



ROBIN ROMBACH / PITTSBURGH POST-GAZETTE

## Overheard Students Get Leadership Advice

In the fall, the student chapter of the American Medical Association at Pitt invited former Secretary of the Treasury **Paul O'Neill** to offer some leadership insights. He spoke to more than 100 Pitt med students about their role as stewards in the quest to make health care a safer industry. When O'Neill was CEO of Alcoa, he drastically changed the company's culture of safety. During his 13 years there, injuries were reduced to near zero. As cofounder of the Pittsburgh Regional Health Initiative in 1997, he sought to use the Alcoa safety ideas to eliminate harm to patients and caregivers. In the first 18 months of the initiative, central line infections were reduced by 67 percent. Today he works independently with hospitals to help them get people out of harm's way. Second-year Pitt med student Akash Goyal, who helped organize the AMA talk, notes, "Hearing [O'Neill's] stories of what it truly means to be a leader in today's environment was especially crucial as we begin our journey into the health care field. His words certainly inspired me to be more aware, respectful, and proactive as a future physician, and I know that they had a similar impact on others, as well." We took the occasion to gain his insights, too.

### What challenges are facing medical workers today?

As measured by injuries to workers, health and medical care is the most dangerous industry in the United States by a lot. By a whole lot. Think about it—it's really remarkable, when you think about people doing construction up on towers and buildings and [working] in foundries and factories. ... How could health/medical care be the most dangerous industry in the country?

### How can health care leaders address worker injuries?

It starts with asking yourself really fundamental questions like, *What do you believe is the central tendency of human beings?* It's a framework for how to think. At one end of the spectrum ... is a belief that people are fundamentally trustworthy and value based. And on the other end of that spectrum is, *People are ne'er-do-wells, and you can't rely on them.* And the reason it's an important question is because it defines how an individual will try to lead them.

**What would you say to inspire leaders to do better?** Ask yourself every day: *Are you part of an organization that aspires to be the best in the world at everything that you do?* And if not, what things can you do to cause that to happen? —Interview by Robyn K. Coggins

## Next Generation

**B**esides being on their way to the impressive MD/PhD combo, Medical Scientist Training Program students at the University

of Pittsburgh are on a funding roll. Four of the trainees have recently been awarded \$48,000 each in the (get ready, it's a mouthful) Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral MD/PhD and Other Dual Doctoral Degree Fellows, sponsored by the National Institutes of Health.

**Taylor Eddens** received the award for his research on pneumonia caused by a fungus called *Pneumocystis*. Eddens is in his second PhD year; his project aims to characterize *Pneumocystis* antigens and develop potential vaccines to target them, especially in patients with compromised immune systems. Eddens published two papers on his work in 2014; his thesis advisor is Jay Kolls, MD professor of pediatrics.

**Matt Hedberg** also received the Kirschstein grant. Now in his third graduate year, he studies mitogenic drivers in head and neck cancer. With his mentor, Jennifer Grandis (MD '87, Res '93), who was a Pitt Distinguished Professor of Otolaryngology and Pharmacology and is now at UCSF, he coauthored a book chapter for *The Molecular Basis of Cancer*.

**Elizabeth Oczypok**, a third-year pathology trainee focusing on pulmonary disease, received a National Institute of Environmental Health Sciences grant. She and her mentor, professor of pathology Tim Oury, an MD/PhD, will study the activation of inflammatory immune responses in asthma.

It's perhaps not surprising that local musician and second-year trainee **Josh Sturm** is interested in tinnitus. He received a grant from the National Institute on Deafness and Other Communication Disorders to study the organization of midbrain neuronal connections that may contribute to the condition. His mentor and director of the auditory research group, Karl Kandler, a PhD, is a professor of otolaryngology and of neurobiology.

In other MD/PhD award news, **Brian Rosborough**, a newly anointed PhD, won the 2014 Dr. S. Sutton Hamilton MSTP Scholar Award for "meritorious contributions to the scientific literature while completing graduate studies." The immunologist is wrapping up his MD this year. —RKC

## GET ON UP

Maybe sitting isn't pretty. A new study backed by a \$3 million grant from the National Institutes of Health will examine whether simply sitting less—rather than exercising more—can help lower people's risk of developing type 2 diabetes and heart disease.

Elizabeth Venditti, a PhD assistant professor of psychiatry who holds a joint appointment in epidemiology at the Graduate School of Public Health, joins principal investigator Andrea Kriska, a PhD in epidemiology, and colleagues to track more than 300 adults age 50 and older who are likely to develop type 2 diabetes or metabolic syndrome. Subjects will attend 22 sessions about healthy living; wear pedometers; and have their weight, blood glucose, cholesterol, and activity levels objectively monitored to determine whether they are reducing their total sitting time and losing or maintaining weight.

