adult mouse models of the disease [in particular fragile-X-syndrome and Rett-syndrome-related autism] exhibiting pharmacologic rescue [the use of drugs to treat genetic problems] in response to emerging drugs. Treatments used in animals are far from a drug used in humans, though. That process can take a long time.

#### What we know about how the disorder develops

There's early overgrowth of the brain in most children with autism. Before you get gross changes in brain size, there are earlier changes that have to go on. If by six to nine months, you're already seeing the acceleration in brain size to the extent it's changing head circumference, the disorder started way before then. The majority of the evidence suggests that it's a disorder of connections of cortical neurons and abnormal development of synapses that starts in the last part of pregnancy and proceeds.

#### On the future of autism research

Just like those with Down's syndrome, each person with autism has a qualitative similarity to the next person but a wide range of severity of expression, and we have to begin to account for that. If you know the why, you can ask, "What can I do to change that?"

#### Her question for us

Why is this disorder not a high priority, an action item for those in positions of influence? It is a serious public health issue. It is a venue for learning about the genetic, neurobiologic, and cognitive bases of human social, communication, and reasoning competencies. —Interview by Joe Miksch

## Next Generation

**D**avid Chou, a Howard Hughes Medical Institute–National Institutes of Health Cloister Scholar, is spending a sec-

ond year in Bethesda, Md. The University of Pittsburgh med student's research focuses on immune regulation related to infection caused by *Leishmania major*, an intracellular parasite. Chou says his mentor, Yasmine Belkaid, chief investigator of the Mucosal Immunology Unit at the National Institute of Allergy and Infectious Diseases, has inspired him. And Chou plans to maintain contact with other students from the HHMI-NIH program. "You meet 41 other medical students from across the country, and you form a tight bond with that group," Chou says. "They may very well be future colleagues."

**MD/PhD student Cyrus Raji spoke at a recent Radiological Society of North America meeting on his findings linking hypertension to Alzheimer's.** Raji is in his second year in Pitt's Cellular and Molecular Pathology graduate program. "I think the main point of the findings is that good heart health equals good brain health," says Raji, who hopes to identify other preventable and treatable Alzheimer's risk factors like high blood pressure. Raji loves the puzzle-solving element of research. "It's like the ultimate Rubik's Cube," he says, adding that research also offers "the ability to create knowledge that could impact more people than I could ever see individually as a clinician."

**Kate Dickman wasn't quite ready to head back to the States at the end of her Fogarty Research Fellowship in Uganda last year.** Instead, the Pitt med student accepted a Howard Hughes Fellowship to stay on and continue her tuberculosis research. This year's project: exploring the prevalence of multiple or mixed infections of TB. For Dickman, research is more than just fulfilling—it has its thrilling moments, too. She recalls the euphoria of first identifying multiple strands in one sample. "I shouted, 'It's multiple infections!' and went running around the lab," she says. "When things are going right, I get excited and think that maybe I'll do something worthwhile that might help out a lot of people."

—Meaghan Dorff

## Knocking Down Silos

The five students taking the University of Pittsburgh's Interprofessional (IP) Health Care Teams Elective looked on, some open-mouthed, as associate professor of surgery Henkie Tan extracted a living donor's kidney at UPMC Montefiore. IP team member and med student Marc Larochelle helped prepare the kidney before the team, guided by a transplant fellow, rushed the organ to its recipient in Children's Hospital of Pittsburgh of UPMC.

