

PITT
iiii PUBLIC HEALTH



**FACING
THE OPIOID
EPIDEMIC**

**GENETICS
INTERFACE**

**ALUMNI
FEATURES**

*and
more*

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Dean's Message



Opioid overdoses due to prescription drugs and heroin

have stealthily emerged as a leading cause of death in Pennsylvania. Our region has been especially hard hit.

This scourge strikes not only young adults, who might be assumed to be the primary risk-takers. It's also killing middle-aged adults—males and females, Whites and Blacks—and tearing apart their families. The national impact rivals that of HIV/AIDS. We at Pitt Public Health need to step up.

My first response was to select *Dreamland: The True Tale of America's Opiate Epidemic* as our One Book, One Community reading for all incoming students this year, and to invite author Sam Quinones here for what turned out to be an outstanding lecture and discussions. Next I delivered a special Dean's Lecture—to a packed auditorium—to focus attention on the epidemic. Then, as you can read about elsewhere in this issue, we launched a pilot research grant program that is funding six new important and exciting projects on opioids here at the school.

We also contacted and offered

assistance to our alumni who already are frontliners in the antiepidemic effort: the chief behavioral specialist in the county human services program, the county medical examiner, and the CEO of the largest drug rehabilitation program in the region are all Pitt Public Health alumni. And Pitt law school alum David Hickton, U.S. attorney for Western Pennsylvania—who cochairs the national Heroin Task Force—has been an inspiring partner from the law enforcement side (and he will be our Pitt Public Health graduation speaker this spring).

A faculty team in our Public Health Dynamics Lab is adapting our epidemic modeling software to simulate social contagions such as heroin use. While the opioid epidemic is not a virus, simulations of the spread of substance use disorders may improve understanding of epidemic dynamics and lead to better intervention strategies. And our Mortality and Population Data System—a powerful computable data system containing every death in the United States for the past half century—is allowing us to map overdose death

patterns in space and time across the entire country. Our expertise in data, systems dynamics, and modeling are helping to inform a national strategy.

We are collaborating with our fellow Pitt faculty in pharmacy, medicine, law, social work, and other disciplines to implement scientifically sound,

evidence-based, recovery-driven programs here

in Western Pennsylvania. And we are reaching out directly to former substance users and their communities for their ideas about what really works. As we mitigate the epidemic locally, we will be helping to solve this public health disaster nationally.

Donald S. Burke, dean ●

*Read more about our work in
controlling the opioid epidemic at
www.publichealth.pitt.edu/opioid.*



PITT PUBLIC HEALTH + HUMAN GENETICS

The newborn heel prick has become so routine, it's hard to believe it has only been in wide use since the late 1960s. In Pennsylvania and numerous other states, 2015 marked the 50th anniversary of newborn screening for inherited diseases like sickle cell anemia and phenylketonuria. These lifesaving genetic tests, considered to be among the country's greatest public health achievements, illuminate the important link between human genetics and public health.

But that link involves far more than the relatively simple genetics that underlie rare inborn conditions. Public health genomics, a multidisciplinary field that arose in the wake of the Human Genome Project, explores how genetic and genomic variations affect widespread chronic diseases. New sequencing technologies offer the chance to screen older populations too and, potentially, to deliver tremendous gains in treating common conditions such as diabetes, Alzheimer's disease, and obesity.

emphasis on molecular research and biotechnology and a chair who brings extensive experience in technology transfer, the department aims to spin off commercial ventures with applications to public health.

This mix of benchwork, population-oriented health research, and commercial savvy puts Pitt in an ideal position to help usher public health into the genomic era.

"Literally every human disease has a genetic component, and we can deliver genetic information on those various diseases," says Dietrich Stephan (HUGEN PhD '96), chair of the Department of Human Genetics and an experienced genomics researcher as well as biotechnology entrepreneur. "Genetics is really going mainstream, and it is becoming a public health tool. That's an area where we're really leading the way."

Assistant Professor Andrea Durst joined the department in 2015 as assistant director of the Genetic Counseling Program. Before earning

FIRST AT THE INTERFACE

BRINGING THE PROMISE OF HUMAN GENETICS TO BENEFIT ENTIRE POPULATIONS

by *Jenny Blair*

In advancing public health genomics, Pitt Public Health had a head start: It was the nation's first school of public health to have its own human genetics department. Formalized in 1989, the department's roots date to the early 1950s when famed population geneticist C.C. Li fled Communist China and established the program as a division within the Department of Biostatistics. Even now, the vast majority of university human genetics departments are situated inside medical schools or graduate schools of arts and sciences.

Pitt Public Health researchers uncover genes that affect osteoporosis, obesity, Alzheimer's disease, cancer, diabetes, and aging, among others. The department trains public health geneticists, genetic counselors, and genetics researchers not only to consider individual patients but entire populations.

Moreover, some of this research is making a speedy jump to real-world application. With an

her doctorate, she spent eight years as a clinical cancer genetic counselor in Louisville, Kentucky, where she observed a troubling trend among cancer patients.

While these patients could benefit from genetic testing and counseling to help direct their treatment and inform family members of their risk, more than half of all eligible patients were not being referred. This was often because the system relied on harried health care providers who may not be able to think beyond the immediate needs of the patient.

"People would [sometimes] not come in for genetic counseling, or they came in years after their diagnosis," Durst says. A common reason: "Nobody ever told them that they needed the test."

These days, technology makes it easy to sequence even entire human genomes. In light of these advances—and so many people falling through the cracks—Durst wanted to find a way

to reach large groups, not just individuals, with genetic testing.

She set out to scrutinize Kentucky's central database of cancer diagnoses and determine how many patients would have been eligible for testing of relevant genetic mutations based on national guidelines. Quite a few, as it turns out: Over a single three-year period, more than one quarter of Kentuckians diagnosed with breast cancer would have merited genetic cancer screening based on their personal histories, such as a young age upon diagnosis or a family history. That's a lot more than were actually referred.

These results suggest databases can effectively identify entire populations that could benefit from genetic testing. A similar approach has allowed the Netherlands, for instance, to catch almost all cases of the inherited disease familial hypercholesterolemia and begin early, life-saving, cost-effective treatment.

"We need to be looking at public health models for identifying people more appropriate for genetic counseling and testing, and educating them about the option of having the test done," Durst says. "It might be very expensive to test the entire population because [the disease being tested for is] not that prevalent. But [studying databases] is a way in which you can identify individuals who do have very high risk."

This big-picture thinking undergirds Pitt Public Health's Genetic Counseling Program. Founded in 1971 within the Department of Human Genetics,

Find out more about the pioneering master's programs at the interface of genetic counseling and public health genetics at www.publichealth.pitt.edu/gcprogram.

it is one of the nation's oldest. It was also the first to offer a dual degree in genetic counseling (Master of

Science) and public health genetics (Master of Public Health), with the first recipients graduating in 2006.

"We were recognizing the public health aspects of genetic counseling in ways that I don't think others were at that time," says Robin Grubs (HUGEN '91, '02), an assistant professor of human genetics who directs the Genetic Counseling Program. "Our students get a strong foundation in public health concepts and public health genetics. Moreover, several of our students have focused their thesis research on projects that address public health concepts."

