



EMORY

SPRING 2010

Public Health

Rollins School of Public Health

Jean Cadet packed three  
bags of supplies, a tent,  
and his Rollins education.  
Then he went home.

## Caring for Haiti

Parkinson's Disease | Health and Statistics | Obesity and Chronic Disease



Just outside my office window, the future of the RSPH is taking shape. Workers will soon complete construction of the Claudia Nance Rollins Building, which we will dedicate on October 6, 2010. The building exemplifies the growth that is propelling our school forward.

## Shaping the future

Featured on the cover of this issue is Jean Cadet, an RSPH student and physician from Haiti. He is among the students and alumni who responded to the nation's earthquake disaster. Students like Dr. Cadet remind us that all of us in public health share a desire to relieve suffering by preventing disease and improving health.

Rollins would not be where it is today without those highlighted in this issue, including our faculty leaders. Neurotoxicologist Gary Miller, associate dean for research, is guiding the development and use of laboratory space in the new Claudia Nance Rollins Building. Lance Waller, Rollins Professor and chair of the Department of Biostatistics and Bioinformatics, also is associate director of Emory's Center for Comprehensive Informatics. Just recently, epidemiologist Viola Vaccarino became Rollins Professor and chair of the Department of Epidemiology, broadening our expertise and collaborations in cardiovascular disease.

We all paused to celebrate this spring when President Obama signed the Patient Protection and Affordable Health Care Act into law. This historic step will aid thousands of people with no health insurance and limited access to health care. Included in this package are measures to reduce obesity and chronic disease. Woodruff Professor and health policy expert Kenneth Thorpe was key to making these measures a national priority.

Just outside my office window, the future of the RSPH is taking shape. Workers will soon complete construction of the Claudia Nance Rollins Building, which we will dedicate on October 6, 2010. Attached by bridge to the Grace Crum Rollins Building, completed in 1994, the RSPH will now have 330,000 square feet of outstanding space for learning and discovery. The building exemplifies the growth that is propelling our school forward. We hope you will help us celebrate this milestone in October.

Sincerely,

A handwritten signature in black ink, reading "James W. Curran". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

James W. Curran, MD, MPH  
*James W. Curran Dean of Public Health*

# Grounded in multidisciplinary research

## Vaccarino named Rollins Professor and Chair of Epidemiology

**Viola Vaccarino, an Emory expert in cardiovascular disease (CVD) outcomes, etiology, and relationships to stress, gender, and health disparities, joins the RSPH as Rollins Professor and chair of the Department of Epidemiology.**

Prior to her appointment, Vaccarino served as a professor in the School of Medicine's cardiology division and director of the Emory Program in Cardiovascular Outcomes Research and Epidemiology (EPICORE), with joint appointments in the RSPH and the Laney Graduate School. She will continue to hold faculty appointments in the medical and graduate schools.

Having a department chair grounded in public health and medicine underscores the growing importance of partnerships in and outside of Rollins. As director of EPICORE, Vaccarino led a multidisciplinary research group focused on clinical and population epidemiology, outcomes research, clinical trials, and translational research in CVD and related disciplines. She also directed the Emory Heart Center Information Services, the investigative resource arm of the Emory Cardiac Database, which is among the nation's first and largest computerized cardiovascular databases.

"Dr. Vaccarino's success in collaborative research, particularly in cardiovascular disease, is of tremendous value to the Emory community," says RSPH Dean James Curran, a fellow epidemiologist. "She will help forge new partnerships for Rollins and aid our continued growth in mentorship and teaching as well as grant development."

Prior to joining Emory in 2000, Vaccarino taught at Yale, where she earned a doctorate in epidemiology. She received her medical degree and completed a doctorate and postdoctoral fellowship in nutrition toxicology at the University of Milan. She currently is a fellow of the American Heart Association (AHA), a member of the American Epidemiological Society, and a recipient of an Established Investigator Award from the AHA. She has more than 200 research articles to her credit.

Among them is a 2009 article in the *Archives of Internal Medicine* in which Vaccarino and her colleagues identified a measure of stress-induced blood flow to the heart that explains part of the connection between depression and heart disease. The researchers found



Viola Vaccarino specializes in the study of cardiovascular disease prevention and outcomes.

that blood flow, as measured by the ability of small coronary vessels to dilate, was reduced in patients who suffered from depression. Their study of identical and fraternal twins, all male Vietnam-era veterans, was the first to examine the relationship between major depression and coronary blood flow.

In her new role as epidemiology chair at Rollins, Vaccarino will merge her scientific interests with the department's research strengths in CVD, cancer, women's and children's health, infectious disease, renal disease, HIV/AIDS, health and disease in correctional systems, genetics, social epidemiology, and public health preparedness. She also will lead recruitment of faculty and students.

Says Vaccarino of her new responsibilities, "I look forward to this amazing opportunity to broaden our efforts to predict, control, and prevent disease."

# CFAR to host AIDS Vaccine 2010

Global meeting focuses on vaccine research

**This past winter, MD/MPH student Sarah Twichell** attended the Conference on Retroviruses and Opportunistic Infections (CROI) in San Francisco. There she had the good fortune—backed by good science—to receive a Young Investigator Award from CROI, regarded as the premier HIV/AIDS research meeting. The award recognized her poster



on trends in incidence of cancer among HIV-infected children. Currently a fourth-year medical student, Twichell conducted her award-winning research last year as a Thomas F. Sellers Jr. Scholar at Rollins.

She is just the type of early-career scientist that organizers of the upcoming AIDS Vaccine 2010 conference in Atlanta hope to attract. The Emory Center for AIDS Research (CFAR), based in the RSPH, serves as the local host for the meeting, the largest global scientific conference focused on AIDS vaccine research. Approximately 1,000 researchers, clinicians, community advocates,



**MD/MPH student Sarah Twichell** received a Young Investigator Award at the Conference on Retroviruses and Opportunistic Infections in February. The award recognizes her research on cancer trends in children with HIV.

policy-makers, and funders are expected to attend September 28 through October 1.

Pathologist Eric Hunter, co-director of the Emory CFAR, will chair the meeting. Rollins leaders James Curran and Carlos del Rio, also CFAR co-directors, will serve as co-chairs, along with former Emory scientist Harriet Robinson, who leads vaccine research and development for GeoVax. Alan Bernstein, executive director of Global HIV Vaccine Enterprise, is conference host.

Through the Emory CFAR, more than 100 scientists and clinicians are working to help individuals, families, and populations affected by HIV/AIDS, locally and globally.

“Our clinicians at Emory provide care to more than 7,500 patients with HIV each year—one of the largest cohorts in the country,” says Hunter, a Georgia Research Alliance Eminent Scholar and one of the world’s leading experts on retroviruses. “The development of a viable vaccine is a particularly relevant objective for the community. Atlanta and AIDS Vaccine 2010 provide an outstanding opportunity to participate in scientific exchange and debate in the very real face of the disease and its direct impact on the global community.”

## HIV rates in Atlanta and Georgia

Atlanta has more than 60% of HIV cases in Georgia, CFAR researcher Paula Frew reported at the CROI conference in February. More than 50,000 new infections occur yearly in the United States, according to the CDC. And the number of HIV/AIDS cases is increasing faster in the South compared with other areas of the country. *Kaiser State Health Facts* ranks Georgia as ninth in the nation in the number of new HIV/AIDS cases, with more than 3,000 new HIV infections diagnosed in 2007.

For details on AIDS Vaccine 2010, visit [hivvaccineenterprise.org/conference/2010/](http://hivvaccineenterprise.org/conference/2010/).

# APHA honors faculty and students

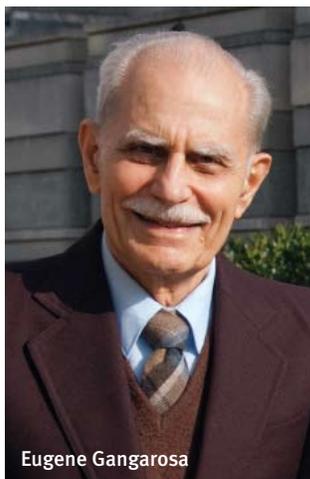
The RSPH had much to celebrate last fall during the annual meeting of the American Public Health Association (APHA) in Philadelphia, where the following faculty members and students received awards.

**Kathleen Miner**, associate dean for applied public health, received the 2009 APHA/Pfizer Faculty Award for Excellence in Academic Public Health Practice. She is the third APHA member to receive this honor, which includes a \$10,000 prize, for advancing and integrating public health practice with research, teaching, and service.

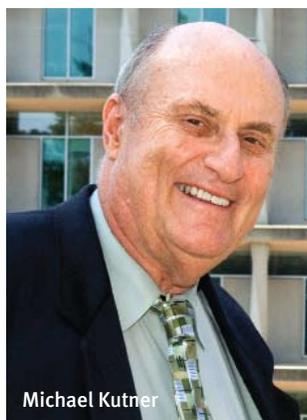


Kathleen Miner

**Eugene Gangarosa**, professor emeritus of global health, received the Wade Hampton Frost Lectureship Award, which recognizes the use of epidemiologic principles and methods to address a public health issue. Recipients are invited to present a lecture, and in Gangarosa's case, he discussed the history of safe water and sanitation in honor of Frost, one of his public health heroes. Frost (1880–1938) was the first professor of epidemiology at Johns Hopkins in the nation's first epidemiology department.