"There are hundreds of decisions we can make that will impact how much we move," Venditti says. "We're trying to get people to keep better track of the chunks of time they spend sitting and come up with ways to interrupt it."

—Cheryl Alkon



CATHERINE LAZURE

## Ready or Clot

The brain can be an unforgiving organ. Lodged in the right place, a clot half the size of a Tic Tac is enough to cut off blood supply and bring the whole system crashing down. This is what happens during an ischemic stroke, something 130,000 Americans die from every year.

Thankfully, a new clot-retrieval procedure is gaining traction within the medical community. It's called endovascular treatment (ET).

During ET, surgeons insert a thin tube into the patient's artery by way of the groin. Once inside, X-ray-guided imaging allows the doctors to maneuver the device through the body and into the brain, where it can open blocked vessels and retrieve the offending clot.

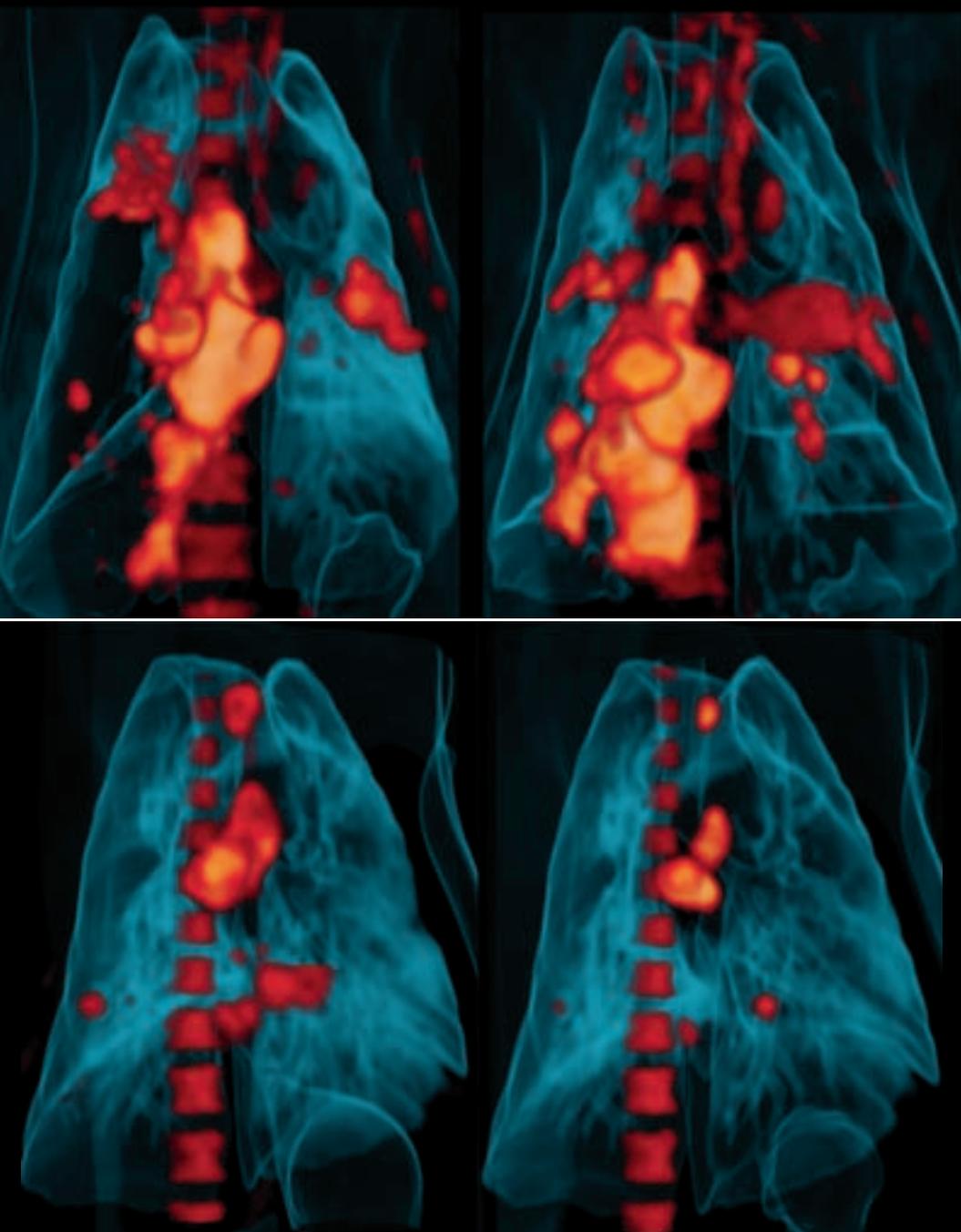
But the proof is in the patients. A study involving 316 cases reported in a March *New England Journal of Medicine* article showed ET increases positive outcomes for patients from 30 to 55 percent compared to standard treatment.