At multiple sites around Pittsburgh, genetic

counseling students are exposed to settings from pediatrics to oncology to cardiovascular health, where they learn how to counsel patients about inherited disease risk. Typical patients include a pregnant woman whose advanced age puts the fetus at higher risk for genetic conditions like Down syndrome, a child whose developmental delay suggests a genetic cause like Fragile X syndrome, or an adult with ovarian cancer in her family. Students navigate the often complex ethical and psychosocial dynamics surrounding genetic counseling, including ambiguous results, disclosure of results to family members, a lack of trust in the results among family members, and access to testing.

In keeping with the genomic era, though, the program is also teaching genetic counseling students to be aware of options beyond one-patient, one-provider models. Durst lectures clinical advisors about using state cancer registries to identify patients for genetic counseling referral, as she did in Kentucky. Her advisee, master's student Laura Cross, studies population-based screening for hereditary cancer.

Genetic counseling students also learn from departmental director of graduate studies and associate professor Candace Kammerer, a genetic epidemiologist who studies genetic risk factors among large families and ethnic populations for hypertension, arteriosclerosis, and other common diseases. Kammerer teaches public health genetics as well as a required capstone course. Her doctoral and master's advisees have studied the genetics of dental decay, coronary artery disease, Alzheimer's, breast cancer, insulin resistance, recurrent pregnancy loss, cholesterol levels, and other topics central to public health.

With an eye toward practical implementation, Durst also builds bridges between genetic counseling students and those studying in the Department of Health Policy and Management. After all, a future hospital administrator or policymaker might be in a position to set up automatic genetic counseling referrals for, say, all newly diagnosed colon cancer patients. But he or she needs to know it matters.

Public health programs remain chronically underfunded at the government level; one partial workaround is the commercial sector. While the Department of Human Genetics' core functions remain education and research, its interface with

industry constitutes a third pillar: Thanks in part to Stephan's extensive scientific and commercial experience, the department is translating new insights into products with the potential to lead to quicker public health gains.

"You're basically doing a handshake between two cultures that speak very different languages," Stephan says. "What we can bring to the table is [the whole package]: communicating, structuring the transfer so it's exciting for investors, speaking their lingo."

To date, three spinoffs have attracted outside investment. These include Diavacs, with a new therapy to halt the progression of type I diabetes; Peptilogics, with a novel broad-spectrum antibiotic; and Matrika, with a new prenatal genetic screening test that uses blood drawn from the mother to detect some 7,000 potential abnormalities in fetal DNA—mutations that can affect up to 10 percent of newborns.

After earning his doctorate in human genetics at Pitt, Stephan did a fellowship at the National Human

Genome Research Institute of the National Institutes of Health (NIH) as it undertook the Human Genome Project. He then studied the genetics of childhood cancers at the Children's National Medical Center in Washington, D.C., an experience that brought him up against the practical limits of pure science research.

"Those insights didn't magically result in a new drug or a new diagnostic that would help patients in the clinic," Stephan recalls.

So he set out instead to turn genomic insights into new clinical tools for the marketplace, including diagnostic tests and therapies. He spent eight years as a department chair with the nonprofit Translational Genomics Research Institute in Phoenix, Arizona. He also built biotech companies in San Francisco, California, including Navigenics, which delivered information about genetic risk factors to consumers. NIH director Francis Collins took a test and learned he was

susceptible to type 2 diabetes.

Stephan is working toward genomic tools for governmental public health too. His lab is developing pharmacogenomics tests for populations with mental illness—that is, studying individuals' genetic variations in drug metabolism. Many people with mental illness take multiple medications that may interact and make them sick. Checking for these genetic variations could reduce adverse drug responses and hospital admissions, which might convince the Centers for Medicare and Medicaid Services (CMS) to cover such tests. Stephan also plans to lobby for state-level CMS coverage for a supplemental newborn



YOU'RE BASICALLY DOING A HANDSHAKE BETWEEN TWO CULTURES THAT SPEAK VERY DIFFERENT LANGUAGES," STEPHAN SAYS. "WHAT WE CAN BRING TO THE TABLE IS [THE WHOLE PACKAGE]: COMMUNICATING, STRUCTURING THE TRANSFER SO IT'S EXCITING FOR INVESTORS, SPEAKING THEIR LINGO."

screening panel. The diseases it tests for, he says, "often go undiagnosed for years and years—kids get very damaged if they're not diagnosed early. And there are therapies available for many of them."

To a public health expert who understands genetics and genomics, testing is the low-hanging fruit. Most genetic variants are easily detected, and we often know how to act on the knowledge the tests bring. Stephan points out that billions of dollars are spent annually on largely preventable conditions like type 2 diabetes, obesity, and lung cancer—conditions whose genetics we understand better every day.

"Prevention is a huge blind spot with respect to how we think about health care in this country," Stephan says. "We want to figure how to crack that nut around prevention. We think that can have massive impact on health care costs in all our age-related chronic diseases." ●

In Brief



TIM BETLER / UPMC

Zika Studies

When **Ernesto Marques** started hearing about strange rashes in Brazilian patients, he didn't think much of it—perhaps it was a mild strain of dengue. So the

IDM associate professor and Brazilian citizen was

quite surprised when his laboratory tests came back revealing a mosquito-borne virus called Zika.

Now, nearly a year later, the finding has reached new urgency as babies are being born with microcephaly, a congenital smallness of the head associated with incomplete brain development, to mothers most likely infected with Zika during pregnancy.

“It's such an obscure virus

with no previous reports of any really severe disease associated with it,” said Marques. “It's a virus nobody really cared about until now. So it's basically a whole new disease to us—we have no good diagnostic tools, no vaccine, and very little is known about how it causes disease in people.”

He is hoping to change that with two studies: one modifying an ongoing dengue virus study, and a more robust case-control study to compare patients with Zika infections to those without them. Both will explore how the virus infects and affects people, particularly pregnant women and their unborn babies, and to confirm or refute the suspected link between microcephaly and Zika.

While the results of such studies may take years, Marques believes the fastest route to treatment might be for women to acquire antibodies to the virus before they have babies. This could be achieved several ways,

including contracting the infection in childhood or getting an antiserum, which is blood serum from someone who already had the disease.

“We've been talking with the World Health Organization and the Pan American Health Organization to put this in a global context,” he said. “The response to this should not just be leaning on Brazil to solve it. This is rapidly becoming a global disease and it will require international efforts ... to control it.” ●

El Nino Epidemic

The World Health Organization estimates more than 2.5 billion people are at risk of contracting dengue, a rapidly spreading vector-borne virus. Nearly 1.4 billion of these live in Southeast Asia.

Reported cases tend to follow a repeating annual cycle, making it nearly impossible to predict when larger epidemics will occur. Until now.

Willem G. van Panhuis (epidemiology), Dean **Donald S. Burke**, and other Pitt

Public Health researchers led an international team in collecting and analyzing 18 years of reports on 3.5 million cases in



Learn more about epidemic responses at www.publichealth.pitt.edu/Zika.

Southeast Asia. They found occurrence of synchronous dengue epidemics across the region appeared to be linked to abnormally high temperatures such as those brought on by the weather phenomenon El Niño, which appears about every five years.

