

*Devoted to noteworthy happenings
at the medical school*

GETTING CURES TO THE CLINIC

The Clinical and Translational Science Institute (CTSI) at the University of Pittsburgh was founded on the principle that more needed to be done to speed up the process of transforming achievements made in the laboratory into therapies used in the clinic.

The National Institutes of Health seems to think that CTSI is doing a fine job, if one can draw inferences from a recent five-year, \$67.3 million grant. Pitt's CTSI is one of 10 such institutes nationwide to have its funding renewed in 2011. Since its founding in 2006 with an \$83.5 million grant, CTSI (a collaboration between Pitt, UPMC, Carnegie Mellon University, and the Urban League of Greater Pittsburgh) has had success in creating computer software to improve the diagnosis of melanoma, made advances in the study of sleep disorders, and funded research into the efficacy of low-cost prescription drug programs—to name just a few of the thousands of studies CTSI has supported.

—Joe Miksch

FLASHBACK

On Jan. 14, 1931, the Associated Press reported, “It all started when somebody telephoned that ‘two wild men’ were running loose on the campus.”

A wagonload of Oakland police officers was dispatched, capturing Myrlen Morgan and Thomas Wilkins, certain that the two were insane. Not long after, police released the men, quite certain of their sanity! “The whole thing was explained by a member of the faculty later. [For an experiment on respiration,] students Myrlen and Thomas were asked to run about the campus to demonstrate physical exertion.”

ILLUSTRATION ROB KELLY (BASED ON PHOTO COURTESY T. KENSLER)



Kensler receives the Friendship Award from Vice Premier Zhang Dejiang

Kensler Lauded Abroad

Thomas Kensler, a PhD professor of pharmacology and chemical biology in the University of Pittsburgh School of Medicine, recently earned the National Friendship Award from the People's Republic of China. According to China's State Administration of Foreign Experts Affairs, the honor is the country's highest given to “foreign experts for outstanding contributions to the country's economic and social progress.”

Kensler's research centers on trying to understand how aflatoxins, carcinogens produced by fungi that commonly grow in many dietary staples, contribute to the high incidence of liver cancer in the country's population. He is also testing ways to detoxify our bodies of the carcinogen. Liver cancer is among the three deadliest cancers worldwide. In some regions of China, one in 10 people dies from the disease.

On Sept. 30, on the eve of the National Day of China, Kensler joined other public health advocates, economists, and manufacturers as they were honored in the Great Hall of the People in Beijing.

“I have made the investment of my time and my energy,” says Kensler, “and the payback is great friendships. I'm always happy to go to my second home.” —Jessica Tittler



TIM GREEN

A&Q with Aaron Baum on Finance and Health

With a bachelor's degree in mathematics from the University of Chicago, Aaron Baum (Class of '15) worked as an equities trader before entering the University of Pittsburgh School of Medicine's Clinical Scientist Training Program (CSTP). After his first year, Baum took a leave of absence to spend nine months in Haiti. There, he attempted to improve health care access for rural Haitian women and their families by working with Fonkoze, a microfinance bank. Now, he is taking another leave from med school to work toward a PhD in sustainable development at Columbia University.

How a bank improves access to health care

What we were doing was capitalizing on existing infrastructure. The way Fonkoze works is through a network. ... Most of the action, as far as the loans, takes place in the village centers where Fonkoze employees distribute loans and get repayments. The village centers are where women congregate twice monthly in an organized fashion, so you can use that opportunity to provide other services. We trained one client in each center to be able to identify malnourished children using a color-coded upper-arm circumference strip, and then we partnered with Partners in Health to provide care for those children. That was the first project I started doing.

We're piloting a minipharmacy as a social business model where one client per village is trained to distribute essential health commodities (such as oral rehydration solutions, deworming pills, and vitamins) for a small profit. Fonkoze also provides micro-insurance for catastrophe and will soon provide it for cholera. So you can level off your risk as a Fonkoze client.