Eugene Gangarosa



Michael Kutner



Howard Frumkin



Julia Painter



Lydia Ogden

**Michael Kutner**, professor emeritus of biostatistics, became the third Rollins faculty member in the APHA/Pfizer Public Health Academy of Distinguished Teachers. He joins David Kleinbaum, professor of epidemiology, and Rob Stephenson, assistant professor of global health, as members. Academy membership honors faculty for elevating excellence, visibility, scholarship, and the impact of learning and teaching in public health.

The APHA Environmental Section honored **Howard Frumkin**, adjunct professor of environmental health, with the Homer N. Calvert Award and Lecture for his contributions to the field. Formerly chair of the Department of Environmental and Occupational Health, Frumkin is special assistant to the director for climate change at the CDC.

APHA honored two doctoral students for their research. **Julia Painter** (behavioral sciences) received the 2009 Top Student Abstract in the School Health Education and Service Section for “Psychosocial Correlates of Rural Adolescents’ Intention to Receive an Influenza Vaccination.” **Lydia Ogden** (health policy) was one of three students honored for outstanding abstracts in the Health Administration Section. Her winning abstract examined “Public Health Funding Formulas in Political Context.”

Stay up to date on the latest APHA and public health events, news, resources, and activities at [apha.org/about/rssinfo/](http://apha.org/about/rssinfo/).



# STORIES FROM HAITI

Following the January earthquake in Haiti, President Obama wrote in *Newsweek*, “Above all, we act for a very simple reason: in times of tragedy, the United States steps forward and helps. That is who we are. That is what we do.” The same can be said of Rollins students and alumni. In times of disaster, they are trained to help communities and nations recover and move forward.

**Their stories from Haiti follow.**

By Kay Torrance and Pam Auchmutey



Top left: A 16-year-old girl visits the Los Palis medical clinic in central Haiti. Top right: In Léogâne, residents constructed a tent city, where safe sanitation and disease prevention are major concerns. Below left: The Ministry of Health building collapsed in Port-au-Prince, killing several staff and hampering Haiti’s disaster response. Below center: This young girl lives in the remote village of Los Palmas in Haiti’s Central Plateau. Below right: A U.N. soldier patrols the streets as workers unload supplies to assist residents in Léogâne, where more than 80% of the city was destroyed.



A mother and daughter wait patiently at the health clinic in Los Palis, where RSPH student Jean Cadet volunteered. Cadet's story begins on the next page.

## TRAVELING SOLO:

### JEAN CADET

Although he became an American citizen three years ago, “part of my heart will always belong to my fellow Haitians,” says Jean Cadet ROMPH, a student in behavioral sciences and health education.

The Haitian-trained doctor returns home twice a year on medical missions. After the earthquake, Cadet and Madsen Beau de Rochars, another Haitian physician studying in the RSPH, wanted to return as soon as possible to care for the injured and check on their families. They tried to get on a charter flight, but the sponsoring organization could not get clearance to land its plane.



Top: A hand-made sign sums up the situation for residents of Port-au-Prince. Below: Haitian physicians Madsen Beau de Rochars (left) and Jean Cadet traveled to Haiti two weeks after the January earthquake to assist with relief efforts. Cadet returned to Haiti in March.



Members of Cadet’s church paid for his airline ticket. Rollins students held a fundraiser, donating money and basic medical supplies. Cadet bought a tent from Wal-Mart, filled three large bags with clothes and medical supplies—the most the airline would allow—and he was off.

He flew to Miami and on to Santo Domingo, Dominican Republic, and then settled in for a seven-hour bus ride to Port-au-Prince. His destination was the Église Adventiste de l’Auditorium de la Bible, a church that he knew as a boy. The church was two blocks from the Presidential Palace in an area that sustained heavy damage, and although little was left of the church, 1,200 people now called its property home. He arrived after dark, and two patients were waiting for him. The next day he would see many more.

Some people on the church grounds sought Cadet’s advice on proper sanitation. Early each morning, church residents held prayer, and on the day that Cadet was present, an impromptu

Above and opposite page: During his second trip to Haiti, Jean Cadet volunteered with the Haiti Humanitarian Fund, which promotes sustainability through education, agriculture, safe water, microcredit financing, and health. Cadet’s team provided medical and dental care for more than 800 adults and children in three locations in rural central Haiti.



“When the wind blows, children go into shock because they think  
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THERE ARE SOCIAL AND MENTAL HEALTH ISSUES THAT  
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—Alawode Oladele, 93MPH

public health class followed. Using a megaphone, he instructed them on how to properly construct a latrine and dispose of garbage. He also talked about preventing infectious disease.

In between working at refugee camps and tending to medical needs, Cadet checked on family and friends. A few dear friends had died. His brother and sister were sleeping on the street. His uncle’s family had gone outside to play soccer right before the quake hit, which probably saved their lives. Their two-story house collapsed, killing four renters, whose bodies remained in the rubble.

“I could smell the bodies, but it didn’t seem to bother my family as they slept near the house,” says Cadet. “I think they became immune to it.”

Back at the church, some leaders wanted to urge people to leave the city since help still had not arrived. Cadet thought otherwise. “I told

them not to push it,” he says. “Even if they could provide only one meal a day, at least they have each other. There is a support system there. I met a man who had lost his wife and children. He needed that support system. Many of the camps were not well organized. They had no control of who was coming and going.”

All too quickly, it was time to leave. Classes were starting at Rollins, and Cadet’s wife and two small children eagerly awaited his return. By his last night in Haiti, numerous people had called dibs on his tent. He left the tent, the extra clothing, and the \$1,475 that Rollins students with the Health Organization for Latin America had raised. “I really want to thank the students,” he says. “They responded to the call for help.”

Because of his emergency training in Haiti and at Rollins, Cadet knew what to do when he arrived at Port-au-Prince. “Though I couldn’t take much since I was traveling solo,

whatever small help that I brought to that community was of value,” he says. “They were very grateful. In the end, I was happy I went solo. I always say that everything happens for a reason.”

**HANDS-ON HELP:  
MADSEN BEAU DE ROCHARS**

Madsen Beau de Rochars 10MPH heard the news from a friend: “Haiti has been devastated.” He tried to phone family and friends there but to no avail. As he watched the television pictures come in on CNN, he decided to go to Haiti right away to help.

Before becoming a William H. Foege Global Health Fellow at Rollins in 2008, Beau de Rochars directed the lymphatic filariasis program at the Hôpital Sainte Croix in Léogâne, about 18 miles west of Port-au-Prince. He knew then the many challenges that Haiti faced and that he eventually would return.

Following the earthquake, when

his charter flight to Haiti fell through, Beau de Rochars' faculty adviser, Deborah McFarland, was able to get him a seat on a private plane.

"I had good support from my classmates and the faculty," he says. "People called and came to see me. It really touched me."

Although he had some idea of what to expect when he landed in Léogâne, the scene still stunned him. "It was shocking and emotional to see my friends and colleagues living on the street," he says. "I have many friends and extended family who didn't make it." (His and his wife's immediate family were okay.)

In Port-au-Prince, the house that they left behind had collapsed. "I praise God that my family was not there," says Beau de Rochars, who slept inside a borrowed car in Léogâne.

The first refugee camp that he visited had a team of doctors and nurses in place, so he traveled 20 miles outside of Léogâne to an area that needed help. He drove those in need of medical care to various facilities. In one of the refugee camps he visited, he encountered a little girl who had an infected wound on her foot. "If she lived elsewhere," he says, "she would have had access to hospital care and would not have lost her foot to amputation because of such cruel circumstances."

During his mission, Beau de Rochars was tapped to serve on a presidential commission to provide technical assistance on needs assessments, preparations for infectious disease outbreaks, and distribution of medicine. He also helped Michael Ritter O8MPH, who operates a household water treatment program in Léogâne, and Graham Huff, who leads the Atlanta nonprofit League of Hope, set up water pumps to serve town residents. "I tried to put my hands anywhere I could help," says Beau de Rochars.



Above: Michael Ritter instructs residents on the safe use of water in Léogâne. Right: Health workers prepare to distribute five-gallon water buckets in the region. Opposite page: Ritter has run a household water treatment program in Haiti since 2008.



Now back at Rollins, he wants to return to Haiti even more. After graduating in May, he will serve two years with the CDC's Epidemic Intelligence Service before he can return to his homeland. While he praises the international community for its response, he is concerned that mental health services and care for amputees may be overlooked.

"Many people there told me they lost their wife or husband or kids, but I didn't see any tears," he says. "They were fighting to survive and still unsure of what happened, or they found social support because so many others shared their situation."

"I believe the Haitian population is strong, and we can rebuild," he

adds. "We have to do better than what we did in the past."

## SAFE WATER FOR SURVIVAL:

### MICHAEL RITTER

Michael Ritter O8MPH has worked for Deep Springs International in Haiti since summer 2008, running a household water treatment program. His work is vital to improving living conditions in a country that ranks as the western hemisphere's poorest. After the quake, his program made the difference between life and death.

On January 12, he was standing on the second floor of a rectory building in the mountains outside Léogâne, where he is stationed. The



building shook violently back and forth but did not collapse. He and a Haitian colleague went out onto the porch and heard screams nearby.

When Ritter returned to Léogâne, he found 80% to 90% of the town destroyed. In the immediate days afterward, he drove a truck with a 55-gallon drum to distribute water in the town. He secured more equipment to produce chlorine solution to treat the water, and the program's 165 remaining Haitian community health workers resumed distributing five-gallon buckets and solution.

"That's one of the biggest networks we've got right now—the human network," Ritter said from Haiti. "A lot of our issues now are how to scale up effectively."