The finding, published in the October 20, 2015, issue of the *Proceedings of the National Academy of Sciences* and reported in the *International Business Times* and other outlets, couldn't be more timely: The region is bracing for the most intense El Niño in nearly two decades, which could mean a spike in cases of the dangerous hemorrhagic fever early next year. ●

Aids Center Wins Grant

The MidAtlantic AIDS Education and Training Center (AETC), based at Pitt Public Health, has received a four-year, \$10.7 million grant from the U.S. Department of Health and Human Services Health Resources and Services Administration Bureau of HIV/AIDS. One of eight AETC programs nationwide, the center has served the region's health professionals since 1988.

"We give clinicians the knowledge and skills to offer and conduct HIV testing and provide proper treatment for not only the

infection itself, but also for other co-occurring disorders and issues," said **Linda Frank**, associate professor of infectious diseases and microbiology. The training also helps clinicians and team members to support people with HIV and those at risk for infection.

"Though great strides have been made, ... HIV/AIDS is still a significant public health issue," Frank said. "Health professionals must make HIV testing routine to reduce disparities in access to prevention and treatment and thus reduce stigma associated with the disease." ●

More Substantial Savings

Building on an earlier study in which they found the federal government could have saved more than \$5 billion on its Medicare Part D low-income subsidy program in 2009 by using "intelligent" rather than random assignment of plans, **Yuting Zhang** and her health policy and management colleagues are at it again. This time, they analyzed the method for assigning people with schizophrenia to Part D prescription drug coverage plans.

They found the government could save Medicare and schizophrenia patients a combined \$150 million annually were it to assign

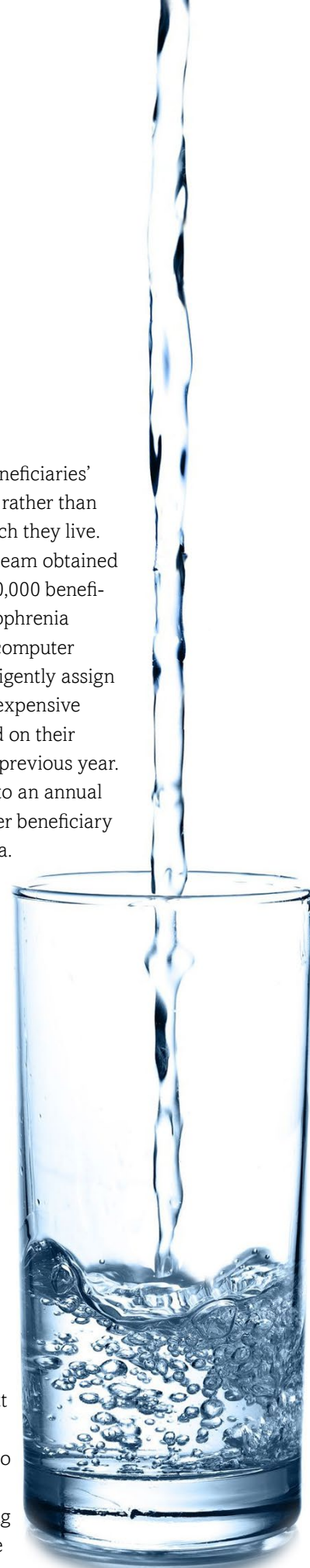
plans based on beneficiaries' medication needs rather than the regions in which they live.

Zhang and her team obtained data on nearly 120,000 beneficiaries with schizophrenia and developed a computer algorithm to intelligently assign them to the least expensive plan in 2010 based on their drug usage in the previous year. This translated into an annual savings of \$466 per beneficiary with schizophrenia.

Results were reported in the March 2015 issue of the journal *Health Affairs*. ●

Arsenic's Other Effects

The impact of chronic exposure to arsenic on stem cell function and development in utero and in children has been widely studied and publicized. Researchers at Pitt Public Health are delving deeper into the effects of this naturally occurring metal on the more



than 140 million adults worldwide and 4 million Americans who chronically ingest it in their drinking water.

Studying mice, they found exposure to environmentally relevant levels of arsenic can lead to stem cell dysfunction that impairs muscle healing and regeneration, which might explain why some people don't recover easily after

Watch Jennifer Adibi talk about the effect of phthalates on unborn babies at www.publichealth.pitt.edu/phthalates

injury or surgery. They also learned arsenic caused heightened biochemical

signals from a protein complex called NF kappa B, which is involved in matrix remodeling and tissue repair.

"A striking finding is that if we blocked the activation of the NF kappa B program, we saw the arsenic-exposed muscle recovered just fine," said **Aaron Barchowsky**, professor of environmental and occupational health. The report appeared online in *STEM CELLS*. ●

age than those who don't. This according to the results of a Pitt Public Health analysis of 15,451 live births in southwestern Pennsylvania from 2007 to 2010, published June 3, 2015, in *PLOS One*. The finding did not prove causality.

"Our work is a first for our region and supports previous research linking unconventional gas development and adverse health outcomes," said study coauthor and environmental and occupational health chair **Bruce Pitt**, referring to the results of a longterm analysis conducted in 2010 and 2012 that found multiple health concerns and stressors associated with proximity to fracking.

Authors of the previous analysis, led by emeritus professor

Bernard Goldstein (also a

coauthor on the current study), were unsure whether the health impact was due to exposure to pollutants or to the

psychosocial stressors of living near drilling. In both cases, researchers concluded more intensive research is needed.

This study also was the subject of the June 9, 2015, *New York Times* article "Fracking Linked to Birthweight." ●



Everyday Exposure

Phthalates are chemicals found in everyday items like shampoo, hair spray, vinyl flooring, plastic toys, and food packaging. In a word: they're pervasive, and, researchers at Pitt Public Health say, they appear to affect women early in pregnancy by targeting and disrupting the essential pregnancy hormone human chorionic gonadotropin (hCG), which has an adverse effect on the masculinization of male genitals in the baby.

Jennifer Adibi, assistant professor of epidemiology, and her colleagues analyzed data collected from approximately 350 women and their babies who participated in TIDES, The Infant Development and the Environment Study, that revealed an association between two molecules—mono-n-butyl and monobenzyl phthalate—produced when phthalates are ingested. They found lower-than-normal hCG levels in women carrying male babies and higher levels among women carrying female babies.

They presented their results at the Endocrine Society's 97th annual meeting in San Diego, California, in March 2015.

Fracking and Birthweight

Pregnant women who live close to a high concentration of natural gas wells drilled with hydraulic fracturing, or "fracking," are 34 percent more likely to deliver babies small for gestational





“There is growing societal concern over pediatric disorders that have a basis in the fetal period and which may be more common in one sex or another, such as autism, attention deficit disorder, obesity, asthma and infertility. It is important to find out if chemicals in our food or environment might influence these conditions,” said Adibi.

Adibi and her team are hoping in the future to enroll pregnant women at clinics in Pittsburgh to assess exposures to endocrine disruptors and measure effects on the placenta and the baby. ●

Screen Time

Turning off the television could have significant positive effects on public health, say researchers in three separate Pitt Public Health studies.



