

*Devoted to noteworthy happenings*

*at the medical school*

## WISNER LEADING THE WAY

Katherine Wisner's work regarding the treatment of depression during pregnancy and the postpartum period recently earned her the 2011 American Medical Women's Association Women in Science award.

Wisner, an MD professor of psychiatry, and of obstetrics, gynecology, and reproductive sciences, as well as of epidemiology at the University of Pittsburgh, directs the Women's Behavioral HealthCARE program at the Western Psychiatric Institute and Clinic of UPMC and serves as an associate investigator at the Magee-Womens Research Institute.

Her studies include determining the effect that the use of selective serotonin reuptake inhibitors have on the health of new mothers and infants and defining the pharmocokinetics of psychotropic drug use during pregnancy. Wisner is also evaluating novel treatments, including the efficacy of bright-light therapy for depressed pregnant women.

Wisner says she's humbled by the recognition and "very pleased to be named among the many women who have contributed so much to scientific advancement." *—Joe Miksch*

## FOOTNOTE

**The University of Pittsburgh as a whole published 7,483 research papers from 1981 to 1985. Not bad. From 2005 to 2009, though, that production nearly tripled to 22,457 papers, vaulting Pitt to 10th place in terms of the published academic output of public universities nationwide.**

**The data were compiled by Thomson Reuters and reported by *Science* and *The Chronicle of Higher Education*.**

CARMEN MOK




## Dementia and Depression

**Older adults who are depressed often experience mild cognitive impairment, as well. And depression in this population can be a precursor to dementia, says the University of Pittsburgh's Charles Reynolds.**

**Reynolds is an MD, the UPMC Endowed Professor of Geriatric Psychiatry, and director of the Pitt/UPMC Aging Institute. He has found that when older adults with both depression and mild cognitive impairment are treated with long-term antidepressant medication and donepezil, a cognitive enhancer used to treat Alzheimer's disease, they show improvement in their cognitive abilities, notably language, memory, and executive functions. They also have lower rates of conversion to dementia over a two-year period.**

**The study included 130 depressed adults older than 65 (roughly half took donepezil, the other half a placebo) who were recruited in collaboration with Pitt's Clinical and Translational Science Institute. The results were published in January in *Archives of General Psychiatry*.**

**Reynolds says the work was a unique collaboration between the National Institutes of Mental Health–funded Late Life Depression Evaluation, Treatment, and Prevention Center, which he directs, and the National Institute on Aging–supported Pitt Alzheimer Disease Research Center at UPMC. *—JM***



CAMI MESA

# A&Q

## Annie Silk: Reexamining Obesity

Pitt internal medicine resident Annie Silk (MD '08) has been worried about the challenges of examining obese patients since med school. "At first I thought I was just really bad at it," she says. But in comparing notes with her mentors and peers, she realized she was not alone.

It's no wonder. Literature on the topic is scant, she found, and medical texts almost always feature models with helpful bony landmarks. It's a dangerous oversight, given that 35 percent of adults are obese, and excess fat makes everything from hearing heart rhythms to finding tumors more difficult.

Silk brought her concerns to assistant professor of medicine and of epidemiology Kathleen McTigue—who was her mentor in the Clinical Research Training Program and is a national expert on obesity—who suggested she do some field research. Silk interviewed seasoned clinicians to ask for advice, and she came up with plenty of gems. (For example, to get a better listen at the ticker, lean the patent forward so the heart beats closer to the chest wall.) Silk organized these tips into a chart and drafted an accompanying commentary, both of which were published in the *Journal of the American Medical Association* (*JAMA*) in December 2010.

### On why this issue is so often overlooked

A lot of doctors don't think there's anything we can do, that the physical exam is just going to be harder with obese patients. I realize medical school is getting more and more condensed, but I think it's worthwhile [to learn to do this better]. We need to meet patients where they are. And now two thirds are overweight or obese.

### On the goal of her project

[McTigue] helped me realize that what I wanted was to get other doctors to realize that this is a serious problem—she suggested I submit to *JAMA*. I was happy it was also covered by the *L.A. Times* and CNN.com, because it brought the lay audience's attention to this hidden danger of obesity. It also caught the attention of medical educators, as I'd hoped. A physical-exam-course director in Arizona initiated an e-mail discussion with me and cc'd his colleagues. And [Pitt associate professor of medicine] Peggy Hasley told me she's already using the article in her physical exam course.

### Her question for us

Should obese patients be told that their physical exam may be less sensitive than a similar exam on a healthy-weight patient? *—Interview by Elaine Vitone*



## Next Generation

During their third year in the Medical Scientist Training Program, a joint MD/PhD program between the University of Pittsburgh and Carnegie Mellon University, all students take a grant-writing class.

The students write a mock F30 grant (technically, a Ruth L. Kirschstein National Research Service Award), which is the National Institutes of Health's individual training grant for MD/PhD candidates. Students critique one another's proposals as though they were on the NIH review committee.