Before the quake, his water program had reached 1,500 households. By mid-March, the program had reached 4,500 families and distributed enough chlorine to treat 15 million liters of water.

Ritter has resumed living at the CDC compound in Léogâne. The compound is sprinkled with tents, housing up to 100 people. The satellite Internet and phone lines are working faithfully, and he no longer has to take "bucket baths."

While there is much work to be done, Ritter is hopeful about Haiti's prospects and plans to remain for now. "Walking around Léogâne, seeing the speed in which people built

some sort of a structure with wood poles and bed sheets for roofs, shows the creativity and resourcefulness of Haitian people," he says.

## WITNESS TO PLANS IN ACTION:

### NICOLE DIONNE

Nicole Dionne **10MPH** was in a car stopped outside a hospital office in Port-au-Prince on January 12. She was on her way back to the Hôpital Albert Schweitzer in Deschapelles, about 40 miles north.

A second-year MPH student in global health, Dionne was researching her thesis, a descriptive overview of diabetic patients and comparison of the hospital's treatment to the standards set by the International Diabetes Foundation. Her work would serve as a guide for future development of community-based preventive programs.

When the earthquake hit, "I initially thought the car had been hit from behind," she says. "I didn't really understand what was happening until I saw the buildings around us start to collapse. Our driver managed to make it back to the hospital after finding an alternate route out of the city."

Deschapelles, she found, was undamaged, but patients from the greater Port-au-Prince area were flooding in. "Patients were arriving by any means possible—motorcycles, the back of pickup trucks, buses," she says. "At the time I left the hospital, a week after the earthquake,

patients were still arriving. Hospital staff were working nonstop. There were more than 250 patients waiting for surgery."

An International SOS team met her at the Port-au-Prince airport to put her on a private helicopter flight out of the country. The scene at the airport was chaotic. The U.S. State Department had instructed American citizens to go to the airport to be evacuated, but the U.S. military had cut off entry because of overcrowding. The SOS team paid a private jet pilot for a seat on board, and Dionne was on her way to Santo Domingo to catch a commercial flight back to the states.

"As a student of global public health, I have learned a lot by seeing the emergency relief process," she wrote of her experience in Haiti after returning home. "We spend a lot of time in the classroom learning about preparedness, but seeing the plans in action is something completely different. With every disaster response, there is a lot to be learned. Each time we can improve."

"If it weren't for school starting [in January], I would like to have



Global health student Nicole Dionne was in Port-au-Prince when the earthquake struck. Her experience in the days afterward deepened her commitment to working globally after she graduates in May.



Below right: Alawode Oladele, co-founder of the Haiti Health Collaborative (HHC), helps organize medical teams to work with Sonje Ayiti (below left), an HHC member organization that works in Port-au-Prince and rural northern Haiti (left).

stayed at the hospital and continue helping there,” she adds. “I think some family members thought this would change my career goals and push me into working domestically, but my fellow classmates in global health all understood how much more motivated this situation makes me to finish my degree and get working in the field.”



## RELIEF FOR THE LONG TERM:

### ALAWODE OLADELE

Given the extent of the destruction in Haiti, Alawode Oladele 93MPH worries about what might happen next. With hurricane season approaching and people living in tents, there’s no telling how the nation would cope with another disaster.

“There is still a sense of urgency and a great need for human services,” says Oladele, a physician who directs



medical services for the DeKalb County Board of Health. “When the wind blows,

children go into shock because they think another earthquake is happening. There are social and mental health issues that will show their evil faces years from now.”

Oladele hopes to quell those demons through the Haiti Health Collaborative (HHC), a Georgia network that advances health care and socioeconomic development. Since the earthquake, HHC has provided food, water, clothing, counseling, and medical supplies and support where needed. Premiere International Health Care, an HHC partner led by Oladele, organizes medical teams to

raderie Philanthropic Association) to support hospital services at Centre Medical Emmanuel in Jacmel.

Oladele has an eye on Haiti’s future beyond the acute need for medical services. He is also tapping the skills of agricultural experts with Florida-based ECHO (Educational Concerns for Hunger Organization) to develop seeds that will thrive in Haiti’s tropical climate. Teaching people how to raise crops, fish, and livestock will help sustain lives in rural inland Haiti, away from the earthquake rubble and the direct path of hurricanes.

“People ask, ‘What does that have to do with health?’” says Oladele, who will return soon to Haiti. “It takes food, water, shelter, education, and economic stability to maintain good health.”



Emily Auerhaan Frant (left), Nick Schaad, and Colleen Scott are among the first students to receive a Complex Humanitarian Emergencies Certificate at Rollins.

## Certificate program prepares students for disasters like the Haitian earthquake

By Kay Torrance

The ground shook violently for 30 seconds or so, and in that short period of time, a small Caribbean nation was upended. Buildings crumbled, more than 300,000 people died, and many more were injured and left without basic necessities.

The devastation from the January earthquake in Haiti was just the type of emergency for which RSPH students train. Beyond the initial response to provide medical care, water, food, and shelter, they can assist with long-term efforts to rebuild the nation's infrastructure. And they can assess how well federal agencies and nonprofit organizations responded.

With every emergency that passes, there are lessons to be learned and incorporated into planning for the next one. Public health schools have responded with formal curricula on wide-scale humanitarian disasters and emergency preparedness. For example, the RSPH offers

a Complex Humanitarian Emergencies Certificate program, which accepts 10 to 15 students each year who have international experience and who wish to work in emergency response after graduation.

The five classes in the program cover a range of issues, including epidemiology, food and nutrition, water and sanitation, and infectious disease. Students learn from case studies and from instructors with the CDC's International Emergency Refugee Health Branch (IERHB).

"The goal of the branch is to prepare people to respond to complex emergencies globally, and its partnership with Rollins is essential in carrying out this mission," says Theresa Nash, assistant director of academic programs in the Hubert Department of Global Health.

The emergency preparedness courses form the foundation of the certificate program. Emily Auerhaan Frant 10MPH will

receive one of the program's first certificates in May. She served three years as a Peace Corps volunteer in Niger before enrolling in the RSPH to prepare for a career in international programming in the nonprofit sector.

"The emergency preparedness courses added a different dimension to what I thought I wanted to do," she says. "I see the spectrum of work that I can get into."

Like other students in the certificate program, Frant works at the CDC, helping staff the Emergency Operations Center, where she gathered field reports and population lists after the Haiti earthquake. In the classroom, she discussed case studies and heard how IERHB staff overcome similar problems in the field, providing a mix of best practices and real-life experience.

For Colleen Scott 10MPH, the courses showed her the depth of coordination needed for organizations to respond to a crisis. "Before taking the courses, I thought responding to an emergency was somewhat fly-by-the-seat-of-your-pants," she says. "The classes have taught me that the greater the planning, the greater the impact. They have definitely broadened my knowledge in areas that I didn't know I was interested in before."

In one exercise, the classroom was turned into a refugee camp, with instructors playing various roles, from refugees to the health coordinator for WHO. Students were responsible for gathering information on a particular issue and assessing and responding to the situation at hand. They also had to find a way to work together that satisfied all parties.

"The classes are extremely case-oriented, and I'm coming out of them with tangible skills," says Nick Schaad 10MPH, whose family moved around the globe with his father's work for the World Food Programme. "It was almost as good as being in the field."

Gary Miller's mice have Parkinson's.

# Can he cure them?

By Sylvia Wrobel

Gary Miller's mice—genetically engineered to have flaws in the packaging, storage, and transport of dopamine—are providing essential clues about how Parkinson's disease (PD) develops and how environmental toxins can cause or speed up that process. It's a question made to order for Miller, a neurotoxicologist who leads an interdisciplinary Parkinson's disease research and treatment center based in the RSPH. Soon, working in one of the school's new wet laboratories, he will use his unique mouse model of PD to develop biomarkers of exposure, risk, and early disease and to test whether a novel therapeutic agent can restore function to a damaged dopamine system.





Brain sections taken from Parkinson's mice are stained with an enzyme to determine the extent of neurodegeneration.

Untreated, the disorder gets worse until a person is totally disabled. For some patients, PD leads to a deterioration of all brain functions and early death. There is no cure. What are needed are biomarkers of exposure and disease progression and a treatment to counteract the disease process and restore function to the dopamine-producing system. That's where Miller's mice come in.

### Of mice and dopamine

Miller knows mice. He began using PD mouse models while a postdoctoral fellow at Emory, working with neurology chair Allan Levey in the School of Medicine. Continuing his postdoctoral studies at Duke, Miller was part of a team that used genetic engineering to completely knock out genes related to dopamine function. He was hooked on the concept that manipulating genes in mice could provide answers to the disease that had afflicted his own grandfather.

Today, Miller serves as professor of environmental and occupational health and associate dean for research at Rollins. Since 2008, he has directed the multidisciplinary Emory Parkinson's Disease Collaborative Environmental Research Center. He applied for and won five years of NIH funding for the center to study how (and which) chemical toxins cause neuron death leading to PD and to identify genes that increase susceptibility or resistance to the PD-inducing effects of toxins. The unique mouse model created by Miller would come to play a starring role in the center, with research involving scientists from other disciplines in and outside of the RSPH.

More than for any other neurodegenerative disease, a growing amount of cellular and population evidence points to a connection between Parkinson's and exposure to environmental toxins. A recent Harvard study found a 75% increased risk of PD in those who reported exposure to pesticides, and Miller has shown that certain classes of pesticides induce Parkinson's-like damage in the brains of mice.