The first, published online and in the June 15 issue of *Diabetologia*, found that for each hour spent watching TV daily, the risk of developing diabetes increases by 3.4 percent after controlling for other important risk factors. Participants in the lifestyle intervention Diabetes Prevention Program reported it helped them to reduce their sitting time by 37 minutes per day, and now authors **Bonny Rockette-Wagner** and **Andrea Kriska** (epidemiology) hope to study the impact of that reduction in sedentary behavior.

Two other studies linked television viewing to increases in violence and obesity. **Anthony Fabio** (epidemiology) and his colleagues analyzed data over a 15-year period from participants in the Coronary Artery Risk Development in Young Adults (CARDIA) Study and found increased TV viewing among young adults led not only to a pronounced increase in injuries for those predisposed to hostility but also to a higher likelihood of subsequent obesity. Results of these studies were published online in the *International Journal of Injury Control and Safety Promotion* and *SAGE Open*, respectively. ●

Cognitive Consequences

Middle-aged type 1 diabetics have more brain lesions—in the form of white matter hyperintensities—and demonstrate more cognitive complications than their nondiabetic counterparts.

This according to the results of a study conducted by **Caterina Rosano**, associate professor in epidemiology, and her Pitt

Public Health colleagues that was published in the May 19 issue of *Neurology* and cited in a May 25 *Wall Street Journal* article on diabetes as a risk factor for developing Alzheimer's disease.

Rosano's group studied 97 type 1 diabetics (all participants in the ongoing Pittsburgh Epidemiology of Diabetes Complications Study) and 81 of their nondiabetic peers. Thirty-three percent of the diabetics had moderate to severe levels of white matter hyperintensities, compared with 7 percent of their nondiabetic counterparts, and they averaged lower scores on cognitive tests than those without the condition.

While more research is needed, Rosano says, “Early detection and intervention—such as controlling cardio-metabolic factors and tighter glycemic control, which help prevent microvascular complications—also could reduce or delay these cognitive complications.” ●

Aging with HIV

Advances in medicine and public health are enabling HIV-positive adults in the United States to live longer—in fact, more than half are older than age 50.

About two thirds of these are gay and bisexual men, which has prompted researchers in Pitt Public Health's Center for LGBT Health Research, led by **Ron Stall** (behavioral and community health sciences) to look for protective factors—called “resiliencies”—that are helping keep some men with HIV healthy



and could be extended to other men, rather than simply fixing health problems as they arise.

With the support of a three-year, \$2.1 million grant from the National Institutes of Health, the team will regularly survey 1,850 HIV-positive and -negative men who are participating in the Multicenter AIDS Cohort Study to examine why some gay and bisexual men remain healthy well into later life, even with multiple risk factors. They hope to determine strategies that could help all gay and bisexual men adopt resiliencies—whether it's strong friendships, positive family ties, good coping skills or something else—that will give them a better shot at healthy aging, particularly when living with HIV. ●



New Scholarship for HUGEN Students

With support from C.C. Li's two children and his wife, Clara, the C.C. and Clara Li Endowed Scholarship was established in summer 2015. The award honors the legacy of C.C. Li, who served as chair of the Department of Biostatistics and was a faculty member at Pitt Public Health for

Read Daniel Week's remembrance of working with Ching Chun Li, go to www.pubichealth.pitt.edu/ccli.

more than 30 years. A recipient of the American Society of Human Genetics Award for Excellence in Human Genetics Education, Li authored several textbooks—including *First Course in Population Genetics*—that are considered to be classics in the field and have been translated into several languages. The inaugural C.C. and Clara Li scholar will be named in fall 2016. The Li family's generous support of Pitt Public Health dates back many years and includes a \$1 million planned gift commitment to create a research fund for the Department of Human Genetics. ●

Pain as a Public Health Problem

Lower back pain accounts for about \$86 billion in health care expenditures every year in the United States, and the federal government has asked Pitt to lead a \$14 million clinical trial to examine the transition from acute to chronic lower back pain, comparing two approaches that can be delivered in a primary care office. The first allows physicians to do what they think is best, and the second teams up physicians with physical therapists to deliver a specialized therapy designed to help patients put their lower back pain in perspective, allowing them to identify and overcome barriers to recovery.

Sally Morton, chair of the Department of Biostatistics, is

director of the Comparative Effectiveness Research Center, created to provide the infrastructure to support these large, pragmatic studies. "We built the necessary methodological expertise and data environment to allow researchers to answer the questions facing our health system that are important to patients. Ultimately, these taxpayer investments," she said, "will improve outcomes and inform national policy and practice."

Across five regional sites, the research team plans to recruit 2,640 patients with acute lower back pain; examine how well they perform activities that typically bother people with lower back pain, such as sitting, standing, walking, lifting, traveling and sleeping; and then measure the number of X-rays, MRIs, surgery, and other lower back-related medical procedures for all patients enrolled in the study.

"This is the heart of patient-centered comparative effectiveness research," said **Everette James**, professor in the Department of Health Policy and Management and director of the Health Policy Institute. "Our mission is to use real-life research to find the right treatment for each patient at the right time."

Read more about this pain study and keep up with other school research findings at pubichealth.pitt.edu/news. ●



Renovation Update

The second phase of renovations, including a complete gutting and remodeling of the Fifth Avenue portion of Parran Hall, is now under way at Pitt Public Health. These include a redesigned lobby for Parran Hall, complete with an open, communal meeting space; coffee bar; and café, along with total modernization of all seven floors.

Alumni, friends, faculty, and staff continue to contribute to the Building for a Healthier World Capital Campaign to help fund these renovations. Thank you to everyone who has supported the campaign and taken advantage of the Elizabeth L. Surma ('81) and John P. Surma Matching Gift Program, which is matching all campaign donations up to \$1 million. ●



Building for a Healthier World

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Make a gift to the Building for a Healthier World campaign by visiting www.publichealth.pitt.edu/capitalcampaign.

* as of December 8, 2015

FIGHTING THE OPIOID EPIDEMIC

by Christine H. O'Toole

As a tsunami of prescription painkillers and heroin engulfs the region, Pitt Public Health launches innovative research to understand behavior, treatment, and prevention.



When does a drug epidemic become official?

For opioids, the signal moment arrived in 2008, when drug overdoses surpassed auto fatalities as the leading cause of accidental death across the nation and in Pennsylvania. Fatal overdoses and abuse rates have spiked dramatically since then, pushing rates of premature mortality in younger adults to record levels. Nationally, prescription

Stemming the supply of opioids is the focus of recent federal efforts. Legislation introduced last fall by U.S. Senator Pat Toomey (R-PA) would cut down on painkiller diversion in the Medicare program. The bill would lock in patients to one physician and one pharmacist to combat the practice of “doctor shopping,” or going to more than one physician to get opioid prescriptions. David Hickton, U.S. attorney for Western Pennsylvania, convened a 2014 regional working group to address all aspects of the epidemic and now cochairs the federal Heroin Task Force.

drugs caused more than half of the 44,000 overdose deaths in 2013.