Among the many lessons Corrine Kliment (MD '11/PhD '09) learned in the course was the importance of scope in a successful proposal. "If the project's too broad, somebody will read it and say, 'There's no way you're going to get all that done,'" she says.

Kliment used the class to write a grant to study the antioxidant properties of a protein in the lung.

"None of (the other students) studied oxidative stress or the lung," she says. "The class forced me to be able to communicate my work to people who weren't in my field."

Clayton Wiley, professor of pathology and director of the program, likens the class to a writing workshop "for a very specific kind of writing." It used to be that MD/PhDs like Wiley were trained in "the school of hard knocks." You write a grant application, "then somebody trashes it because you don't know how to write it," Wiley says. "It's like somebody asked you to write a sonnet, and you didn't know what the structure of a sonnet was. We teach them to write the sonnet."

Pitt's MSTP students now lead the country in F30s. (Pitt had 25, at last count, ahead of Washington University's 20 and the University of North Carolina's 18.) The program also trains students in the art of poster presentation, reading research papers critically (and quickly!), and medical ethics.

*—Reid R. Frazier*

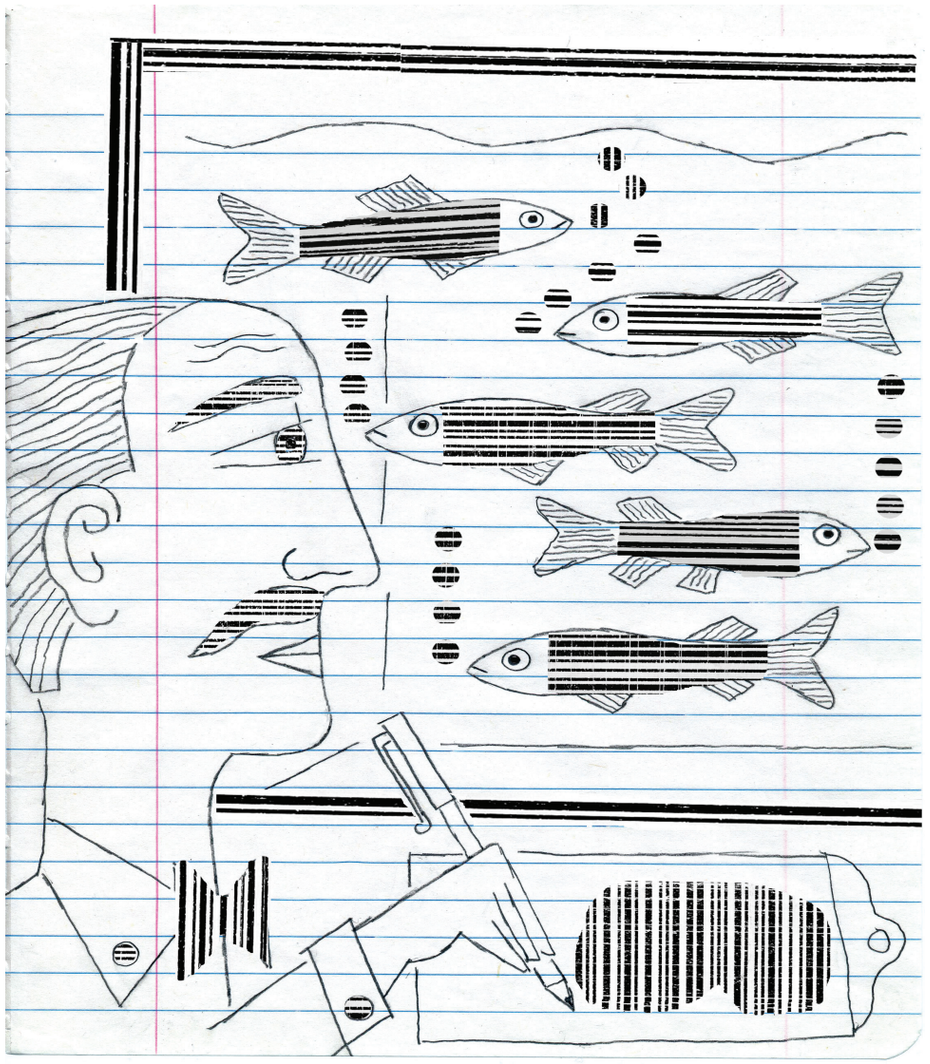
# The Fish That Saved Kidneys

**Kidneys subjected to acute injury can heal themselves, but do so slowly and often with scarring. In 2008, with the help of Billy Day, a PhD University of Pittsburgh professor of pharmaceutical sciences, Neil Hukriede, a PhD associate professor of developmental biology in the School of Medicine, found and tested a compound that may hold promise for patients experiencing renal injury. The compound, of a class called histone deacetylase inhibitors (HDACi), reversed the effects of acute kidney injury in zebra fish and did so without scarring.**

**Hukriede, in collaboration with investigators at Vanderbilt University, won a three-year, $2.8 million federal stimulus funding grant to pursue this line of inquiry further, this time in mice.**