A nationally recognized expert in the impact of toxins on PD, Miller doesn't lay all the blame for PD on toxins. The majority of cases, he says, probably result from a combination of factors. A person with genetic risks might develop PD at age 70, even without exposure to toxins (or other insults like head trauma), but exposure to toxins may speed up onset by 10 or more years.

What Miller seeks to understand is the mechanism through which this happens. His genetically engineered mice are proving to be a potent research tool.

PD occurs when the brain cells that produce the neurotransmitter dopamine begin to waste away, for reasons unknown. Without sufficient dopamine, the nerve cells cannot properly send messages, leading to loss of muscle function.

The process is slow and silent, sometimes extending over decades. Some of the early manifestations of PD, like loss of olfactory function or depression, are only now being recognized. By the time the motion disturbances for which PD is best known—tremor, halting movements, rigidity, loss of balance—show up, 70% to 80% of the dopamine-producing cells may already be dead.

Dopamine has always been a double-edged sword, says Miller. The brain has to have it, but it is toxic if not in the right place. He created a new PD animal model to see what happens when the storage and handling of dopamine are disrupted. Miller's mice have been genetically altered so they (and their offspring) produce abnormally low amounts of VMAT (vesicular monoamine transporter), a protein that packages neurotransmitters such as dopamine

### Miller's VMAT mice are the first Parkinson's animal model to demonstrate both the motor symptoms and non-motor symptoms of Parkinson's—the latter a particular focus of attention over the past decade.

into little sacs called vesicles and transports them out of brain cells. The VMAT gene in mice is 92% identical to its counterpart in humans.

The lack of sufficient VMAT, and the subsequent failure to properly transport dopamine out of the cells, creates oxidative stress and damage to the same brain cells as those that die in human PD. It also causes the onset of PD symptoms—and not just the familiar problems with motion.

#### Parkinson's before the tremor

Other scientists have created PD mouse models by chemically damaging brain cells, but that can inadvertently cause widespread damage and produce mice with a variety of ailments and problems, clouding the issue of what is related to PD. Miller's VMAT mice have normal vision, sense of touch, and muscle strength, functions typically normal in human PD patients. That means they have the capacity to perform various tests, such as finding their way around mazes, and their symptoms are all related to PD.

Miller's mice are the first PD animal model to demonstrate both

the motor symptoms *and* the non-motor symptoms of PD—the latter a particular focus of attention over the past decade. By the time the PD mice are two months old, they no longer discriminate well among scents, an important part of mouse life lost. At a year—middle age for mice—they fall asleep more quickly than normal; have delayed emptying of the stomach, which in humans can cause pain, heartburn, and distension; and display anxiety and behaviors

associated with depression (giving up easily, for example) and mood disorders that respond to antidepressant drugs. Next, PD-like motor problems develop, becoming more profound as the mice age.

Miller and his team have published extensively regarding the neurodegeneration caused by faulty handling of dopamine in the part of the brain associated with motor symptoms. But VMAT also packages and transports other neurotransmitters, including norepinephrine and serotonin, which regulate mood as well as some physiological functions. Last year, Tonya Taylor, a graduate student in Miller's lab (and a recent recipient of a National Research Service Award from the National Institute of Environmental Health Sciences) was first author of a paper from the lab describing how a diminishment in VMAT causes faulty handling of these other transmitters, causing non-motor problems in the PD mice. Since L-dopa, the most common PD treatment, does not help non-motor symptoms, Miller hopes the mice will help him identify medicines that do.

Miller found that some toxins, such as PCBs (polychlorinated biphenyls), inhibit actions of VMAT. He also found that exposure to toxins and genetically reduced VMAT produce identical brain changes. As he explores further how exposure may affect VMAT actions, he is focusing on the toxins themselves.

Some of the toxins that Miller has shown to be linked to risk for PD in mice and humans (including PCBs, dieldrin, and DDT) are officially gone, banned in the 1970s after being linked to cancer, but older patients still report exposures, and low levels still linger in the soil. Indeed, Miller has shown that PCB levels are higher in brain samples from people who died with PD than in those who died of other causes.

"We can't ban all of the thousands of toxic products now on the market," says Miller, citing the need to improve crop production and control insects. "But we can be careful."

That's why he has sorted out the chemical properties of various pesticides to determine which ones might pose the greatest risk and may require re-evaluation of policies and guidelines for use. Working with investigators in the School of Medicine, he also is developing metabolic biomarkers to identify people exposed to suspected pollutants and determine if this exposure contributes to disease onset and progression.

#### Protecting brain function

Although no one has yet found mutations in VMAT in people with PD, one group found that elevations in the protein appeared to protect against developing the disease. Now that Miller is close to understanding how VMAT deficiency causes PD and how altered VMAT may interact with exposure to toxins, he is looking for ways to intervene. He believes he knows how.



Graduate student Tonya Taylor co-wrote a research paper describing how the diminishment of VMAT causes non-motor problems in Parkinson's mice. Miller hopes the mice will help him identify medicines to restore non-motor function.

Earlier this year, Emory medical school investigators, led by pathologist Keqiang Ke, found a compound that protects brain cells against the kind of damage seen in seizure, stroke, and PD, achieving what so many other experimental “neuroprotective” drugs have failed to do over the past decade. The compound, 7,8-dihydroxyflavone, is a member of the flavonoid family of chemicals, abundant in fruits and vegetables. Because of its ability to cross the blood-brain barrier, its selective action on specific cells once it arrives in the brain, and the different pathway it uses to achieve its actions (mimicking one of the brain’s own growth factors), the investigators believe the compound could be the founder of a new class of brain-protecting drugs. When Miller gave it to mice that had been treated with a toxin that kills the same neurons as those affected by Parkinson’s, it prevented nearly all of the damage. More studies are under way, but Miller believes this novel therapeutic agent can restore ability to transport neurotransmitters both in animals genetically deficient in VMAT protein and in those exposed to neurotoxins.

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*Atlanta freelancer Sylvia Wrobel is a frequent contributor to Emory's health sciences publications.*

## GENERATING RESEARCH SYNERGY

In addition to conducting his own research, Gary Miller is helping build the research structure for other scientists. Last fall, he became associate dean of research in the RSPH. His most pressing responsibility is to help decide how to configure the 20,000 square feet of laboratory space in three floors of the Claudia Nance Rollins Building that opens this year. Having new wet laboratories (think beakers and pipettes instead of computers) in the rapidly growing RSPH changes everything, says Miller.

It allows the school to recruit faculty who need such laboratories and to bring many existing Emory researchers with aligned interests closer together, including those from public health, which will use labs on the fourth and sixth floors, and those from medicine, which is leasing fifth-floor lab space. Miller will move his own lab, along with eight postdoctoral fellows, technicians, and master’s and doctoral students, from the Whitehead Biomedical Research Building to the new building’s fourth floor. There he and his team will work alongside other researchers focused on chemical-based studies in toxicology and the environment.

“I want the laboratories to become a focal point for public health discovery,” says Miller. “But the research portfolio in the RSPH goes way beyond the lab bench. The same collaborative and collegial atmosphere that develops in the labs should extend to the entire school. There are several untapped collaborations across departments and even more across the Emory campus. I hope to identify these opportunities and help provide the resources to take advantage of them.”



# MAPPING THE LINKS BETWEEN

statistics

AND

health

By Mike King

The maps dominating Lance Waller's office represent more than just interesting artwork.

For the chairman of the Department of Biostatistics and Bioinformatics, the dozens of maps provide a daily reminder of early work in a field of study that may only now be reaching its true place in preventing disease and improving health.

The largest, commanding much of the wall behind his desk, is the self-described "Map of the Hydrographical Basin of the Upper Mississippi" by geographer and mathematician Joseph Nicolle.

Printed in 1843, the map represents the first detailed rendering of the hydrology system for a landmass in North America that is half the size of Europe. The French scientist's remarkably accurate journals, among

other things, were used to chart Minnesota's famed 10,000 lakes. But it doesn't include one of the largest, Lake Minnetonka—an omission that was likely the result of Native American tribal guides not wanting the geographer to know about their sacred burial grounds nearby.

"You can't account for what you don't know exists," Waller says of the significance of Nicolle's map.

On a shelf opposite the map, Waller has earmarked a page from a book on John Snow, one of the pioneers of epidemiology and the field now known as "spatial statistics."

It depicts a miniature version of the 1854 map Snow had made pinpointing the proximity of the dead to a Broad Street pump in London. Snow's discovery linking the source of contaminated water to the spread

of cholera fell on deaf ears, and more than 600 residents died.

"Finding an unusual connection isn't the end of the story, it's just the beginning," says Waller of the science that forms his life's work.

The rudimentary statistical analysis that Snow applied more than 150 years ago has evolved into use of Geographic Information Systems (GIS), data mining studies, and other sophisticated tools to count, analyze, map, and predict health threats that may—like Lake Minnetonka to Joseph Nicolle—otherwise never have been noticed.

Waller has been at the forefront of many of these changes. The youthful-looking Rollins Professor is among a new generation of biostatisticians who have pushed the once behind-the-scenes use of bioinformatics front and center in epidemiology and, increasingly, as a major component of biomedical research and health care reform.

As associate director of the Center for Comprehensive Informatics (CCI), based in the Woodruff Health Sciences Center, he provides an important link with other scientists. The CCI fosters collaboration among software and biostatistics experts and basic science and clinical researchers at Emory and Georgia Tech.

"We are in a new age of biomedical research where technological breakthroughs allow the collection of data on vast scales, such as medical imaging, gene expression arrays, and sequencing," Waller explains. "The CCI represents a focused effort to bring together these types of experts with research teams to make the most of newly available data."