Pittsburgh is at the epicenter of the opioid epidemic, in which Appalachia is particularly hard hit. Allegheny County reported 306 drug overdose deaths in 2014—up from roughly 100 in 2000—and even higher per-capita rates in nearby areas. Ohio saw overdoses surpass auto fatalities a full year before the rest of the nation. West Virginia posts the highest overdose death rate of any state, but in Fayette County, adjacent to Pittsburgh, the rate is even higher.

The scale of the region’s problem has galvanized law enforcement officials and health agencies to demand both immediate and long-term strategies to contain the problem. Now, at the direction of Dean Donald Burke, Pitt Public Health has prioritized a research agenda on opioid abuse that combines the school’s expertise in big data and its longstanding prominence in behavioral and environmental factors in public health. Six new Pennsylvania-centered projects provide tools to reliably measure the epidemic, model its dynamics, understand health behaviors, and ultimately prevent further abuse.

The yearlong projects funded by the dean’s

office include first time analysis of individual-level death certificate data related to overdose; linking hospital discharge data with outside sources to identify those at risk of fatal overdoses; measuring overprescription and overuse in the state Medicaid and Medicare systems; and mapping social media references as real-time surveillance of drug abuse. A final project zeroes in on best delivery systems for naloxone (Narcan), a revolutionary lifesaving treatment in use across the state.

“People are jumping in. The momentum is building across the school,” says Christina Mair, assistant professor of community and behavioral health sciences and an expert in substance abuse.

Community Impact

How can Narcan be distributed to save more lives? Pitt Public Health researchers Mary Hawk, assistant professor of behavioral and community health sciences; Chris Keane, assistant professor of behavioral and community health sciences and of health policy and management; and doctoral student James Egan address this vital question in their new project. Although Pennsylvania has had a standing order for the drug to reverse overdoses since October 2015, overdose fatalities continue to rise, suggesting its implementation is far from ideal. A collaboration between these researchers and Prevention Point Pittsburgh, a needle exchange program, may suggest best practices for this revolutionary therapy.

Narcan’s impact is indisputable. In 2014, the county had 306 overdose deaths. Between January and September 2015, Prevention Point Pittsburgh provided the antidote to more than 600 individuals, resulting in at least 156 overdose reversals compared to 167 in all of 2014.

“In many senses, Narcan distribution is the ‘perfect’ public health intervention,” notes Hawk. “It is nonabusable, easily administered by health professionals as well as lay responders, and highly effective in preventing death when overdose occurs.” It is also relatively cheap, at about \$25 per kit. With co-project investigators Keane and Egan, Hawk will keep her focus on the front line of the epidemic, allowing users’ needs and experience to drive policy recommendations.

Prevention efforts follow treatment. That premise underlies the research of Professor Mair, who is examining 20 years of hospital discharge data related to opioid overdoses. Using data

compiled by the Pennsylvania Health Care Cost Containment Council, she will examine whether spatial patterns are predictors of future rates of abuse.

“No study has yet examined whether opioid overdose is subject to a process of spatial contagion, as has been shown for other types of drugs,” says Mair, who has previously researched patterns of alcohol and marijuana abuse in California communities. With coprincipal investigators Jessica Burke, associate professor of behavioral and community health sciences, and Zan Dodson, postdoctoral fellow in health policy and management, she will identify high-risk zip codes in Pennsylvania and use a community-engaged needs assessment approach to involve

local key stakeholders in identifying and illustrating resources, risk factors, and intervention opportunities within the highest-risk region.

State data is also the source for a collaborative opioid project between epidemiologists at the Pennsylvania Department of Health and Thomas Songer, assistant professor of epidemiology. “There is little data to identify the patterns of who may transition from approved medical use of opioids to abuse, overdose, and heroin use. Identifying individuals at high risk for adverse events, like hospital admission and mortality, is a key first step,” says Songer. With the guidance of the health department, this project links data on hospital admissions with the state mortality dataset to examine the adverse effects of opioid misuse between 2000 and 2014. The research will identify the frequency and risk factors related to opioid-related readmissions and all-cause and opioid-related mortality. “Linking databases offers the opportunity to answer different questions, such as plotting out the timeframe to these adverse events and illustrating the typical patterns in this timeline. If this collaborative effort is successful, it would provide powerful information for policy efforts related to opioids.”



State policymakers are putting a spotlight on opioid prescription abuse, an issue that made national headlines in December. Research published in the *Annals of Internal Medicine* showed that more than 90 percent of people who survived a prescription opioid overdose were able to obtain

Data from the Allegheny County medical examiner is the foundation of a new online state resource designed to increase community awareness of overdose and overdose prevention strategies. Housed at Pitt's School of Pharmacy, OverdoseFreePA is building a database with 11 variables on drug overdose deaths, from toxicology to locations. Information for Allegheny and Westmoreland counties is comprehensive; another 11 rural counties have agreed to share data as well. Janice L. Pringle (EPI PhD '86), now associate professor at the School of Pharmacy, is collaborating with medical examiner Karl Williams (EOH '03), and coroners across the state.

another prescription for the very drugs that nearly killed them.

This fall, the Pennsylvania Department of Health will expand its prescription drug monitoring program to combat the oversupply of opioids. At the same time, the Department of Human Services will consider programs that limit Medicare and Medicaid patients to assigned physicians. Such lockdown programs exist in many states. Julie Donohue, associate professor of health policy and management, will use data mining to find the best criteria for identifying people misusing prescription opioids.

"We are taking on a technical problem: how to identify people who are misusing opioids. Prescriptions come from multiple doctors and multiple pharmacies, and no one has a handle on where users obtain the drugs. State thresholds for identifying people at risk of misuse are completely arbitrary and all over the map." Her study also will analyze Pennsylvania Medicare and Medicaid data for the recent past to find optimum criteria for state prescription monitoring.

Jeanine Buchanich, research assistant professor of biostatistics and deputy director of the Center

for Occupational Biostatistics and Epidemiology, digs into Pitt Public Health's own data to present striking visualizations. Her analysis of the Mortality and Population Data System, a Pitt-held mortality repository, has already mapped geographic variations in accidental poisoning deaths across the U.S. from 1999 to 2013. On the resulting map, a broad swath of red paints Appalachia as a hot spot for fatal overdoses in both males and females aged 15–64. The work was presented at a White House meeting on the national opioid epidemic last fall.

Buchanich also has analyzed county-level data that shows rural areas of Pennsylvania, including Allentown and Erie, have shown spikes in fatalities since 2005. Buchanich's current mini-grant project drills deeper. She will mine individual-level data across Pennsylvania from an estimated 20,000 death certificates from the state department of vital statistics.

"Pennsylvania may be the first state to do this," she says. "We were previously restricted to aggregated county-level data annually. We didn't have detail on time patterns, and had no data below county level. Now we'll have access to age, race, sex, and specific locations of residents at time of death. The patterns are more specific." Some locales, such as Allegheny County, file complete toxicology reports on every drug found in victims' systems. Coroners in other counties may report data differently or in less detail. Building a more standardized data set may allow spatial and temporal analysis by abuse researchers.

Real-Time Tracking

New methods of distribution have taken painkiller sales off street corners. Mobile devices and social media now facilitate discreet transactions that constantly shift locale. But social media also offers data for real-time surveillance of drug activity. Dodson is harnessing new applications that track popular social media platforms to discern where opioid use and sales are taking place in real time. His study pilots the use of social media big data for monitoring opioid and heroin drug-related habits. While major U.S. cities routinely conduct such reconnaissance, its use has not been evaluated in smaller metro areas.

