

Robert Wood Johnson MEDICINE

We will have to change the court fight looms over right to carry to

GUN DEBATE AT TIPPING POINT

gun law starts heating up
Lawmakers Call for Re-dividing

Some gun sellers seeing brisk business
Lawmakers turn talk to gun regulations

'SURELY WE CAN DO BETTER THAN THIS'

Call to ban assault weapons
it's politics as usual
New Calls for Gun assault weapons
Opposing side
Lawmakers present

control gets backing on Hill right to bear

Students Speak Out:

Gun Violence

is a Public Health Issue

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LETTER FROM THE DEAN

Dear Friends,

Serving as the dean of Rutgers Robert Wood Johnson Medical School has been one of the profound honors of my professional career. So it is with mixed emotions that I share the news that I have accepted a new role as the president of Rush University in Chicago. My tenure here has been a remarkable and wonderful journey. Welcoming new classes, celebrating the Match, and graduating new physicians who will carry the proud Robert Wood Johnson Medical School experience across the country and globe have been exhilarating.

There have been many successes, including the launch of the RWJBarnabas Health and Rutgers University partnership to jointly operate a world-class academic health system, improving the financial health of our school, and navigating the changing health care environment, with a dedicated sense of purpose and resilience. I was reminded of that strong sense of purpose when I received the final letter from the Liaison Committee on Medical Education certifying our eight-year reaccreditation.

That pattern of success is reflected in each of our missions. The clinical enterprise has expanded services, and significantly improved the quality and safety of the patient experience, with the ambulatory accreditation from the Joint Commission. That journey was part of a transformational change across the practice and the entire medical school community.

The recognition of quality extended to the community health mission. The Eric B. Chandler Health Center was repeatedly recognized for the quality of care that our faculty and staff provide as a Federally Qualified Health Center. The related teaching programs and vast community group outreach and integration, along with the global health program, are the future. The future also holds promise for research. Our scientists increased funding year over year and continue to seek increased National Institutes of Health and extramural funding that will help to fulfill the promise science holds to treat and cure the diseases of the 21st century.

In addition, I am pleased to announce that Robert L. Johnson, MD, FAAP, the Sharon and Joseph L. Muscarelle Endowed Dean of Rutgers New Jersey Medical School (NJMS), has agreed to assume the additional position of interim dean of Robert Wood Johnson Medical School. Dr. Johnson joined the faculty of the NJMS Department of Pediatrics in 1976. He created the division of adolescent and young adult medicine and led it since its inception, and he served as chair, Department of Pediatrics, from 2001 to 2005, when he was asked to serve as the school's interim dean. In 2011, Dr. Johnson was named dean of NJMS. Dean Johnson plans to get to know Robert Wood Johnson Medical School alumni, faculty, staff, and students, understand our aspirations, and work together to promote our goals.



I thank you for your support, your work and dedication, and your friendship during my time as dean. I will always carry with me the knowledge and experiences, as well as many warm memories, from my time here.

Sincerely,

A handwritten signature in red ink, which appears to read 'Sherine E. Gabriel'. The signature is fluid and cursive, with a large loop at the end.

Sherine E. Gabriel, MD, MSc
Dean

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RWJBarnabas Health and Rutgers University Launch the State's Largest and Most Comprehensive Academic Health System

RWJBarnabas Health to invest more than \$1 billion over 20 years

RWJBarnabas Health and Rutgers University announced the official launch of their public-private partnership to jointly operate a world-class academic health system dedicated to life-changing research, clinical training of tomorrow's health care workforce, and high-quality patient care, consistent with the missions of Rutgers and RWJBarnabas Health. By working together, these two higher education and health care industry leaders will enhance research and medical and health professional education, improve access to care, and reduce health disparities in New Jersey.

The new venture will further the goals of Rutgers with respect to medical and health professional education and research by boosting the recruitment of prominent academic, research and clinical practitioners, and strengthening the advancement of health science innovation and education, while also enhancing the delivery and accessibility of evidence-based health care statewide.

"This is a transformational partnership for RWJBarnabas Health and Rutgers University, but, more importantly, for the people of New Jersey and



beyond," says Barry Ostrowsky, president and CEO, RWJBarnabas Health. "Together, we are poised to develop a widely renowned academic health system, driving medical innovations and clinical research to influence outcomes across the nation."