## *Mining data, drawing conclusions*

The son of a statistician—his father worked at the Los Alamos National Laboratory studying the reliability

A collector of maps, Lance Waller uses statistical methods to analyze and map data to understand the ecology of raccoon rabies and other diseases. Photos were taken at the Grey Parrot Gallery in Buckhead.

and life span of mechanical components—Waller has always been drawn to the field. He majored in mathematics and minored in computer science as an undergraduate but got hooked on spatial statistics when an academic advisor led a project that looked at disease clustering.

In the years since, much of Waller's work has been directed at linking spatial statistics, GIS information, and statistical assessments of environmental justice and creating new and more sophisticated models for small-area health statistics. More recently, Waller has concentrated on spatial point process methods for alcohol epidemiology, conservation biology, and disease ecology.

From the study of sea turtle nesting patterns in the Southeast to looking at geographic links between alcohol sales, crime, and drug use in Houston, Waller's research has helped create policies and procedures that, among other goals, promote conservation and reduce the risk of crime.

“What we can do with mapping is look at how things line up and draw some conclusions about, for instance, zoning ordinances regarding where alcohol licenses might be problematic,” he explains.

Similarly, data can be mined from traffic flow patterns; emergency room visits for allergy, asthma, and other respiratory diseases; and proximity to highways or clogged arterial streets. That information can lead to better decisions about the impact of new highways or traffic corridors on public health in urban areas—the way environmental impact statements have informed public officials about land use practices in rural regions.

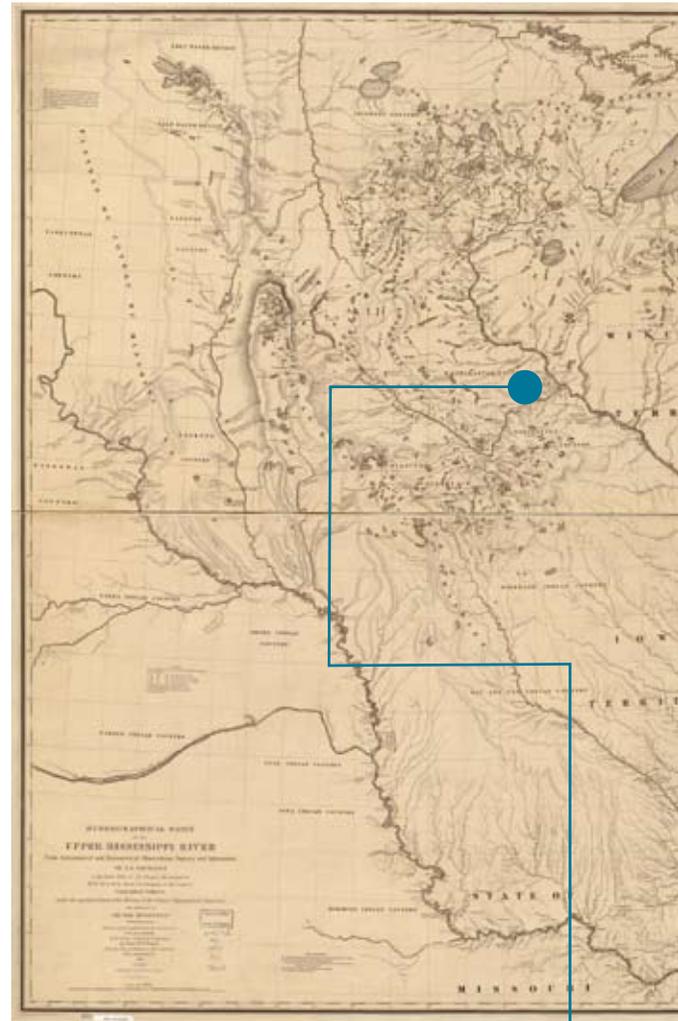
One of his studies involved the spread of rabies among raccoons from Florida to Georgia and up the eastern seaboard to Virginia and West Virginia. Since rabies is a reportable disease, researchers were able to map

the spread and even slow the spread by predicting where it might go next. (They baited the woods with feed that contained a vaccine.) “It was like fighting a forest fire. They put down a line of defense that worked,” says Waller. He currently is developing statistical methods to analyze spatial data in disease ecology, using raccoon rabies in the northeastern United States and Buruli ulcer in Ghana as case studies.

Such practical applications of bioinformatics have been important in the fight against the spread among humans of animal pathogens like monkey pox, West Nile virus, SARS, and swine flu. The success thus far at keeping H1N1 in check can be directly linked, at least in part, to timely, accurate assessments of how the virus has spread, especially among children and college students, Waller believes.

With 30 faculty members, the department he leads is similar in size to those in public health schools around the country, and like the others, it is growing. Faculty collaborate with Emory researchers on projects such as developing new ways to monitor cancer cell growth and new methods of analyzing survival patterns in cancer patients. Some of their most hopeful lines of study involve the Center for Biomedical Imaging Statistics, the Emory Center for AIDS Research, and the Atlanta Clinical and Translational Science Institute.

Waller took over the department last July, succeeding Michael Kutner, who joined Emory in 1971, when the department was part of Emory's School of Medicine. Kutner, who continues to teach and conduct research, aided in recruiting Waller from the University of Minnesota in 1998.



Waller is fond of Joseph Nicollet's 1843 "Map of the Hydrographical Basin of the Upper Mississippi" for what it doesn't show—Lake Minnetonka, the largest lake in Minnesota. "You can't account for what you don't know exists," says Waller of the map's significance.

The careers of both men represent succeeding generations of biostatisticians. Their profession grew in stature during the 1960s and 1970s when the NIH greatly expanded training programs and provided scholarships and tuition assistance for

students interested in the field at medical schools across the country. That stimulus helped the image of biostatisticians evolve from technicians and analysts to their more appropriate role as full-fledged researchers in clinical medicine and public health.

### *An explosion of new data*

As clinical trials of new drugs for cancer, HIV, and other diseases exploded in the 1980s, it became increasingly clear that accurate, meaningful



With the death toll from AIDS rising monthly and an increasing demand to enroll patients in trials testing dozens of anti-viral drugs, researchers needed to know quickly which drugs were harmful, which showed potential, and which needed more study. Collecting and analyzing data from experiments around the country became paramount.

Harvard researchers were working with large hospitals that were treating AIDS patients, while the University of Minnesota—where Waller was a faculty member at the time—worked with physicians who were monitoring AIDS patients in their family practices.

Using what Waller calls “a very detailed design” for studying the data collected, and other tools of the trade, biostatisticians could quickly measure the effectiveness of the “cocktail” of anti-retroviral drugs that became the gold standard for people infected with HIV.

One goal of biostatistics, Waller says, is to help design clinical trials “where you don’t have to

data analyzed by biostatisticians. But they also have determined quickly that some experimental drugs are both safe and effective and shortened the length of time needed to move them from the first tests in humans to FDA approval. Such trials may still be rare, he says, but without timely, well-designed data gathering, the information gleaned from them could take years to accumulate, leading to unnecessary risks for some patients and missed treatment opportunities for others.

As their role in clinical studies grew, biostatistics experts were thrust into evaluating the cost-effectiveness of drugs, medical devices, and other therapies. The field, now known as comparative effectiveness research, has been touted as one of the best ways to bend the curve on health care spending.

Waller agrees that he and his colleagues will play an essential role in such research. He also knows that such research can cause controversy. A recent example: The value of screening mammography for women was based, in part, on comparative effectiveness analysis that was accurate, even though the conclusions derived from it, such as what age women should be screened, varied.

“Unfortunately, we can’t guarantee an average outcome for everybody,” Waller says. The goal should be to determine what to measure, how to measure it, and then test all conclusions as thoroughly as possible. It’s a challenge he relishes as RSPH biostatisticians analyze and link data in a variety of applications across Emory.

That may be why Waller feels such kinship for his predecessor’s work in London and why the little map in the John Snow book speaks so eloquently more than 150 years later.

*Mike King is a former medical writer and editor with The Atlanta-Journal Constitution.*

“What we can do with mapping is look at how things line up and draw some conclusions about, for instance, zoning ordinances regarding where alcohol sales might be problematic.”

—ROLLINS PROFESSOR LANCE WALLER

statistical analysis is essential to the successful outcome of large-scale studies. The quest to find drugs that could combat the death and disability associated with HIV/AIDS in particular marked a turning point for biostatistics, Waller believes.

wait for all the results to be in before you know whether something works or not.”

In recent years, researchers have shut down experiments with investigational drugs that were likely to cause harm based on preliminary



## Kenneth Thorpe is concerned about weight. Not his own but the weight of the nation.

For the past several years, the RSPH health policy expert and former Clinton administration adviser has tracked the growing number of adults and children in this country who are obese or overweight and the rising costs of caring for them when they become ill.

Through journal articles, congressional testimony, newspaper and

television commentary, Twitter, and alliances with key partners, Thorpe has kept obesity and chronic disease front and center in the debate over health care reform and counseled employers, state governments, political parties, and presidential candidates on how to prevent disease, save lives, and lower health care spending.

“If Congress wishes to control costs in health care, they must put the obesity epidemic at the top of the agenda,” Thorpe wrote in his *Huffington Post* blog last fall. “Why? Because as much of a problem as obesity is today—believe it or not, it is going to get worse—and we will all be paying more for it.”