Geofeedia, an app that allows a user to search major social media platforms by location for a set of defined keywords, hashtags, or emoji, also

provides the ability to look backwards through time and identify social networks by looking at how users interact. Dodson says the app is well suited to analysis of potential regional opioid activity.

“Connectivity allows the epidemic to evolve and spatially diffuse quickly, with prescribers and suppliers shifting their focus and response to each new effort to control it,” he notes. “Western Pennsylvania is also at the heart of major travel arteries in the region, like Interstate 70, Interstate 80, and the Pennsylvania Turnpike, and that facilitates quick distribution. Rapid evolution makes it difficult to deploy countermeasures effectively to the right locations.” He intends to validate the social media clusters using crime data from the city of Pittsburgh.

Responding to the epidemic of painkiller abuse—ideally in real time—is a priority for Allegheny County. Karen Hacker, director of the Allegheny County Health Department and adjunct faculty member at Pitt Public Health, believes data modeling developed at the school to track viral pandemics offers another potentially powerful tool to understand the opioid epidemic.

“In working with Dean Burke, we’re beginning to understand the modeling in FRED (Framework for Reconstructing Epidemic Dynamics),” she says. The open-source, agent-based modeling system uses highly accurate synthetic populations and is based closely on models used in previously published studies of influenza. It may potentially be adapted to identify evolving drug formulations, mitigation strategies, and health behaviors. “It’s a fascinating concept,” says Hacker. “We are exploring what types of data they would put into the system. Ultimately, we may be able to answer questions about whether addictions, or even obesity or cardiovascular disease, may function like viruses. Partnering with universities helps us address these issues.” ●

Read more about the ways in which the school is addressing the opioid epidemic at www.publichealth.pitt.edu/opioid.

DREAMLAND MAPS AN EPIDEMIC

by James O’Toole

Last November 10, scores of Pitt Public Health students and faculty members jammed the University Club to hear a diagnosis of the fateful confluence of greed, desperation, and misplaced compassion that has overwhelmed families and public health resources across America.

They heard veteran journalist Sam Quinones describe some of the roots of the national opioid epidemic. In often-impassioned tones,



he discussed the findings detailed in *Dreamland: The True Tale of America’s Opiate Epidemic*. The book, this year’s selection for Pitt Public Health’s One Book One Community program, examines how pharmaceutical companies, drug smugglers, and well-intentioned physicians

and researchers unwittingly conspire to fuel addiction.

Quinones’ reporting unravels some of the threads of this bleak tapestry. One was the movement at the end of the last century encouraging health care professionals to take a more aggressive approach to the management of chronic pain. He looks at how pharmaceutical firms, notably Purdue Pharma, the manufacturer of OxyContin (oxycodone), seized on and exaggerated slender evidence—the infamous Porter-Jicks letter—purporting to show the benign impact of longterm use of this highly addictive class of drugs.

Find out more about One Book, One Community activities at www.publichealth.pitt.edu/oboc.

Many years and lost lives later, Purdue and its senior executives would plead guilty to charges of deceptive marketing practices, paying fines of \$634 million.

The black tar heroin supply increasingly comes from Nayarit, a relatively small state on Mexico’s Pacific coast. Distributing powerful heroin like pizza, the syndicate offered drive-by deliveries from young men who evaded arrest by transporting their goods in small balloons carried in their mouths.

At first, Mexico’s disruptive business model was largely confined to western U.S. states, mostly in smaller communities where the newer merchants would not have to compete with violent, well-established drug dealing networks. By the late ’90s, the newer heroin marketers had moved east of the Mississippi. Columbus, Ohio, was an early hot spot, as dealers capitalized on the appetite for opioids whetted by OxyContin abuse. In the second decade of the new century, it’s no longer a localized phenomenon. ●

STUDENT STORIES

by *Jenny Blair*

Sandstorms on the way to work, a horse running in front of her bus, and a six-day power outage have all been part of **Marilyn Blasingame's** graduate school experience. Between the first and second years of her master's work at Pitt Public Health, Blasingame spent two years as a Peace Corps Master's International student in Mongolia.

Blasingame's initial time at Pitt equipped her with skills like teamwork and communication. Then she headed to the eastern capital of Öndörkhaan, not far from Genghis Khan's birthplace. She helped her coworkers in the health department develop health training sessions and also taught English, chronicling her adventures in a blog that her Pitt colleagues followed with interest. (They even sent care packages with snacks and Pitt swag!)

Blasingame returned to Pittsburgh in summer 2015 to finish a degree informed by her service. Her thesis will examine infectious disease prevention efforts in geographically isolated areas, including Mongolia and rural Pennsylvania. Upon graduating in spring 2016, she plans to work on preventing sexually transmitted infections, ideally, right here in Pittsburgh. ●

Samantha Rosenthal studies Alzheimer's disease, which struck her grandfather.

"I remember how painful it was to watch him deteriorate," says Rosenthal, who is a fifth-year doctoral candidate in the Department of Human Genetics. "That motivates me tremendously . . . Each of the DNA samples I work with is a person."

Rosenthal compares DNA from Alzheimer's patients and healthy people to figure out which genetic factors might predispose people to or protect them from the disease. Recently, she

studied a rare variant in a gene called TREM2 that increases the risk of Alzheimer's up to 12-fold. It's unusual for one variant to have such a large effect, and the findings appeared last summer in *Neurobiology of Aging*.

Born and raised in Pittsburgh, a place she affectionately calls "the biggest little city," Rosenthal chose Pitt partly for its emphasis on the relationship between genetics and public health. Rosenthal plans to continue her research in an academic setting.

"Alzheimer's fascinates me," Rosenthal says. "If I can contribute even the tiniest bit to better understanding it, I'll call it a win." ●

Sometimes the best way to look at cancer is with a bird's-eye view. MPH student **Yisi Wang** uses geographic data to study leukemia, lymphoma, and other childhood cancer cases associated with the fracking operations that dot Pennsylvania's landscape.

Last summer, Wang began to examine cancer surveillance data with the Pennsylvania Department of Health, mapping these cancers alongside the geographic distribution of natural-gas drilling operations to study the latter's potential health effects. She also manages medical- and air-quality data for the Southwest Pennsylvania Environmental Health Project.

Wang trained as an oncologist in China, where rising cancer rates are fueled in part by air pollution. While studying tumor metastasis in a lab at Weill-Cornell Medical Center in New York City, she grew fascinated by data analysis and decided to pursue epidemiology instead. "I like dealing with data and I like to learn computer software," she says. She hopes to participate in hospital or pharmaceutical research projects after completing her degree.

Lesbian, gay, bisexual, and transgender (LGBT) youth suffer more substance abuse, mental health problems, and sexually transmitted infections than heterosexual, cisgender youth. This surprised **Robert Coulter** as an undergraduate mathematics major at Syracuse. Now a doctoral candidate in the Department of Behavioral and Community Health Sciences, Coulter studies how early-life factors like parental support might protect against—or predict—alcohol and tobacco use among sexual-minority young people.