"As one of the nation's leading public universities, Rutgers has a long-standing history of excellence in education, service, and research," says Rutgers President Robert Barchi, MD, PhD. "Through this partnership, we have formed the largest and most comprehensive academic health system in New Jersey and are well positioned to take our place as a national leader in patient care, health science discovery, and innovation."

Patients will benefit from increased access to a world-

Seated (left to right): RWJBarnabas Health Board of Trustees Chair Jack Morris; Barry Ostrowsky; Chancellor Brian Strom, MD, MPH; and Robert Barchi, MD, PhD. Standing (left to right): Rutgers Biomedical and Health Sciences (RBHS) Senior Vice Chancellor for Clinical Affairs Vicente Gracias, MD; RBHS Senior Vice Chancellor for Finance and Administration Kathleen Bramwell; and RWJBarnabas Health Board of Trustees Vice Chair Marc Berson.

class academic health system, clinical innovation, groundbreaking research, and newly developed centers of excellence, as well as to more providers families need to manage their health and wellness.

"This unparalleled enterprise will further our shared goal to grow research activities and expand clinical trials statewide," says Rutgers Biomedical and Health Sciences Chancellor Brian Strom, MD, MPH, including eight schools, a behavioral health network, and six centers and institutes that focus on basic laboratory research, cancer treatment and

research, clinical and translational research, neuroscience, environmental and occupational health, and health care policy and aging research. "Becoming an integrated academic health system will enable us to expand our academic and research mission so we can better train tomorrow's clinical workforce and quicken the pace of discovery for patients."

RWJBarnabas Health will invest \$100 million initially, and then more than \$1 billion over 20 years to expand the education and research mission of the integrated academic health system. ■



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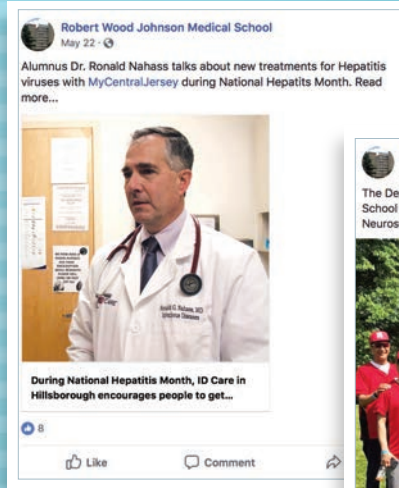


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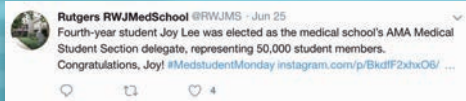
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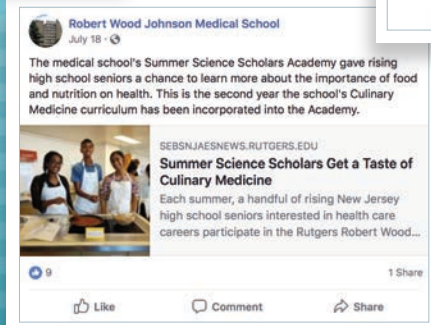
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Don't forget to tag #RWJMS when you post! We want to see what you're up to!



Cystic Fibrosis Center Earns High State and National Rankings:

**Expertise, Teamwork, and Goal-Setting
Define Approach to Patient Care**

BY KATE
O'NEILL

Julia Rae Schlucter and Cameron Grant share many qualities. Both are plucky, strong-minded, and smart. Both are artists and athletes. Both were born with cystic fibrosis (CF), an inherited, chronic, progressive disease that affects respiratory and pancreatic function, as well as other organ systems. Both refuse to let the disease define their lives, and both consider themselves integral partners in the care they receive at the comprehensive Cystic Fibrosis Center at Rutgers Robert Wood Johnson Medical School and Robert Wood Johnson University Hospital.

Julia recently graduated from Fordham University, and, with that milestone, she transitioned to the center's adult program. Cameron entered high school in the fall of 2017. She has been followed at the center's pediatric/adolescent program since 2015, and, like Julia, she will work with its team until she graduates from college.