### How did we get here?

The obesity rate has climbed steadily for three decades. During the 1960s and 1970s, the share of U.S. adults



# A Weighty Matter

From local communities to the White House, Kenneth Thorpe has put obesity and chronic disease on the health care reform agenda

BY PAM AUCHMUTEY

who were obese ranged from 15% to 17%. Since the early 1980s, the obesity rate for adults has climbed a half a percentage point a year and now stands at 34%. Why such a steady rise?

“Obviously, we’re taking in more calories,” says Thorpe, Woodruff Professor and chair of the Department of Health Policy and Management. “Processed foods are inexpensive and widely available. Couples with dual incomes are more likely to eat meals outside the home. Stu-

dents move less because the number of activity minutes in schools has dropped over the past decade. People concerned about neighborhood safety are less likely to exercise if there are no walking paths and bike paths near their homes. All of these factors contribute to obesity.”

Health and government leaders have sounded the obesity alarm for some time. In 2001, then-U.S. Surgeon General David Satcher issued a call to action to reduce overweight and obesity. In 2003, Arkansas Gov-

ernor Mike Huckabee signed legislation targeting childhood obesity.

Among other measures, Act 1220 required public schools to measure children’s body mass index to identify potential health risks related to overweight and obesity. Earlier this year, First Lady Michelle Obama targeted childhood obesity with her Let’s Move campaign, backed by a White House task force.

President and Mrs. Obama are familiar with Thorpe’s efforts. In 2007, Thorpe helped form a national coali-

tion to position obesity and related illnesses as a top health care priority in the 2008 U.S. presidential election. Today, the Partnership to Fight Chronic Disease (PFCD)—involving 120 business, labor, health care, and community members—continues to educate policymakers on how to reduce the physical and financial burden of disease.

The year that PFCD was launched, Thorpe and his colleagues at Rollins published study results comparing the prevalence and treatment of disease for adults aged 50 and older in the United States and in Europe. The team found that Americans were nearly twice as likely to be obese as their counterparts in Europe. “If the United States could bring its obesity rates more in line with Europe’s, it could save \$100 billion a year or more in health care costs,” the researchers wrote in the journal *Health Affairs*.

New data compiled by Thorpe’s team shows that obesity costs will quadruple by 2018. The data, part of the 2009 *America’s Health Rankings* report, is the first to estimate obesity prevalence and costs at the state and



Kenneth Thorpe is a familiar figure in Washington. Earlier this year, he briefed reporters at the National Press Club on the growth in Medicare spending related to chronic disease.

national level for the next 10 years.

According to CDC estimates, one-third of U.S. adults—more than 72 million people—are obese. If current trends continue, the report states, 103 million people—43% of the U.S. adult population—will be obese, and obesity spending will quadruple to

\$344 billion by 2018. But if obesity rates held at current levels, the United States would save nearly \$200 billion in health care costs by 2018.

As of 2008, Georgia spent about \$2.5 billion a year in direct health care costs related to obesity. The *America’s Health Rankings* report

## Back to the basics

“Three-quarters of what we spend on health care in this country—\$1.65 trillion annually, the same amount as our deficit—is linked to patients that have chronic health care conditions like diabetes, high blood pressure, and abnormal cholesterol,” Kenneth Thorpe wrote in *The Atlanta Journal-Constitution* last fall. In his article, Thorpe recommends four basic steps to improve health and reduce health care spending.

**1 Turn back the clock on obesity.** Changing consumer behavior to reduce and prevent conditions related to obesity and overweight could save \$220 billion by 2018.

**2 Streamline administration of benefits and reduce waste.** Simplifying and standardizing paperwork, moving to an electronic-based system, eliminating paper prescriptions, and reducing staff turnover could save \$315 billion over the next 10 years.

**3 Reduce hospital readmissions and better coordinate care for seniors covered by Medicare.** Research shows potential savings of \$10 billion annually.

**4 Design a system that helps patients follow doctor’s orders.** For example, if patients were to take their prescription drugs as directed, the nation could save \$100 billion per year.

Source: PriceWaterhouseCoopers

If current trends continue, 103 million people—  
**43% of the U.S. population**—  
will be obese, and obesity spending will quadruple to  
**\$344 billion**  
by 2018.

(FROM THE 2009 AMERICA'S HEALTH RANKING REPORT)

projects that figure would rise to nearly \$11 billion by 2018.

“At a time when Congress and state governments are looking for savings in health care, this data confirms that obesity is where the money is because it is related to the onset of so many illnesses,” says Thorpe.

### What will it take?

There are solutions, with reducing obesity and overweight as a first step. Studies led by RSPH health policy research professor Ron Goetzl have helped companies like Johnson & Johnson and Dow Chemical Company reduce employee absenteeism and increase company savings through work site weight-reduction programs. The YMCA, a PFCD partner, has adapted the CDC's Diabetes Prevention Program model to help pre-diabetic adults lose weight. Instead of using one-on-one coaching like the CDC model, 13 YMCAs in Indiana have taken a team approach to weight reduction and exercise, cutting the program's cost by 15%.

“We're starting to see more movement on effective community programs like the YMCA's,” says Thorpe. “If we can get more funding to get more preventive programs up and running and encourage employers

and Medicare to pay for them, you can reduce the lifetime risk of diabetes, including people in their 50s. And employers and Medicare would save money.”

Weight management is only part of the solution. Among other steps Thorpe recommends: streamlining administration of health benefits, cutting wasteful spending, making it easier for patients to adhere to prescriptions and doctor's orders, and improving continuity of care for seniors covered by Medicare.

“In the Medicare program, one in five hospital patients is readmitted within 30 days—at a cost of \$13 billion a year—because of poor care coordination,” Thorpe wrote last fall in *The Atlanta Journal-Constitution*.

More recently, Thorpe's team reported that the causes of Medicare spending growth have changed dramatically over the past two decades. Twenty years ago, most increases were due to inpatient hospital services, especially for heart disease, the researchers wrote in the online edition of *Health Affairs* (February 18, 2010). Today, most annual Medicare expenses account for outpatient treatment of chronic conditions such as diabetes, arthritis, hypertension, and kidney disease.

To better manage chronic illnesses, Thorpe helped pioneer a community health team (CHT) model for small physician practices in Vermont. There, nurses, nurse practitioners, care coordinators, nutritionists, mental health specialists, and social and community health workers work in concert to follow patients in the hospital, during clinic visits, and at home. The model is designed to improve transition of care, reduce hospital readmissions, and lower health care costs. It also provides greater peace of mind for patients and their families.

The CHT concept is based on the care management models used by large clinic practices such as Mayo and Geisinger. Currently, CHTs cover about 10% of the population in Vermont, and the entire Medicaid population in North Carolina. Rhode Island, Pennsylvania, and Colorado are looking at using the model.

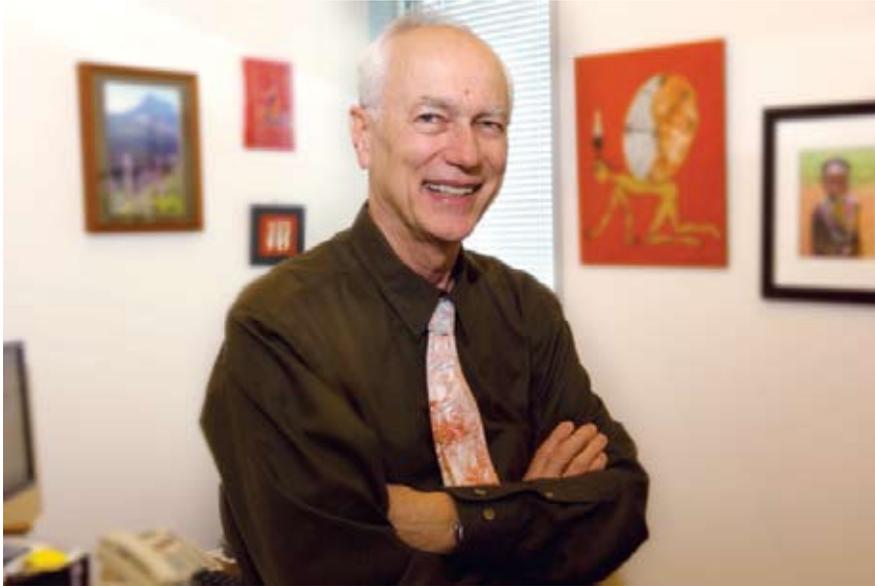
Community health teams were part of President Obama's initial health care reform plan. And while Congress recently passed landmark health care reform legislation, much work remains to ensure that chronically ill patients receive the services they need. Once firmly in place, CHTs would manage patients covered by Medicare, Medicaid, or private insurance. The major hurdle to implementing teams is securing federal and state funding.

“There's no reason why we couldn't have them up and running nationally three to five years from now,” says Thorpe, who has briefed members of the U.S. Senate committees on health and finance about the concept. “We've had 10 to 15 years of experiments with community health care teams, and we know what works. We need to move ahead with them to reduce obesity and chronic disease and save lives.”

To learn more about Kenneth Thorpe's work with chronic disease, visit [emoryhealthsciblog.com/?s=Ken+Thorpe](http://emoryhealthsciblog.com/?s=Ken+Thorpe).



## Rochat supports students through MyEmory



Global health professor Roger Rochat is the RSPH volunteer leader for MyEmory.

Roger Rochat can trace his history with Rollins to before the school was formed. Now the global health professor is doing his part to secure the school's future.