**"It's very exciting," Hukriede says. "So far, we've seen a 30 to 40 percent increase in the rates of renal recovery in zebra fish and mice. We're hoping to find molecules that are more effective and show no toxicity at lower doses."**

**Hukriede and Pittsburgh colleagues, many of whom are members of the University's Drug Discovery Institute, will identify the compounds that may spur kidney regeneration. Vanderbilt collaborators will use the mouse model to see whether the compounds are hitting their targets and to test their toxicity.** ***—JM***



CATHERINE LAZURE

## WALK YOUR BRAIN

If you want to stave off Alzheimer's, it probably helps to keep moving, according to Cyrus Raji (MD/PhD '10). While in Pitt's Medical Scientist Training Program, Raji, now a UPMC Mercy intern who begins a radiology residency at UCLA next year, analyzed brain scans from more than 1,000 patients. He showed that high body-mass index correlated closely with a loss of brain volume in the hippocampus, a region implicated in Alzheimer's. (Because many late-stage dementia sufferers don't adequately feed themselves, Raji confined his study to people in the early stages of Alzheimer's, to exclude those who'd lost weight as a result of the disease.) Even when taking other risk factors for Alzheimer's into account—such as education level—the hippocampus was smaller in heavier individuals. Raji also analyzed the effect of walking on brain volume and found that people who walked six miles a week—even those who were obese—had a greater retention of both gray and white matter and a 50 percent reduction in Alzheimer's risk. *—RRF*

## FOOTNOTE

**Is your 3-year-old daughter's rash something to worry about? There's an app for that, a kind of first-aid kit that fits in your phone.**

**Children's Hospital of Pittsburgh of UPMC recently released ChildrensPgh, an iPhone/iPad/iPod Touch application available at Apple's iTunes store and the Children's Web site, that helps moms and dads figure out how best to care for their kids' health.**

**The app features 91 symptom-care guides, which are searchable through an alphabetical index, body-area index, and keyword search. Users can also access pediatric dosage tables for common over-the-counter medications, first-aid illustrations, and images to help identify symptoms, injuries, and common bites and stings.**



JOHN ALTDORFER

## WHITE CLOUD DAY

Richard Bondi (MD '69) gauges the distance to the green during the 12th annual Pitt Med Golf Outing at the Quicksilver Golf Club on a recent spring day (the first blessedly rain-free tourney day in years). Organized by students, this year's event raised $6,400 for the Dr. Edward Curtiss Leadership in Service Award, presented each year to a Pitt med graduate to offset educational costs. A general surgeon with UPMC, Bondi is a past winner of the foursome team tournament. His team came in second this year. Bondi's prescription for success is simple: "I always bring some young bucks with me." *—John Altdorfer*

# Name Dropping

**Jennifer Lippincott-Schwartz**, chief of the National Institute of Child Health and Human Development's Section on Organelle Biology, shares this thought on her lab Web site: "There's an understandable tendency for researchers to be tempted to extrapolate to grand conclusions. Part of the work of being a scientist, however, is to be disciplined enough to verify hypotheses through a multitude of techniques and approaches." In the spirit of hearing a multitude of perspectives on science, each year Arthur S. Levine, dean of the University of Pittsburgh School of Medicine and senior vice chancellor for the health sciences, invites an elite group of investigators to participate in Pitt's Senior Vice Chancellor's Laureate Lecture Series. This November, Lippincott-Schwartz, a PhD, will join in to discuss how imaging advances are changing scientists' understanding of cellular biology. Lippincott-Schwartz is a member of the National Academy of Sciences. She most recently was named the Keith Porter Lecturer by the American Society of Cell Biology.

**Richard Lifton**, who is chair of the Department of Genetics, the Sterling Professor of Genetics, and professor of internal medicine at Yale University, as well as a Howard Hughes Medical Institute investigator, will visit in September as a Laureate Lecturer. The MD/PhD's work on the genetics and physiology of cardiovascular and renal disease has uncovered mutations linked to 20 human diseases. His presentation is titled "Genes, Genomes, and the Future of Medicine." Lifton is also a member of the National Academy of Sciences and has been honored with the American Heart Association's Basic Science Prize and the American Society of Nephrology's Homer Smith Award.

The National Institute of Diabetes and Digestive and Kidney Diseases' **Reed Wickner**, an MD, visited in April and spoke about prions, those particles that infect cells and are responsible for such devastating diseases as Creutzfeldt-Jakob and mad cow. Among other things, Wickner's lab discovered that yeast have prions and that yeast prions can code for shape (as DNA molecules, working with RNA, code for amino acids in proteins). Although prions have devastating repercussions in mammalian cells, some researchers suggested that they might actually help yeast cells. Wickner, a National Institutes of Health Distinguished Investigator and member of the National Academy of Sciences, has found that's not the case: "Nature is not all goodness and light, as some people might have you believe." *—Erica Lloyd*