What a degree in sustainable development offers

[It's] essentially an economics PhD plus one in natural science. It's great if you are interested in health systems, which by default is a cross-sectoral issue.

What he'll be doing 10 years from now

I don't know. Whatever I end up doing, I hope it will be related to community health systems and will bridge implementation and research. I hope that I have clinical training, but I also hope there is research involved. I also want to be building something concrete.

His question for us

What are your ideas for starting financially viable community health programs via microfinance or other existing rural infrastructures? —Interview by Nick Keppler

Next Generation

Earning a Doris Duke Clinical Research Fellowship is a feather in the cap of a young physician-scientist. Rachel Orler

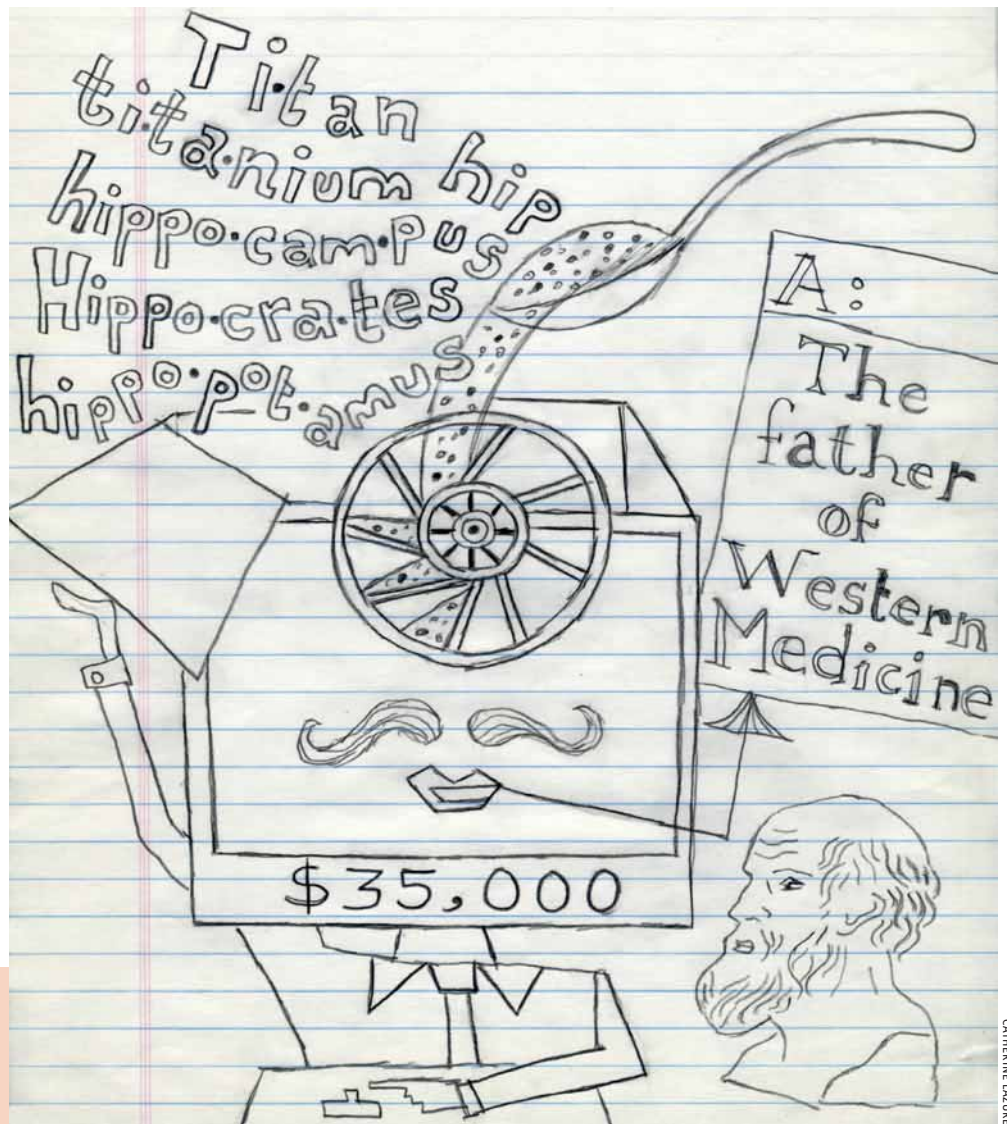
(Class of '13), a 2010–11 Duke fellow (one of eight from the school that academic year), made the most of her time away from the classroom. Last fall, Reid was the first author on an *Archives of Internal Medicine* paper titled “Associations Between Physician Characteristics and Quality of Care.” (The research, done with Ateev Mehrotra, assistant professor of medicine at Pitt as well as a policy researcher at RAND Corp., began as her scholarly research project.) As a Doris Duke fellow, Reid also researched the possible impacts of retail clinic visits on primary care medicine. Oh, and during her Doris Duke year, she earned an MS in clinical research at Pitt. She's spending this academic year at the Center for Medicare and Medicaid Innovation in Baltimore, Md., working on ways to improve health care while lowering costs. Next? “I'm thinking I'll do an internal medicine residency and then probably a general medicine fellowship. And after that, I'll aim to be a physician-researcher doing health policy work.”