"The treatment effects are astonishing," says Tudor Jovin, an MD and director of the UPMC Stroke Institute, associate professor of neurology and neurosurgery, and leader of the University of Pittsburgh arm of the study.

As far as Jovin is concerned, ET is already the new standard of care. Or as he puts it, "You're more likely to survive if you get this procedure." —Jason Bittel

## FOOTNOTE

From multiple-award-winning documentary film to TV pilot: In *Code Black*, Ryan McGarry (MD '09) depicted the hectic and overcrowded rooms of LA County Hospital's emergency department, where he did a clerkship, and CBS has taken notice. A fictionalized series announced in January pits the ideals of doctors against systemic inequalities in the busiest ED in the nation. *Fifty Shades of Grey* actress Marcia Gay Harden is set to star, with McGarry executive-producing alongside David Semel, of *House MD* and *Heroes* fame.



COURTESY: M. TERESA COLEMAN

## RESEARCHERS' PET CT

Current treatments for multidrug-resistant tuberculosis are imprecise and lengthy—chemotherapies drag on for up to two years, and long-term side effects of the drugs are brutal. Pitt's JoAnne Flynn, a PhD, with colleagues here and at the National Institutes of Health, has taken several leaps forward on the path to treating this pernicious form of TB.

The group's study, published in *Science Translational Medicine* last December, reported several important conclusions. First, that mouse models are not adequate for evaluating TB drug efficacy—antibiotics like linezolid and AZD5847 don't work in mice, but did in Flynn's study of 20 cynomolgus macaques. The nonhuman primates were divided into untreated, linezolid, and AZD5847 groups; 87 percent of subjects in the treatment groups improved.

In addition, combined PET/CT scans during and after treatment of the macaques showed that they developed responses similar to those of humans—with lungs healing and flaring unpredictably and simultaneously, roughly correlating with bacterial burdens.

Previously, researchers could only study TB-added tissue postmortem; with PET/CT scans, they can track development of the illness almost in real time. Here, we show PET/CT scans of macaque lungs before (left) and after two months (right). The red/yellow flares show lesions decreasing in the linezolid treatment group and increasing in the control (top row).

"I don't think we appreciated [lesion heterogeneity] until we had the ability to scan monkeys over and over again and say, 'This part's getting better; this part's getting worse' and were able to map that back to bacterial differences," says Flynn, a professor of microbiology and molecular genetics as well as immunology.

Parallel to this study, a phase 2 human trial in which linezolid was added to a failing drug regimen confirmed her team's results. —RKC

## Name Dropping

The first speaker of this year's Laureate Lecture series will be neurobiologist **Leslie Vosshall**, a PhD. On May 12—just in time for mosquito season—Vosshall will discuss the genetic basis of mosquitos' attraction to humans, focusing on the malaria- and chikungunya-infected pests in the tropics.

Her lab at Rockefeller University has been scientifically evaluating folkloric explanations behind our allure, including whether gender, age, or race contribute to a bug's swooning (answer: nope). She's found the basic mosquito equation of attraction: heat plus body odor plus exhaled carbon dioxide probably equals alive and human, AKA tasty. Her lab has shown mosquitos are choosy too, probably because of something in the blood that affects an individual human's scent. Knowing how mosquitos hunt, what their rules are, and how people can intervene could help everyone from picnickers to the 97 countries and territories in malaria's grip.

Vosshall is a Howard Hughes Medical Institute investigator, as well as the Robin Chemers Neustein Professor.

The other Laureate lecturers this year include . . .

**Joseph Schlessinger**, whose June 16 lecture was rescheduled from last year's series. He will present on receptor tyrosine kinases—transmembrane signals that affect cell growth and differentiation—and their role in cancers. Schlessinger, a PhD and National Academy of Sciences member, is the William H. Prusoff Professor and chair of pharmacology at Yale University.