Thomas F. Scanlin, MD, professor of pediatrics, chief, division of pediatric pulmonary medicine, and director, CF Center, leads the pediatric/adolescent program. The adult CF program at Robert Wood Johnson Medical School is directed by Sabiha Hussain, MD '95, assistant professor of medicine, a specialist in pulmonary and critical care medicine. Both programs, adult and pediatric, offer multidisciplinary teams that include not only physicians and nurse practitioners, but also a social worker, a psychologist, a pharmacist, and a physical therapist, as well as nutritionists, nurses, and respiratory therapists.

Prior to joining the medical school faculty in 2005, Dr. Scanlin was the director of the Cystic Fibrosis Center at the Children's Hospital of Philadelphia (CHOP), when that center was identified as being in the top five for lung function outcome. Two years later, the adult program at Robert Wood Johnson Medical School received accreditation from the national CF Foundation; the center itself is one of only three accredited CF centers in New Jersey.

A Brief Primer on CF

According to the patient registry maintained by the Cystic Fibrosis Foundation, 1,000 new cases of CF are diagnosed annually in the United States, where 30,000 people are living with the disease, with a higher incidence among Caucasians.

A major breakthrough came in 1989, when the CF gene named CFTR (cystic fibrosis transmembrane conductance regulator) was identified. This knowledge led to vast improvements in therapies to address disease symptoms, slow the progression of the disease, improve nutrition, and make early diagnosis through newborn screening. As a

result, median life expectancy for patients with CF has risen from 3 years of age in 1950 to more than 45 today.

CF is an autosomal, recessive disease, caused by a mutation in the CFTR gene. People who inherit one copy of the CFTR mutation are CF carriers but are free of the disease. A child can inherit the disease only if both parents have a mutation—of which there are more than 2,000 currently known. In that case, each of their children will have a one in four chance of inheriting the disorder.

The mutated CFTR gene disrupts the function of the CFTR protein, which regulates the movement of salt and water in and out of cells that produce mucus, sweat, saliva, tears, and digestive enzymes. Normally, a thin, free-flowing layer of mucus is secreted in passageways throughout the body, promoting the smooth function of the respiratory, digestive, and other systems and protecting them from irritants and invaders such as pollutants and bacteria.

When the CFTR protein is absent or defective, the mucus secreted by the cells in the tiny airways within the lungs, pancreatic ducts, gastrointestinal tract, and/or reproductive system becomes thick and sticky. This thickened mucus causes blockages and traps bacteria, leading to frequent infections and loss of function in the affected organs.

One of the great challenges in treating CF is its variability among individual patients. Depending on the mutation or combination of mutations, the disease may more seriously affect function of the lungs or pancreas, or absorption of nutrients. Because of the complexity of the disease and its treatment, Dr. Scanlin was very pleased to see in 2016 that the CF Center at Robert Wood Johnson Medical School ranked highest nationally and in New Jersey in a composite score for lung function and nutritional status.

In addition to having a strong clinical program, the CF Center is a designated Therapeutics Development Network center. "We have access to current and future clinical trials and are able to offer exciting new drugs," says Dr. Scanlin. The national CF Foundation has substantially increased the center's grant funding, supporting additional research and expansion of the research team. For instance, the center is participating in a third-phase trial of a drug that is designed to target the root cause of CF by fixing the chloride channel in a patient's lungs.

Moreover, the foundation's sponsored patient registry publishes outcomes for all accredited centers. This helps patients research the outcomes and compare the CF centers. "Transparency has added an element of constructive competition," says Dr. Scanlin. "The centers know patients have this resource, and everyone is improving care."



Thomas F. Scanlin, MD, professor of pediatrics, chief, division of pediatric pulmonary medicine, and director of the comprehensive Cystic Fibrosis Center at Robert Wood Johnson Medical School, leads the pediatric/adolescent program at the CF Center.

Patients Flourish under Goal-Oriented Approach

Julia has two older brothers; one has CF, and the other does not. Thus, her parents knew before her birth that their daughter had a one-in-four chance of inheriting the mutated CFTR gene. Cameron, on the other hand, is the oldest of three siblings, so her parents were shocked when routine newborn screening revealed that their baby had CF.