Pitt med boasts nine new Doris Duke fellows for the 2011–12 academic year. Gillian Harrison is studying the safety and efficacy of modified stromal cells in patients with stable ischemic stroke. Ryan Li is looking to define predictors of osteoarthritis after ACL reconstruction. Rachael Maciasz is researching palliative care communication techniques for cancer patients. Brian Nolan is evaluating tools used to assess response to anti-inflammatory therapy in patients with rheumatoid arthritis. Michael Schowalter is undertaking the proteomic analysis of pure- and mixed-type desmoplastic melanoma, a rare metastatic skin cancer. Ben Sprague is investigating noninvasive cardiovascular imaging. Ryan Stephenson seeks to understand the role of Toll-like receptors—proteins that play a key role in the innate immune system—in head and neck cancer. Lisa Tseng is evaluating the relationship between weight change and physical function at the advent of menopause. And Jacky Yeung is endeavoring to sort out the role of molecular defects related to the rare, and often fatal, brain cancer glioblastoma. —JM

Dr. Watson, We Presume

After about five years of labor, the brainiacs at IBM made a very smart machine called Watson. It understands English (using software to extract meaning from language) and kicks tail at *Jeopardy!* In early October, Dan Cerutti, IBM vice president for Watson commercialization, and Steven Shapiro, former chair of medicine at Pitt and current chief medical and scientific officer for UPMC, met at Science2011 to talk about how Watson could be of service to medicine.

Cerutti and Shapiro say that Watson will be fed just about every scrap of information available to the medical profession and use its speed and unique ability to derive likely answers to complex questions. Watson is expected to be of use in diagnostics and as a way for patients and doctors to work together before they even meet. UPMC's Technology Development Center is in negotiations with IBM to help turn Watson the *Jeopardy!* champ into Watson, MD. Stay tuned. —JM



CATHERINE LAZURE

Reilly New Chair of Medicine

John Reilly Jr., an MD, is now the Jack D. Myers Professor and Chair of the Department of Medicine at the University of Pittsburgh, replacing Steven



Reilly

Shapiro, who recently became UPMC's chief medical and scientific officer. He was recruited to Pitt by Shapiro in 2008 to become the department's vice chair of clinical affairs; the two physicians had worked together in Boston.

Reilly is known for his studies on the genetic and environmental factors associated with chronic obstructive pulmonary disease (COPD) and the role of alveolar macrophage enzymes in emphysema, COPD, and lung cancer.