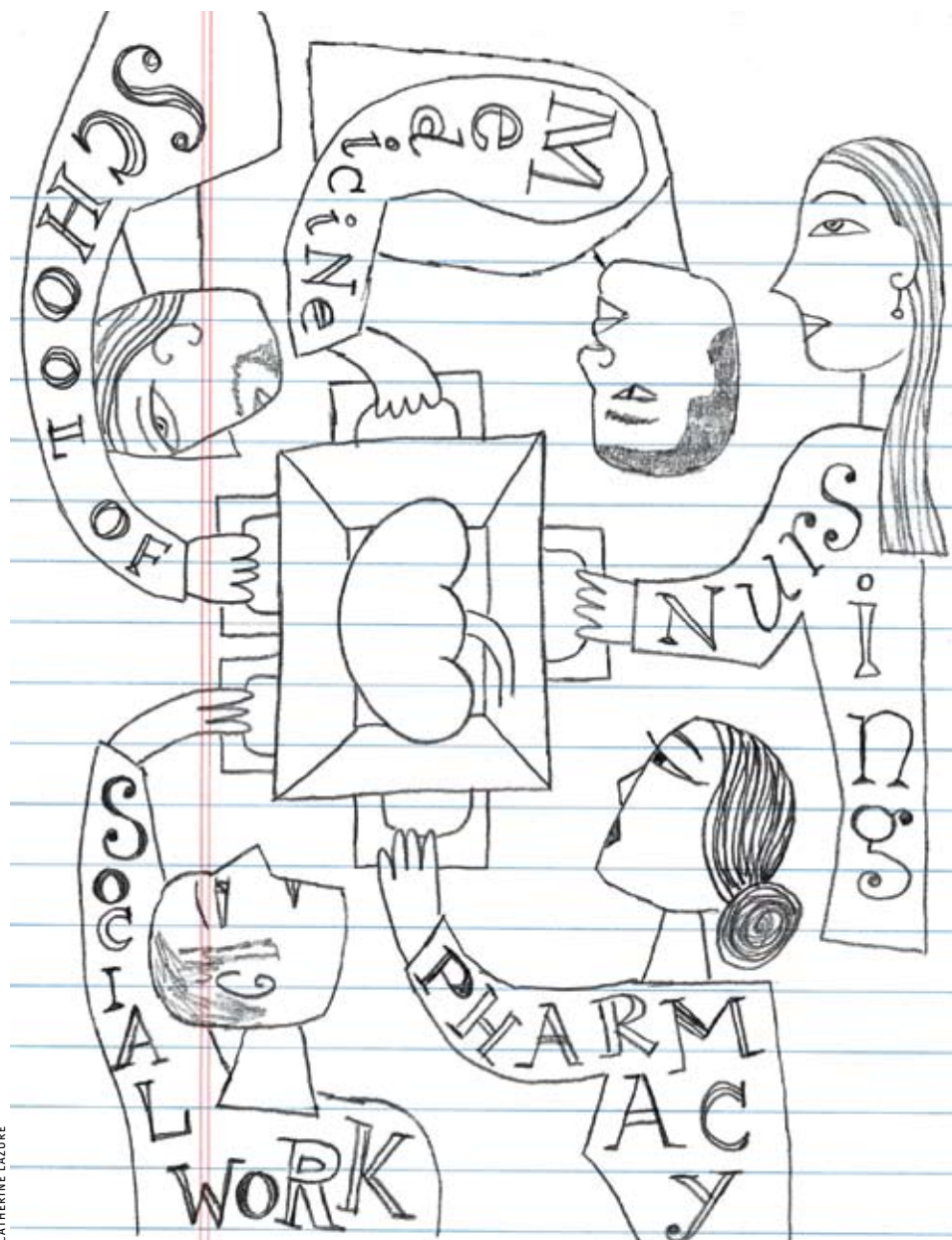
"We needed to get that organ to the recipient as quickly as possible," recalls Larochelle's IP classmate Kristen Shimko, Pitt pharmacy student. "It was educational in a different way than anything else I've experienced."

During the implant procedure at Children's, Pitt professor of surgery Ron Shapiro tossed questions at the team: "What's this artery? What's this structure?" The students—from Pitt Schools of Social Work, Pharmacy, Nursing, and Medicine—conferred with one another as they huddled close to the action, careful not to breach the sterile field.

A few of Larochelle's classmates had never seen an operation before—watching gave them insight that their specialized educations wouldn't normally have provided. Larochelle, in turn, reeled at the problem a nutritionist posed on another day: If a hospital's liberalized diet policy lets a diabetic patient order cake with lunch, his doctor might be the last to know. "I'm definitely more likely to follow up on that issue," Larochelle says.

A group of faculty representing Pitt's medical, pharmacy, social work, and nursing schools designed the elective two years ago to promote interprofessional understanding. The professors also structured the course to help students gain a deeper sense of what it's like to live with chronic illness. This year's students focused on patients with end-stage renal disease. Course organizers will add a cardiology component next year, as well as another student team.