Because early diagnosis has proven to provide a solid prognosis, all 50 states now require that newborns be screened for IRT (immunoreactive trypsinogen) level. A high IRT—a chemical made in the pancreas—can suggest that the baby has CF. The CF Center recently partnered with the New Jersey Department of Health, when it received a two-phase grant from the CF Foundation that will improve the state's CF screening for newborns: first, by lowering the IRT cutoff number to make IRT screening more sensitive, and second, by testing for 139 different mutations. "It will improve our ability to diagnose CF in its earliest stages, before lung damage occurs," Dr. Scanlin says. *Read more about the state lab that performs all newborn screenings and their partnership with Rutgers on page 21.*

"Around the time of a new diagnosis, we primarily work with the parents," adds Dr. Scanlin. "To help them focus on the future, we might ask, 'What are your dreams for your child and yourself? To be happy and healthy? That your child will go to summer camp, travel, and maybe someday to give you grandchildren?' Goal orientation keeps everyone looking ahead and staying as healthy as possible."

Cameron

Cameron suffered a CF crisis when she was 12. She coughed endlessly, lost weight rapidly (10 pounds in two weeks), and was exhausted from night sweats and high fevers. The specialist she had been seeing since age 4 insisted that she had contracted a virus and that her symptoms were a natural progression of the disease.

Cameron's mother disagreed, and took her to an urgent care center, where blood work revealed a lung infection. Back home, she desperately searched the internet, and finding the CF Center at Robert Wood Johnson Medical School, she called. "They were swamped that afternoon, and they'd never heard of me," she says, "but they found their social worker in the hall. She picked up the phone and *listened*. She urged me to bring Cameron in to be seen."

The next day, the Grants met with Dr. Scanlin and the CF Center team. Cameron was immediately admitted to The Bristol-Myers Squibb Children's Hospital at Robert Wood Johnson University Hospital, where she spent two weeks being treated for a lung infection. "I was so scared in the hospital, but Dr. Scanlin was great: he made sure I had the nicest nurses, and he came to see me all the time," Cameron says. "He's so chill."

After hearing something else in Cameron's lungs, says her



After an internet search, Jennifer Grant (above right) brought her daughter Cameron (above left, and facing page) to the Cystic Fibrosis Center at Robert Wood Johnson Medical School for treatment. When patients are newly diagnosed, physicians at the CF Center take a goal-oriented approach to keep everyone looking ahead.



mother, Dr. Scanlin did a bronchoscopy that revealed the presence of a nontuberculous mycobacterium. Cameron was discharged on an 18-month course of antibiotics. For six months, she had to use a peripherally inserted central catheter (PICC) line daily. “She went to her seventh-grade dance with an Ace bandage covering the PICC line,” says her mother. “And finally, when the line was removed, she threw a party.”

Cameron recently began taking Symdeko, a drug approved in early 2018 that targets the root cause of CF, and she is doing very well. In addition, she follows a strict, twice-a-day regimen of self-administered therapies. She has an overnight feeding tube fitted with an enzyme-packed cartridge that helps predigest her food. Twice a day, she uses a nebulizer to open her airways and wears an inflatable, vibrating vest for 20 to 30 minutes to shake the mucus free from her lungs so she can “huff” it out.

CF has not hindered Cameron from excelling in field hock-

ey. She was chosen for her middle school team, then for her high school’s freshman team, while remaining a straight-A student and studying violin. “Her love of field hockey fits well with our goal-oriented approach,” says Dr. Scanlin. “It motivates her to keep bulking up and improving her lung function.”

Julia

From birth until her recent transition to the CF Center’s adult program, Julia was under Dr. Scanlin’s care—first at CHOP and then at the CF Center in New Brunswick, when he moved there in 2005.

“A lot of kids with CF become athletes or artists,” Julia says. And she is both. As a toddler, she loved to sing. By age 6, she was performing in musical theater; at 15, record producers were contacting her. Hoping to advance her career, she moved to Los Angeles, where her health declined precipitously.