Rochat is the RSPH volunteer leader for MyEmory, the employee and retiree component of Campaign Emory. Since the \$1.6 billion fund-raising effort began in 2005, employees and retirees have contributed more than \$41 million to the campaign. Launched in February, MyEmory seeks to raise \$50 million by the end of 2012.

In the RSPH, MyEmory participants can contribute to anything they choose: their own department fund, student scholarships, faculty development, the Global Field Experience fund for students, or laboratory equipment.

"Every gift, no matter the amount, makes a difference," says Rochat.

"Many faculty and staff already contribute to Rollins, and MyEmory is an opportunity to invite greater participation from our colleagues."

Rochat's history at Emory began in 1985 when he helped develop the master of public health curriculum through the CDC as coordinator for the international health track.

After retiring from the CDC, Rochat joined the Department of Epidemiology at Rollins in 2000 as a visiting professor and, in 2003, joined the faculty full time in what is now the Hubert Department of Global Health. In addition to teaching and conducting research, the reproductive health expert has mentored many students through the master's thesis process as director of graduate studies in global health.

His joy in teaching and watching students grow in knowledge and determination inspires Rochat from

day to day. His desire to strengthen Rollins and its students led Rochat and his wife Susan to establish the Global Elimination of Maternal Mortality Due to Abortion (GEMMA) Fund. The GEMMA Fund provides support for summer field experiences in developing countries.

"This area of public health is neglected by many, and it gives students the opportunity to do research to achieve global elimination of maternal mortality from unsafe abortion," Rochat says.

He also believes it is important for faculty and staff members to support the programs at Rollins that they value. He co-teaches courses in fertility control and reproductive health program management, and at the request of students, he developed the GEMMA seminar to focus on the public health impact of unsafe abortion.

Student response to the course and the GEMMA fund has been positive. One student group designed and sold T-shirts to raise more than \$2,000 for the fund.

"Observing the passion that our students put into their studies, their student associations, and their work in the Atlanta public health community is incredibly rewarding," Rochat says. "I have received more satisfaction from student response to our gift to Rollins than anything else I have done in the past decade."—*Maria Lameiras*

## Moore joins development team

As a longtime fund-raiser and advocate for international development, Carol Moore loves the company of humanitarians. In her new role as director of development at Rollins, she is in her element.

Moore has worked in the nonprofit sector for more than 20 years with the Society for International Business Fellows, Atlanta International School, CARE, and the Emory Institute for Developing Nations. Now she has joined the fund-raising team led by Kathryn Graves, associate dean for development and external relations.

“Carol is known throughout the Atlanta philanthropic community and brings a deep enthusiasm for our work at Rollins,” says Graves. “She is building our portfolio of major gift prospects and developing and managing strategic fund-raising initiatives for the school.”

Although Moore has worked in the international arena for most of her career, she rediscovered her passion while serving as director of development for the St. Charles Foundation in Oregon. “I realized I missed the

international activities that had been the theme of my working life,” says Moore.

After completing a master’s degree in international service at American University, she returned to Atlanta and to CARE, this time as manager of marketing partnerships with Delta Air Lines, Borders Bookstores, and the Women’s National Basketball Association. During her first career with CARE, she managed major gifts and corporate partnerships with UPS, Delta, Coca-Cola, and Glaxo-SmithKline.

Moore’s perspective on humanitarian work has evolved over years of work, study, and travel, but her desire to improve lives hasn’t wavered. Now, at Rollins, she is raising funds to support the next generation of public health leaders.

“The school has tremendous momentum, especially with our 20th



The RSPH Office of Development and Alumni Relations (L-R): Sonia D’Avalar, Carol Moore, Kathryn Graves, and Michelle James.

anniversary and the opening of the Claudia Nance Rollins Building this year,” she says. “It’s an excellent time to be part of this school. I feel at home here.”—*Pam Auchmutey*



## RSPH campaign support tops \$125 million

To date, the RSPH has raised more than \$125 million—83.3% of its \$150 million goal—for Campaign Emory. Gifts to the RSPH help build endowments for teaching and research, scholarships, programs, and facilities. As of April, the university had raised \$1.03 billion toward its \$1.6 billion goal.

*To learn more about Campaign Emory and the RSPH, visit [www.campaign.emory.edu](http://www.campaign.emory.edu). To make a gift, contact Kathryn Graves, Associate Dean for Development and External Relations, at 404-727-3352 or [kgraves@emory.edu](mailto:kgraves@emory.edu).*

# Alumni begin national conversation on chemical safety

Ben Gerhardstein MPH helped get the conversation rolling. Montrece Ransom MPH joined in next, followed by Kim DeFeo MPH. Now they are engaging the nation in a critical discussion on chemical exposures and health.

The Rollins alumni, all current or former Presidential Management Fellows, are among the four CDC staff members who are moderating the National Conversation on Public Health and Chemical Exposures. Sponsored by the CDC's National Center for Environmental Health (NCEH)/Agency for Toxic Substances and Disease Registry (ATSDR), the two-year project involves members of government, professional organizations, tribal groups, community and nonprofit organizations, and the public. Their goal: to develop an action plan to better use and manage chemicals safely and protect Americans' health.

When Gerhardstein joined NCEH/ATSDR in 2008, the conversation consisted of a few bullet points on a sheet of paper. "The impetus for the project came from a desire by NCEH/ATSDR to take a hard look at 25 years of work in this area—are we doing the best job based on modern science and what we know works in practice," he explains. "It quickly came to have a life of its own."

The project evolved to include several key partners, a leadership council, and six work groups comprised of 180 public health and environmental health experts from around the United States. Each work group is researching issues to form recommendations in their respective areas: monitoring, scientific understanding, policies and practices, chemical emergencies, serving communities, and education and communication.

Gerhardstein coordinates several aspects of the National Conversation project, from working with the leadership council to members of his own agency. Ransom, an attorney and former Presidential Management Fellow, manages the policies and practices and the chemical emergencies work groups, stemming from her experience with the Public Health Law program, based in the CDC's Office of the Director. Since joining that office nine years ago, Ransom has worked on issues in environmental health and public health emergency preparedness. Her experience proved to be a good fit for the work groups she now manages.

"This has been a learning experience for me," says Ransom. "I'm learning about the issues that confront



Left: Kim DeFeo and Ben Gerhardstein. Below: Montrece Ransom.



people in the area of chemical exposures while helping work group members who are experts in the field figure out where the gaps are and where we

should be headed in the future."

DeFeo, who manages the work groups on scientific understanding and serving communities, works with Gerhardstein and others to broaden project participation around the country. This spring, the public will weigh in on the National Conversation through a web forum. Over the course of a few days, key questions will

be posted to generate what's expected to be "robust" discussion among hundreds of people online. While the CDC has conducted similar discussions before, "this is the first time we've done this in the environmental health arena," says Gerhardstein.

To complement the web discussion, DeFeo is developing a toolkit to guide community conversations of eight to 10 people in neighborhoods, churches, and schools. "The idea," says DeFeo, "is to bring people together around the country to learn what their concerns are and what they see as solutions to protect them from chemical exposures."

As the National Conversation moves forward, the leadership council and work groups will share their ideas and recommendations in a draft report for public comment in order to create a final action agenda by early next summer.

"We want the work group reports and the final action agenda to be specific and not just pie-in-the-sky thinking," says Gerhardstein. "We're looking for recommendations that we can make work to protect the public's health." —*Pam Auchmutey*

## RSPH Alumni Association Board Members

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## Upcoming Events

### Spring Diploma Ceremony

Monday, May 10, 2010

11:00 AM, RSPH Lawn

Information: alumni@sph.emory.edu

### RSPH Alumni Reunion Weekend & 20th Anniversary Celebrations

September 24-26, 2010

Information: alumni@sph.emory.edu

### Open House/Destination Public Health

Saturday, September 25, 2010

Information: sshe101@sph.emory.edu

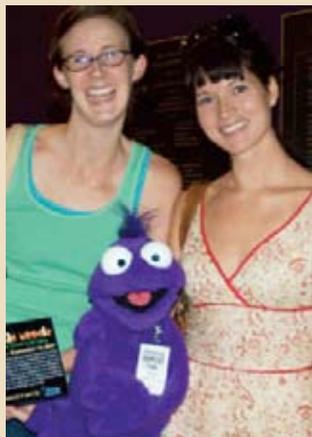
### Claudia Nance Rollins Building Dedication

Wednesday, October 6, 2010

Information: alumni@sph.emory.edu

For information about these and other events: alumni@sph.emory.edu or 404-727-4740.

## HealthSTAT leaders bound by RSPH connection



Danny Vincent 05MPH (left) and Michelle Putnam 09MPH commune with a friend at a puppet show about childhood obesity.

There was no drum roll marking the hand-off at HealthSTAT last year. But it was an important transition for the organization. Jane “Danny” Vincent 05MPH, who had led the group as executive director for more than three years, passed the reins to Michelle Putnam 09MPH in August 2009.

Now a decade old, HealthSTAT—Health Students Taking Action Together—has come a long way since a small group of Emory health professions students decided they needed more than a classroom education to make a difference in the health of their communities. Today, the organiza-

tion includes public health, medical, nursing, business, and law students from Emory, the Medical College of Georgia, Morehouse School of Medicine, Mercer University, the University of Georgia, and other schools across the state. Each year, students accomplish more, building on the foundation laid by students before them. “Together, we have protected the health of immigrant communities, defended health insurance for children, partnered in the community to reduce childhood obesity, and fought to keep Atlanta’s public hospital open,” says Vincent.