"I think medicine is going to change a great deal over the next decade," says Reilly. "What we need to focus on is working with the health care system to put tools in the hands of clinicians so they can measure the kind of care they're providing and can improve systems for delivering care."

On the research front, Reilly says, "We have a lot of scientific talent here, and we need to take full advantage of the patient population that we have through UPMC. Being able to access that clinical data to feed scientific research makes us the envy of most academic department chairs across the country." —JM

CLASS OF 2015 CHEAT SHEET

We thought you'd like to meet a few of the med school's new students:

Michael Burrow learned cued language, a type of phonemic signed language, so that he could communicate with his two sisters who are deaf. He later became a cued-language teacher and a certified cued-language transliterator. The 24-year-old entered the University of Utah after taking two years off for a mission trip to Thailand.

Lauren Zammerilla graduated from the University of Pittsburgh in three years but made the most of her time while she was here. The cheerleader and Phi Beta Kappa member was most proud of her sorority's fundraising efforts (\$10 million nationally) for St. Jude Children's Research Hospital.

Alexis Chidi entered Pitt's premed guaranteed admissions program at just 16 years old. Since graduating in 2009, she has earned a Master of Public Health degree from Johns Hopkins University, where she was one of a handful of students selected for the Global Health Field Research Award. The award allowed her to travel to Zambia to test the efficacy of using oral fluid samples to monitor immunity to malaria.

Before coming to Pitt, Air Force Academy graduate John Jochum served in the Air Force for 12 years as an F15-C Eagle pilot. The reason for the career change is the same one that first led him to the military: "It's very rewarding to wake up every day knowing that my hard work will be focused on serving others," he says. —Alexis Wnuk



(VERY TINY) LEAVES OF GRASS

This photo earned **Donna Beer Stolz** second prize in Nikon International's Small World Competition. Taken through a confocal microscope, this half-millimeter of grass (magnified 200 times) naturally fluoresces, showing off its blue trichomes and the green and red cells of the blade. How the image came to be is a somewhat convoluted story: Stolz, a PhD, is associate director of the Center for Biologic Imaging and associate professor of cell biology and physiology at the University of Pittsburgh. She met North Side artist Diane Samuels at a bar mitzvah. Samuels was working on a project mapping Sampsonia Way, an effort that included sampling and preserving the alley's flora. After talking with the artist, Stolz decided to put a bit of the grass under the 'scope. And, "Wow!" (Another Stolz image won 19th place, and the entry of her Pitt colleague, Jonathan Franks, was named an "image of distinction.") —JM

Connamacher in Hall of Heroes

Robert Connamacher, whose teaching efforts extend from an inner-city elementary charter school to Pitt's School of Medicine, has been inducted into the Student National Medical Association's Hall of Heroes. The organization, formed to assist medical students of color, bestowed the honor on Connamacher at its annual conference in Indianapolis last April. The SNMA established the Hall just two years ago and has inducted only a few individuals thus far.

"I'm sort of a pipeline by myself," says Connamacher, a clinical associate professor of family medicine at Pitt who earned his PhD in pharmacology from George Washington University in 1966, of his efforts across age brackets. The prof teaches a science program in the Urban League of Greater Pittsburgh Charter School in East Liberty. There, among other things, he orders students in grades one through five to run around

the other in configurations that model the parts of atoms. He also is the advisor for Pitt's Medical Explorers, a weekly program sponsored by the med school that gathers for advanced study high school students with an interest in medicine. (Connamacher says they look at autopsies: "There is always a gasp when we pull on a ligament and a finger moves.") In addition, he teaches summer classes for premed undergrads at Pitt, as well as courses at the School of Medicine. He has shepherded thousands of young people in his 45 years of running such programs in Pittsburgh.

Connamacher says he's honored to be inducted into the Hall of Heroes but adds that the "greatest reward for me is the number of students who may not necessarily go on to medicine but find some direction through these classes." —NK