PHOTOS COURTESY OF JULIA RAE SCHLUCTER

Julia Rae Schlucter (above) has been under Dr. Scanlin’s care from birth to her recent transition to the adult program at the Cystic Fibrosis Center at Robert Wood Johnson Medical School. Dr. Scanlin’s proactive, goal-directed approach complements Julia’s intense motivation to realize her professional goals while living with cystic fibrosis (CF)—including winning pageants, singing professionally, serving as a digital sports reporter for Channel 6abc Action News, in Philadelphia, and founding the CF research-focused nonprofit organization Singing at the Top of My Lungs.

After two hospitalizations with lung infections and a collapsed lung, she returned home and was accepted at Fordham, where she earned a bachelor of arts degree in media and communications.

Dr. Scanlin’s proactive, goal-directed approach complements Julia’s intense motivation to realize her professional goals while living with CF. Her treatment regimen has included some of his “old-fashioned” methods, as he calls them—twice-a-day airway clearance and the use of older drugs in combination—while taking Symdeko and participating in clinical trials. Her lung function has reached 120 percent of the predicted volume, whereas 60 percent to 80 percent is more typical for young adults with CF.

Performing professionally as Julia Rae, Julia has won pageant crowns and scholarships since she was 16, the age at

which she founded the CF research-focused nonprofit Singing at the Top of My Lungs. She recorded the song “Be That Girl” for the film *The Greening of Whitney Brown* and, in 2016, surpassed her own expectations by completing the New York Marathon. “I will always pursue music, but broadcast journalism has become my passion,” says Julia, who now serves as a digital sports reporter for Channel 6abc Action News, in Philadelphia.

By following their hearts, retaining their humor and determination, and refusing to let CF define their lives, Cameron and Julia are role models for thousands of other young people living with the disease. Now CF is at the threshold of better treatments and perhaps, one day, a cure. While already living life to the fullest, Julia and Cameron look forward to celebrating that day. **M**



Fellowship Program Aims to Improve Access to Surgical Care in Colombia—and Closer to Home

BY JODI MCCAFFREY

Global

SURGERY IS OFTEN REFERRED TO AS THE NEGLECTED STEPCHILD IN GLOBAL HEALTH, BUT GREGORY PECK, DO, ASSISTANT PROFESSOR OF SURGERY, IS TRYING TO CHANGE THAT.

While

it's estimated that five billion people lack access to basic surgical care worldwide, for years "global health" mainly focused on containing and eradicating communicable diseases. Surgical programs have been grossly underfunded and underappreciated for their role in preserving public health, asserts Dr. Peck, who is also associate director of trauma performance improvement, associate director of trauma, and associate director of the acute care surgery fellowship at Rutgers Robert Wood Johnson Medical School.

"Years ago, I thought that if I saved one patient, that would be enough. But if we can affect an entire health system, we have the potential to save thousands of lives," he says.