The battle continues. In March, HealthSTAT reached out to students to attend the annual state Legislative Breakfast, along with student members of the Georgia Public Health Association. Emails went out, noting that Georgia faced a \$650 million gap in Medicaid funding and that legislators threatened to cut eligibility even further. HealthSTAT members have pushed for increasing revenue by raising the tobacco tax and revising income tax rates and tax credits to avoid cutting essential services.

Since taking over at HealthSTAT, Putnam has learned a great deal about how policy is made in Georgia and how nonprofits play an important role in providing services and advocating for consumers. “Even more,” she says, “I’ve learned that Georgia’s students are an incredibly dedicated bunch.”

Vincent’s experience at HealthSTAT in promoting sound health policy for Georgia prompted her to enroll in law school. Putnam plans to learn and grow at HealthSTAT and work long-term in the health nonprofit community. The organization has been a stepping stone for both of them. It is also a place where Rollins students and alumni, and those in other health professions at Emory and in Georgia, can have an impact for years to come.—Carol Pinto



Colleen Browne 97MSN/MPH and husband Charles Kilgore



Stormy Sweitzer 00MPH in China Town, San Francisco



Fatima Cody Stanford 01MPH



Chuck Washington 01MPH and fiancée Kim Buyske

## 1990s

**BORN:** To **DINAMARIE (DIDI) CRUZ GARCIA-BANIGAN 96MPH** and her husband, Brian Banigan, a son, Gabriel Jerome, on May 9, 2009. He joins his big sister, Xavia Helene. Didi is an endocrinologist at Lahey Clinic Medical Center, and Brian works for IBM. The Banigans live in North Reading, Mass.

**MARRIED:** **COLLEEN BROWNE 97MSN/MPH** and Charles Kilgore, on Jan. 18, 2008. She is a PhD student at Florida International University School of Nursing. They live in Orangeburg, S.C.

## 2000s

**STORMY COMPEÁN SWEITZER 00MPH** received an MBA from the University of Utah in 2007. She lives in Salt Lake City with her husband and business partner, Will Swanepoel. They recently launched SizeTracker.com, an online service that helps parents track their children's measurements and their clothing sizes as they grow. Sweitzer also works in health information technology at HealthInsight, the federally designated quality improvement organization for Utah and Nevada. Projects include a web-based initiative to make

health care quality and cost information more transparent to consumers.

**FATIMA CODY STANFORD 01MPH** received the Paul Ambrose Award for Leadership Among Resident Physicians at the annual meeting of the American Medical Association (AMA) in Chicago last June. Stanford was honored for her commitment to "a strong public health system" that "permeates the very essence of who I am as a health care provider," she notes in her application for the award. She also chairs the Public Health Standing Committee of the AMA's Resident and Fellows Section.

A graduate of the Medical College of Georgia, Stanford is a resident in internal medicine/pediatrics at Palmetto Health Richland in South Carolina. Her AMA award honors the memory of Ambrose, who was killed aboard the plane that crashed into the Pentagon on 9/11. At the time, Ambrose was a senior clinical adviser in the Office of the Surgeon General who was dedicated to serving low-income patients and providing physician leadership in health policy.

**CHARLES (CHUCK) WASHINGTON 01MPH** is engaged to Kim Buyske. Washington is also a medical

Would you like to see your news and photos on these pages?

Share your latest developments by email, mail, or fax.

Address: Alumni Records, RSPH, PO Box 133000, Atlanta, GA 30333-9906

Fax: 404-727-9853

Email: [alumni@sph.emory.edu](mailto:alumni@sph.emory.edu)



Link up through E-Connection, the online community of the Emory Alumni Association. Hundreds of alumni are using the website to link professionally and personally with each other. Through E-Connection, RSPH alumni can reconnect with old friends and colleagues and meet alumni in their area, network with alumni around the world, share photos and special interests, and search for jobs. To register with E-Connection, visit [alumni.emory.edu](http://alumni.emory.edu) and look for the heading "Are you Connected?"

### Looking for a job?

Sponsored by RSPH Career Services, the Public Health Employment Connection lists job opportunities for alumni and students in public health. To view the site, visit [sph.emory.edu/CAREER/phed\\_info.php](http://sph.emory.edu/CAREER/phed_info.php).



Jennifer Pritzker Sender 02MPH and family



Evelia Kory 09MPH and RSPH Dean James Curran

resident at the University of New Mexico. He graduated from medical school at the University of Washington.

**BORN:** To **JENNIFER PRITZKER SENDER 99C 02L/MPH** and her husband, Eric, a son, Noah Avery, in September 2009. He joins older brother Gavin. The family lives in Atlanta.

**BORN:** To **MONICA CAMPOS BOWERS 03MPH**, a son,

Moises Mateo Bowers, on July 22, 2009. Bowers, who is a physician, and her family live in McAllen, Texas.

**TRACY JEAN BROWN 04MPH** received her doctorate in veterinary medicine from the University of Georgia last May. She also married Byron Warner on May 16, 2009, in Albuquerque, N.M. They are stationed in Germany, where Brown oversees the veterinary clinic at Baumholder Army

Garrison. She holds the rank of captain.

**MARRIED:** **ALANNA MCKELVEY 07MPH** and Luke-Pascal Stone on Oct. 30, 2009, in Atlanta. She is a rising fourth-year medical student at Emory, and he is an elementary school teacher at Paideia School in Atlanta.

**EVELIA KORY 09MPH** spent 10 weeks researching border health issues as part of the



Alanna McKelvey 07MPH and husband Luke-Pascal Stone

## Help Seat Our Future



For more information or to purchase your auditorium seat, visit [sph.emory.edu](http://sph.emory.edu) or contact the Office of Development and Alumni Relations at 404-727-3739.

Since the inception of the RSPH, we have seen great advances in the field of public health and the growth of our school. Thanks to the support of our benefactors, Rollins now will occupy two buildings on the Emory campus. You can be part of that growth and create a lasting legacy by purchasing a dedication plaque for our 250-seat auditorium in the Claudia Nance Rollins Building, which will open this summer.

With a one-time gift of \$250, your name—or that of a colleague, mentor, professor, student, or loved one—will be engraved on a 5" x 11" brushed stainless steel plaque and placed prominently in our auditorium.

Gifts are 100% tax-deductible and provide scholarship support for students, unless otherwise designated.

Help us shape the future of public health by seating the next generation of leaders in the RSPH.

## Emory memorial service honors epidemiology student Thomas Butler



Thomas Butler 10MPH

**THOMAS BUTLER, 10MPH**, an epidemiology major set to graduate in May, died unexpectedly but peacefully on Jan. 10, 2010, while vacationing with his family in Florida. Gifted in math and science, he excelled in Emory College's biology program, where the faculty regarded him as a "smart, engaged young scholar" with an ability to look at

the big picture in science and apply what he saw to life. He graduated from the college in 2004.

"Thomas was aware of his ability to look at the big picture and larger context," said RSPH Dean James Curran during a February memorial service honoring Butler in Emory's Cannon Chapel. "In his personal statement for his MPH admissions application, Thomas wrote that his education in biological sciences taught him that 'a holistic picture is often the most important and underutilized tool in the discovery and implementation of a medical procedure.' And it was an opportunity for a more holistic viewpoint that drew him to public health."

At Rollins, Butler worked with the Women's and Children's Center, where he was integral to the pathology portion of a case control study in the NIH-funded Stillbirth Collaborative Research Network. "This was a very difficult study that dealt with many biological specimens, and I assigned Thomas to work with our pathology group because of his background in biology," said Janice Tinsley, project coordinator for the study. "He worked the majority of the time at Children's Healthcare of Atlanta at Egleston helping with preserving placental and tissue specimens, and he worked in Emory's General Clinical Research Center to label and ship blood specimens to the repository out of state. Thomas truly was part of the team as the only male in an all-women's group. He enjoyed every minute of it!"

Butler also was known to faculty, students, friends, and family for his sense of humor and his love of practical jokes. He enjoyed the Emory Sailing Club and Emory Crew and was active in the Emory Presbyterian Campus Ministry. Surviving him are his parents, Lindsay and Anne Butler of Brackney, Pa.; his brother, James Butler of Binghamton, N.Y.; and a large extended family.

Frontera program at the University of Arizona College of Medicine in Tucson. Her summer project examined the types of health studies taking place in the border region involving U.S. and Mexican researchers. She also interviewed clinicians on the U.S. side to examine how they access and use evidence-based information in clinical practice. Kory grew up on the border and is interested in working there in the areas of diabetes prevention and management, nutrition, and relationships between patients and doctors.

## Alumni Deaths

**DONNA LEIGH JENKINS 93MPH**, 50, of Peachtree City, Ga., on Feb. 28, 2009. Survivors include her husband, James.

**CYNTHIA MARGARET LETIZIA 94MPH**, 51, of San Clemente, Calif., on June 23, 2009.

**KATHERINE ANN BRYANT 01MPH** on Sept. 16, 2006. She lived in Texas in the Dallas area.



### Save the date to celebrate

Mark your calendars for RSPH Alumni Reunion Weekend on September 24-26, 2010. Join us as the school celebrates its 20th anniversary in conjunction with the official opening of the Claudia Nance Rollins Building. The new facility will be dedicated on Wednesday, October 6. For details, call 404-727-4740 or email [alumni@sph.emory.edu](mailto:alumni@sph.emory.edu).

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## Of mice and dopamine

Gary Miller knows mice. His genetically engineered mice have flaws in the packaging, storage, and transport of dopamine to help him learn how Parkinson's disease develops and how pesticide exposure can cause or speed up the process. To learn more, see page 14.