German Cancer Research Center professor emeritus **Harald zur Hausen**, an MD, comes to Pitt on Sept. 22. His work helped establish the role of human papillomavirus in cervical cancer, for which he shared the Nobel Prize in Physiology or Medicine in 2008. The virologist's lecture will discuss dairy cattle as a source of infectious disease in humans.

Rounding out the series, **Jennifer Doudna**, PhD professor of chemistry and of molecular and cell biology at the University of California, Berkeley, will speak at Pitt on Oct. 14. The Howard Hughes Medical Institute investigator's lecture will focus on the biology of DNA loci called CRISPRs, short for "clustered regularly interspaced short palindromic repeats." Doudna is known for crystallizing and determining the structure of ribozymes and other RNAs. —RKC

disease who undergo vascular interventions. She was recognized by President Obama with a Presidential Early Career Award for Scientists and Engineers in 2010 for this work. Among her many titles are Edward G. Elcock Professor of Surgical Research and vice chair of research in the Department of Surgery at Northwestern, as well as cochief of the Vascular Surgery Service at the Jesse Brown VA Medical Center. And this January, she added editor-in-chief of *JAMA Surgery* to the list.

**David Levinthal** (Neuroscience PhD '04, MD '06) wants gastroenterologists to ask for help. At both the bench and the bedside, the Pitt assistant professor in the Division of Gastroenterology, Hepatology, and Nutrition focuses on functional gastrointestinal and motility disorders. Because patients with such disorders often need psychological care, Levinthal aims to put psychosocial issues on the radar for gastroenterologists everywhere. His cross-disciplinary spirit will drive a project he began recently as a member of the inaugural class of the American Gastroenterological Association's Future Leaders Program. In his new role, Levinthal will network, receive mentoring, and explore ways the AGA can help young investigators organize and gain funding for multi-investigator scientific teams that span departmental and even institutional boundaries. "My goal has always been to move the field forward. As a researcher and a clinician at a medical center, I've done that in a microcosm. The

AGA is the flagship for the field."

## '10s

As a Pitt med student, **Adrienne Clark** (MD '11) joined the Global Health Interest Group on campus and traveled to Guanajuato, Mexico, to establish global health research opportunities for Pitt

students and help strengthen ties between Pittsburgh's Mexican immigrant communities and their family members back in Guanajuato. The experience led Clark, now a fourth-year chief psychiatry resident at the University of Pennsylvania, to spend a month this past winter teaching at the University of Botswana and conducting clinical work at Sbrana Psychiatric Hospital in Lobatse, Botswana. She was selected by her chair as the program's first resident to serve in this role. Clark will begin a fellowship in child and adolescent psychiatry at Children's Hospital of Philadelphia this fall. —*Keightley Amen, Micaela Corn, and Keith Gillogly*



Clark



Presentations and celebrations at the Palm Beach Winter Academy: Addressing the crowd (photos on left)—Dean Arthur S. Levine and Pitt's personalized medicine czar Jeremy Berg. Soaking up the sun at the poolside reception (above)—MAA prez Jan Madison with speakers Lisa Parker and Steve Shapiro, and friends George Fechter and Chris Fulton.

## SNOWBIRDS OF A FEATHER

Many universities have special winter events in Florida that offer educational and other alumni relations programs, but none do it quite like Pitt. Eleven years ago, Arthur S. Levine (the John and Gertrude Petersen Dean and senior vice chancellor for the health sciences), a team from the Health Sciences Foundation, and a few "snowbirds" down in Naples, Fla., began planning a one-day program that would showcase University of Pittsburgh researchers, clinicians, educators, and others shaping the future of health care.

The first program speakers addressed just over 100 attendees on topics ranging from diabetes prevention to Alzheimer's disease imaging techniques developed at Pitt.

For Winter Academy's decennial this March, a gaggle of more than 400 guests fraternized at the Florida west coast event; Richard (MD '74) and Diane Maloney cochaired the host committee. What's more, Winter Academy has been such a hit that it branched out four years ago to Florida's east coast, when Margaret LaManna (MD '76), who spurred the bicoastal idea, hosted the event at her residence. More than 200 alumni and friends gathered this year at the Palm Beach Mar-a-Lago Club, owned by Donald Trump; the event was hosted by Herb and Barb Shear. The group gathered for talks on personalized medicine and pharmacogenomics, but the academy isn't just lectures—the flock also enjoyed fine food and poolside ambiance. —*Robyn K. Coggins*

**FOR INFO ON NEXT YEAR'S EVENTS: MICHAEL LAFRANKIE, LMICHAEL@PMHSF.ORG  
412-647-9071**