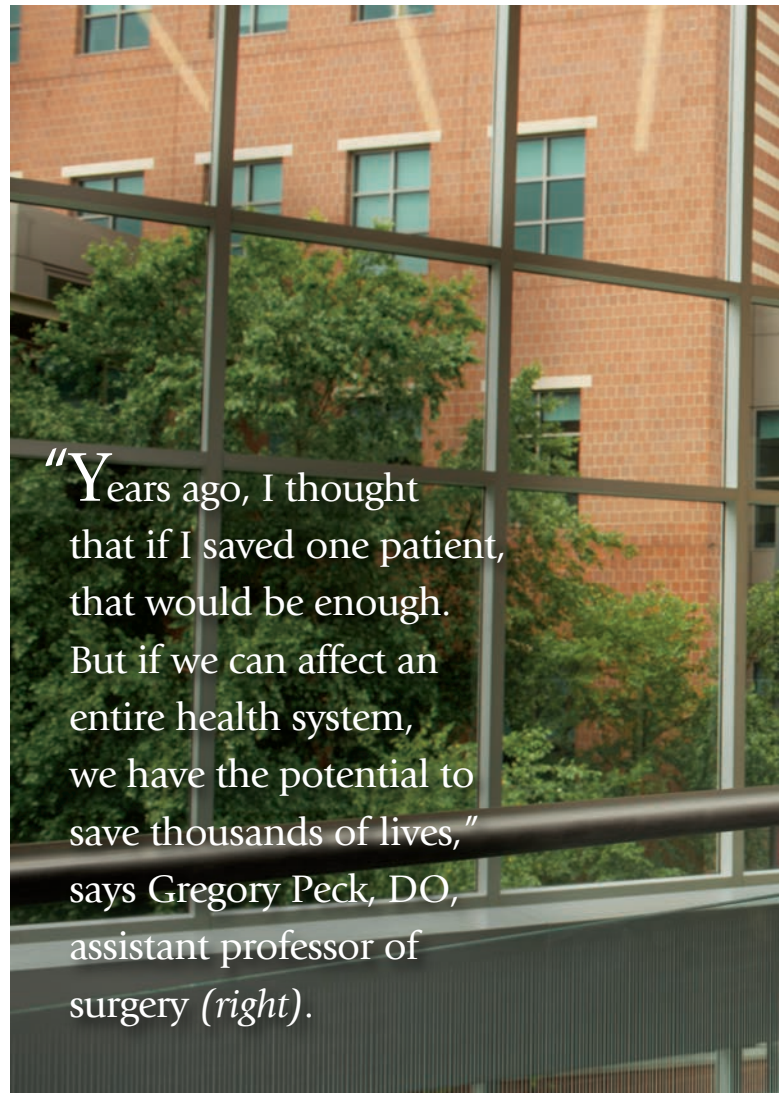
His interest in global surgery began in 2013, during the second year of an acute care surgery fellowship at Emory University. It was then that he traveled to Colombia and witnessed a very different surgical system from that in the United States. There was a considerable amount of trauma care needed, but limited resources to deliver it. The experience had a profound impact on the trajectory of his career.

That same year, colleague and mentor Vicente H. Gracias, MD, now senior vice chancellor for clinical affairs, Rutgers Biomedical and Health Sciences, asked Dr. Peck to join the faculty of the division of acute care surgery at Robert Wood Johnson Medical School. Dr. Peck chose to stay at Emory to finish his fellowship but told Dr. Gracias of his interest in developing a career and programs in global surgery. When he joined the faculty a year later, Dr. Peck researched opportunities to develop a global surgery program for surgical fellows. Dr. Peck's proposal for an acute care surgery and global surgery elective was accepted by the American Association for Surgery of Trauma's Acute Care Surgery Committee in 2015.

"Our goal is to look at the challenges of a country's surgical system—finance, governance, workforce education and training, health care delivery, system infrastructure, and information management—while using the same language across the world to prioritize such," Dr. Peck explains. "With this data, we can develop a framework to enable another country's government—and ours—to build an intact surgical system."

Partnerships and Pillars

The building blocks of this framework are informed by three overarching pillars: the National Surgical, Obstetric and Anesthesia Planning (NSOAP) process, the World Health Organization and World Bank's support for universal health coverage, and the *Lancet* Commission on Global



"Years ago, I thought that if I saved one patient, that would be enough. But if we can affect an entire health system, we have the potential to save thousands of lives," says Gregory Peck, DO, assistant professor of surgery (right).

Surgery's (LCoGS) six core surgical indicators.

NSOAP is a strategic process to assess and inform a country's surgical capacity and access; it was developed by Harvard Medical School's Program in Global Surgery and Social Change, along with LCoGS. Harvard Medical School has been a supportive partner in developing Robert Wood Johnson Medical School's Global Surgery Program. World Health Organization policies, such as Health Assembly Resolution WHA 70.22, which prioritizes emergency and essential surgical care implementation plans, and universal health coverage in the context of surgery, provide a national and international springboard from which to build. Lastly, LCoGS's core surgical indicators create a surgical systems language to assess preparedness, delivery, and cost.

"The six core indicators help governments understand their baseline system ability," Dr. Peck says. "Right now, there's no universal data points to compare. By assessing every country against the same points, we can compare apples to apples, and learn best systems-based practices."