Coulter also evaluates the effectiveness of programs that serve this population, like a Duquesne University program that trains education students to work with LGBT youth.

“Advocates and community organizers are often ahead of the trend with regard to serving the community,” he says. “Research is always five to ten years behind.” In the future, he plans to design and test similar programs as an academic researcher.

Coulter has published widely and won numerous awards. Rare for a student and a researcher studying LGBT health, his doctoral work is NIH-funded. ●

Brian Adams came to Pitt to work with the HIV Prevention and Care Project (HPCP), where he runs Project Silk, a program that addresses the HIV crisis in young LGBT African Americans. Adams was already a seasoned HIV counselor, having run a student clinic at the University of North Carolina during his MPH work. But Project Silk stoked his interest in public health so much he went back to school. Now the program’s clinic supervisor, he is also a part-time doctoral candidate in the Department of Behavioral and Community Health Sciences. He studies

community programs like Project Silk, and he still loves to connect personally with young people. “Just because we’re doing public health doesn’t mean that the aspect of community is lost on us,” Adam says.

Pittsburgh Magazine named Adams to its 40 Under 40* list for 2015, in part for his work with Project Silk. In his free time, Adams runs a 300-player-strong LGBT kickball league he founded last fall. ●

** Also included in Pittsburgh Magazine’s 2015 40 Under 40 are MPH student **Riley Herrmann**, communication and advocacy coordinator at Pediatric Palliative Care Coalition and graduate fellow at the Children’s Institute of Pittsburgh, and **Christina Farmartino** (IDM ’13), executive director of The Open Door and interim executive director of Prevention Point Pittsburgh.*



L to R: Yisi Wang, Marilyn Blasingame, Robert Coulter, Samantha Rosenthal, and Brian Adams

ALUMNI PROFILE: Veronica Sansing-Foster

by *James O'Toole*

Expectations were always high for Veronica Sansing-Foster (EPI '08, '10), but her ascent to administrator and researcher at the Food and Drug Administration (FDA) wasn't the result of a calculated career path. Reflecting on the road that took her from the South Side of Chicago to the key post, she cites her own ability and hard work, her ties to generous mentors at Pitt Public Health, and a measure of serendipity.

Sansing-Foster grew up in the South Side of Chicago surrounded by models of academic achievement. Her mother was a school teacher, several aunts and uncles were physicians and scientists, and her father honed advanced academic skills in her as a child. Growing up in an extended family of artists and dancers also instilled a love of the art in her. She would unexpectedly combine these interests to shape a distinguished professional path.

She remained in the Windy City until graduating from the University of Chicago in 1999 with an honor's degree in psychology. A National Institutes of Health research fellowship led her to Carnegie Mellon University in Pittsburgh, where she worked on cognitive research on children and language. She then began work at UPMC Western Psychiatric Institute and Clinic, helping to recruit subjects and manage data for an international study of anorexia and other eating disorders. At the same time, she was taking dance lessons. She would eventually find time to work professionally as a dancer and dance instructor at Pittsburgh's Dance Alloy Theater. That interest prodded her career in an unexpected direction when a dance teacher urged her to apply for a research position at the Epidemiology Data Center at Pitt Public Health.

Sansing-Foster interviewed for the post with the late Katherine Detre. On her way to the interview,

she had a chance encounter with Stephen B. Thomas, then director of the school's Center for Minority Health. Both Detre and Thomas would serve as mentors: Detre molded an interest in epidemiology and biostatistics while Thomas encouraged her to include minority and underserved communities in research and clinical outreach. She credits Detre in particular for urging her to pursue a PhD and for providing her with the scholarship resources that made that goal possible. She also credits Maria Mori-Brooks as an influential advisor upon the passing of Detre.

"Talk about serendipity and God looking out for me," she said of the relationships that began the day of the interview. "I was so blessed to have mentors like Katherine Detre; she was like my grandmother."

While pursuing her PhD, Sansing-Foster studied issues like combined treatments for heart disease and diabetes. In 2012, her coauthored research paper won the American Society of Nuclear Cardiology's Best Paper award. Simultaneously, she handled responsibilities as a project coordinator at the Center for Minority Health, helping to develop campaigns targeting minority patients.

After gaining her MS in 2008 and her PhD in 2010, Sansing-Foster was recruited by the Division of Epidemiology at the Center for Devices and Radiological Health at the FDA in Silver Spring, Maryland. She's worked as a team leader and branch chief for the Cardiovascular, Neurological, and Physical Medicine Device Branch, where she was responsible for directing postmarket surveillance and research of medical devices, as well as the oversight of multiple epidemiologists with over 60 research studies and medical device registries. She now serves as pharmacoepidemiologist for the Center for Drug Evaluation and Research,

researching and reviewing studies on postmarket drug safety signals.

Sansing-Foster notes her debt to a variety of role models. While in high school, she was paired with a young lawyer named Michelle Obama in the Sister Souljah Mentorship Program, with whom she maintained this relationship throughout college. In the course of her distinguished career, she's long since made the transition from mentee to being a mentor and role model herself. In 2013, she was invited back to Pitt to speak about her work at the FDA and to mentor younger scholars interested in federal careers in science.

Asked recently to offer advice to aspiring medical researchers, she recommended a combined right-brain, left-brain approach: Develop an expertise in biostatistics while keeping in mind the research design and social implications behind the data. "It can be daunting, but it teaches you to really scrutinize the data in front of you," she said. "If you are not able to carefully scrutinize data, someone else can pull the wool over your eyes."

But she also urges young researchers not to let the statistics, however elegantly compiled or presented, to become their sole focus. Researchers must understand what biases exist within the data, account for them, and then translate those numbers into evidence-based public health needs.

"One thing that Pitt prepared me very well for was the empathy and application of my research in the real world," she said. Whenever she approaches a new research project, she asks herself, "How is this affecting the human beings I am investigating? Will this help people?" ●

Post script: Several days after the photoshoot for this article, Veronica and her husband, Everton, welcomed a little boy, Remy St. John Foster. Congratulations!

RICK BRADY



ALUMNI NEWS

Lewis Kuller, Bennet Omalu, Tom Songer, Anne Newman



Alum Honored in Film

A decade ago, a young forensic pathologist from Nigeria brought to light a dark side of America's game, and now Hollywood is telling his story.

Bennet Omalu (EPI '04) was completing a neuropathology fellowship at Pitt's School of Medicine in 2002 when he performed the autopsy on Mike Webster, a former Super Bowl champion center with the Pittsburgh Steelers

who had died suddenly after years of suffering from cognitive

impairment, depression, drug abuse, and suicide attempts. Although Webster's brain looked normal at autopsy, Omalu believed he might have had dementia pugilistica, caused by repeated blows to the head and previously only found in boxers.

Omalu independently conducted extensive tissue analyses,

including specialized staining, and found large accumulations of tau protein in Webster's brain. He labeled the condition Chronic Traumatic Encephalopathy (CTE), published two papers detailing his findings in the journal *Neurosurgery*, and presented his research to the National Football League (NFL).