"Often, you imagine somebody siloed in one role, and it helps to understand the breadth of what they do," Larochelle says. —MD



## Holland Gives Fisher Tribute

James Holland proposes that some breast cancers are related to a virus carried by common household mice. The Distinguished Professor of Neoplastic Diseases at Mount Sinai School of Medicine visited Pittsburgh in February to give the annual Bernard Fisher Lecture, named for the Distinguished Service Professor of Surgery at the University of Pittsburgh.

The incidence of human breast cancer in regions with the mouse species *Mus domesticus* lends support to his suggestion that the human mammary tumor virus (a variant of what's carried by *Mus domesticus*) should be added to the growing list of known cancer-causing viruses. (See

related story on Pitt researcher discoveries on p. 10.)

Fisher himself (MD '43) overturned the prevailing view that breast cancer was a sequential and orderly disease. Much of that work was done with his brother, recently deceased pathologist Edwin Fisher (MD '47, see story on p. 38). The Fishers also were at the forefront of popularizing lumpectomy, as an alternative to radical mastectomy, and tamoxifen as effective treatments for breast cancer.

"He's done more than any other man on the planet to change the outlook on breast cancer," Holland says of Bernard Fisher, who, he adds, has been a friend for more than 40 years. —JM



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## THE MOUSE THAT Poured

After unraveling the mouse genome, scientists made the data widely available. Now you can even find it on Pitt's Oakland campus. Outside the new Biomedical Science Tower 3 stands a sculpture consisting of 14 perforated stainless steel tubes. Each tube represents a mouse chromosome. Water glides down the tubes, creating a waterfall within each. At night, multicolored lights shine through the perforations. The John C. and Darlene D. Mascaro Water Wall was made possible with a donation from the Mascaro Construction Company. Jack Mascaro, a Pitt engineering grad, is chairman of the company, which was the construction manager for the tower. —MD

## Appointments



Davis

**Paula Davis** assumes the newly created post of assistant vice chancellor for diversity for the schools of the health sciences at the University of Pittsburgh.

She is responsible for ensuring that the University's Schools of Medicine, Dental Medicine, Health and Rehabilitation Sciences, Nursing, Pharmacy, and Public Health attract and retain students and faculty from underrepresented groups.

Davis has worked at the School of Medicine since 1994. In 2005 she became the school's assistant dean of admissions, financial aid, and diversity.



Angus

**Derek Angus** considers Pitt's School of Medicine to be at the vanguard in the field of critical care. So when he was offered the position of department chair, he was elated. "This is one of the most important [positions] in the field," he says. "Anyone who loves critical care would love to have this job."

Angus, an MD, has been at Pitt since 1991, when he was appointed assistant professor of anesthesiology and critical care medicine. He has authored or co-authored 137 papers, mostly focusing on the consequences of severe infection, particularly the epidemiology of sepsis and septic shock. He intends to guide research toward deep-

ening the understanding of how the body's immune system reacts to insults and how the essentially internally inflicted damage of sepsis might be treated or prevented.

Angus also hopes to lead the way in the use of information management systems to help standardize patient care in the fast-paced world of intensive care units.

**Minh-Hong Nguyen** and **Cornelius Clancy** have joined the School of Medicine's Division of Infectious Diseases from the University of Florida. Nguyen, an MD professor of medicine, also serves as director of the Transplant Infectious Diseases and Antimicrobial Management Programs at UPMC. She and Clancy, an MD associate professor of medicine and director of the Mycology Research Unit at Pitt, research the ways in which fungal infections prey on immunosuppressed patients.

The pair is particularly interested in understanding the pathogenesis of, and developing diagnostic tests, vaccines, and drugs for, the common fungi *Candida* and *Aspergillus*. These fungi frequently attack, and kill, those with AIDS, as well as patients recovering from bone marrow or solid organ transplants.

Nguyen and Clancy's work is funded by the National Institutes of Health, the U.S. Department of Veterans Affairs, and the American Lung Association. —JM



Nguyen



Clancy