The NFL would not publically acknowledge the link between concussions sustained in football and CTE until 2009, capping a seven-year-long battle depicted in the major motion picture *Concussion* (Sony Pictures, 2015), directed by Ridley Scott and starring Will Smith as Omalu. Filmed in Pittsburgh, the movie was released in December at the same time the University announced its founding academic affiliation with the

newly launched Bennet Omalu Foundation, which will fund research, raise awareness, provide support, and find cures for people suffering from CTE and traumatic brain injuries. ●

D.C. Connections

In 2015, Pitt Public Health alumni had several opportunities to take advantage of the University's vibrant Washington, D.C., network. In March, the school hosted an alumni reception in conjunction with the annual meeting of the Association of Schools and Programs in Public Health. Event attendees had a chance to mingle with Dean Donald Burke and a number of faculty while networking with fellow alumni. In the fall, a strong contingent of public health alumni

Want to know more about the Bennet Omalu foundation? Visit bennetomalufoundation.org.



Alumni relations director Sarah McMullen in D.C. with Dacia Beard (BCHS '11)

gathered for a reception in D.C. hosted by the schools of the health sciences and the Pitt Alumni Association. Finally, in December, Eleanor Hagerman (EPI '12) and Adrienne Long (IDM '14) helped to plan the D.C. area Pitt alumni holiday party on December 3, which was cosponsored by Pitt Public Health and included raffle prizes, gift bags, and a winter clothing drive to benefit area low-income children and adolescents. The school's alumni presence in the nation's capital continues to grow. ●

Taking on the World

Orrin Tiberi's view from his desk at the Centers for Disease Control and Prevention (CDC) headquarters in Atlanta, Georgia, may be vastly different from the one he had less than six months ago as a Global Health Corps (GHC) Fellow in Iganga, Uganda, and before that as a Peace Corps Master's International student serving in Riobamba, Ecuador, but his work is no less important or impactful. One of 32 Association of Schools and Programs of Public Health/CDC Allan Rosenfield Global Health Fellows, Tiberi (BCHS '14) is engaged in an intensive yearlong assignment at the CDC Office of Global Health, working closely with countries



Orrin Tiberi and Adrienne Long

around the world to strengthen and further develop a strategic plan to end the AIDS epidemic through data collection, analysis, and results-based decision making.

"CDC is the premier technical health body in the world," Tiberi says, "and the decisions and discussions that I am part of every day will eventually go on to influence policy and programs on a global scale."

He credits his Peace Corps experience and MPH course work in global health theory and practice at Pitt Public Health with helping him to land the GHC fellowship in Uganda, during which he worked with the Uganda Village Project to develop its operational plan and budget, conduct and analyze a 63-village impact evaluation, and review data collection tools.

"The [GHC] fellowship was instrumental in reaffirming my belief that health equity and social justice are some of the most important aspects of any health intervention," Tiberi says. It's a belief he says he continues to embody every day in his work at the CDC. ●

Adrienne Long

Every day, **Adrienne Long** (IDM '14) conducts potentially lifesaving research. In her work as

an international relations analyst in the Department of Labor's Bureau of International Labor Affairs (ILAB), she analyzes evidence of child labor, forced labor, and human trafficking in sub-Saharan African countries that receive U.S. trade benefits. Although her career path has led her outside a traditional public health setting, Long says her degree from Pitt Public Health, her

participation in the Peace Corps Master's International

program, and her two years of field experience in Mozambique, offered exceptional preparation for her current position.

"I learned various research methodologies and analysis techniques and had the practical experience of putting this knowledge to use in Mozambique," she says. "Now, as a researcher in ILAB, I constantly rely on this knowledge when evaluating whether a research report can be used as reputable evidence of child labor."

Long says living and working in Mozambique exposed her to a new culture and way of life. This not only helped her to develop an understanding of the barriers to eliminating and preventing child and forced labor but also gave her a cultural competence that

Read up on other Peace Corps Master's International students at www.publichealth.pitt.edu/pcmi.

is invaluable as she engages in policy issues on these topics with members of foreign governments, U.S. government stakeholders, and civil society groups. ●



In-House Romance

Congratulations to Pitt Public Health alums **Tyler Rubright** (EOH '15) and **Samantha Malone Rubright** (BCHS '09), who were married on June 6, 2015, in Greenville, South Carolina. The two—who reportedly met in toxicology class—plan to reside in Arlington, Virginia, and continue their environmental health research and outreach work. Upon returning from their nuptials, Tyler began working at the U.S. Environmental Protection Agency and Samantha at FracTracker Alliance while continuing her doctoral studies in environmental health at Pitt. Best of luck to the happy couple! ●

Forever Learning

Jessica Duell (EPI '09) has been named vice chair of the health department's Allegheny County Immunization Coalition. She is currently working as a research study coordinator at Pitt while applying to MD/PhD programs to study medicine and infectious disease epidemiology starting in summer 2016. Duell participated in a new Pitt Public Health class called Global Epidemiology of Vaccines and Vaccina-

tion, and she plans to add the follow-up class, Immunology of Vaccines. She volunteers with the infection control department at UPMC Shadyside Hospital, is vice president of the Metro Community Health Center Board of Directors, and serves with the Allegheny County Medical Reserve Corps. ●

FACING PAGE The room was abuzz when 99 alumni of the school's Genetic Counseling Program came together during the 34th annual education conference of the National Society of Genetic Counselors held in Pittsburgh, October 21–24. Want to see more photos? Visit www.publichealth.pitt.edu/flickr and search for "Genetic Counseling Program Reunion."



2015 Alumni Awards

On May 29, Pitt Public Health celebrated the professional excellence of seven alumni, conferring Distinguished Alumni Awards on **Patricia Maryland** (HPM '82) for practice, **Nancy Obuchowski** (BIOST '91) for research, and **Yvette Conley** (HUGEN '99) for teaching and dissemination. In addition, the Margaret F. Gloninger Service Award was given to **Nancy Glynn** (EPI '94), and **Megan Kavanaugh** (BCHS '08) became the first recipient of the brand new Early Career Excellence Award, to be presented annually to an alumnus who has made

ABOVE, L to R: Nancy Glynn, Patricia Maryland, Nancy Obuchowski, Dean Burke, Megan Kavanaugh, Yvette Conley, Marisabel Sanchez, Tushar Singh
BELOW: Megan Kavanaugh

significant achievements early in his or her career.

In addition to the celebration of these alumni awards, **Marisabel Sánchez** (BCHS '93) and **Tushar Singh** (EPI '14) were initiated into the Pitt Public Health Omicron Chapter of the Delta Omega Honor Society. Election recognizes merit and encourages further excellence in and devotion to public health work. ●





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FLASH FROM THE PAST: More than two decades ago, when **William Gauss** concluded his term as Pitt Public Health Faculty Senate president, he handed over a brick to his successor—a brick he claimed had fallen from the building during repair work. Since then, the brick has been passed on to each Faculty Senate president as a reminder of the charge to strengthen and renew

the school. While the physical building has aged and seen renovations and expansions, the school community continues its commitment to increase its strength and stability. Last fall, **Thomas Songer** assumed senate responsibilities. As we move forward and new presidents inherit the brick, the message will remain the same: The future of the school is strong and secure. ●