Indicators 1 and 2 assess preparedness: geographic proximity



ABOVE: *The global research surgery group at Robert Wood Johnson Medical School, being led by Gregory Peck, DO (seated far right). ■*
BELOW: *Alumni, Paul Truche, MD '16 (left), with Dhaval Mehta, MD '18 (center), and Zina Model, MD '18, in Colombia, working on the formation of a pre-hospital data collection registry.*



of the nearest surgical facility, and how many clinicians are available to staff it. Indicators 3 and 4 assess delivery: how many procedures are performed overall, and how many patients die after the surgery is performed. Indicators 5 and 6 assess cost: of those who have surgical procedures, for how many is it an impoverishing expenditure (10 percent of household income) or catastrophic expenditure (40 percent of income).

“There’s a gross lack of systems thinking in lower-middle-income countries because of many sociopolitical factors. These indicators create a language to look at those metrics and improve them, but do so through political action that is data based,” he adds.

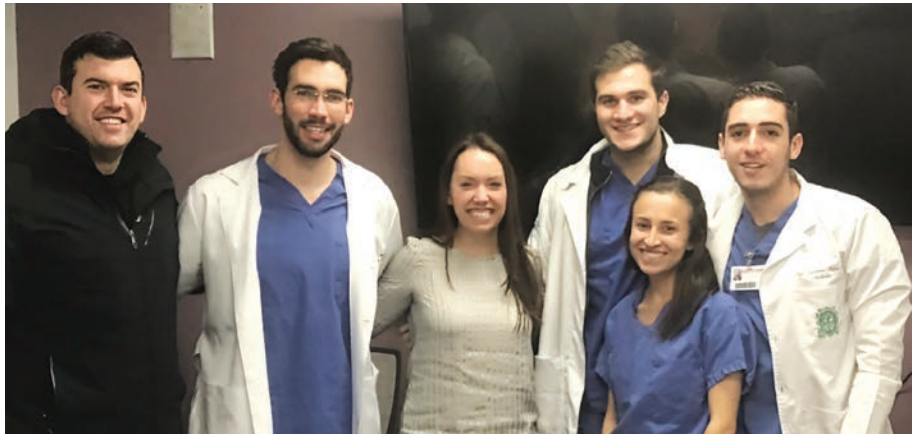
Fellowship Training for Global Surgeons

While there’s a shortage of surgeons, Dr. Peck explains, there’s also a maldistribution of specialty-trained physicians. The majority of surgeons are clustered on coasts and in major cities, leaving rural and low-to middle-income communities at risk. Further, it’s thought that clinicians in other countries often move to the United States for

training, creating a “brain drain,” or shortage, in countries abroad, he says.

To make strides in improving Indicator 2—density of emergency and essential surgical providers—Dr. Peck has championed the Rutgers Acute Care Surgery Fellowship as a way to provide formal global training to acute care surgery fellows—trainees who address emergency surgery, trauma, and surgical critical care needs of the population.

Dr. Peck defines a global surgeon as a surgical specialist who agrees how policy, public health, epidemiology, economics, and clinical skills work together to create efficient surgical systems of care and the translational research that promotes its uptake. Global surgeons, understanding that the fragmented surgical systems in low- and middle-income communities lead to disparities in care and research, often have a broader view of medicine and an interest in becoming multi-sectoral administrative leaders. They are culturally sensitive and transparent, have an interest in diversity, care to understand the reasons for disparities, and are champions for health care, education, training, and research equity.



LEFT: Paul Truche, MD '16 (left), with Gregory Peck, DO, at the Panamerican Trauma Conference in Brazil. ■ **ABOVE:** Students from Robert Wood Johnson Medical School, Colombia, and Brazil, who spent a month with the medical school's global surgery and acute care surgery teams learning about trauma systems in the United States. Left to right: Robert Wood Johnson Medical School surgical resident John Dutton, MD '18; Brazilian medical student Julio Betiol; University of Massachusetts surgical resident Erin Scott, MD '18; Brazilian medical student Ricardo Galletti; and Colombian medical students Sara Patiño Franco and Luis Guillermo Pelaez Arroyave. ■ **BELOW:** Javier Escobar, MD, professor of psychiatry and family medicine and associate dean for global health (far left), with Gregory Peck, DO (third from left), and colleagues from Medellín, Colombia.



PHOTOS COURTESY OF GREGORY PECK, DO

To prepare these surgeons for global roles, the fellowship participants may conduct international rotations in essential and emergency surgery and trauma systems improvement, in partnership with San Vicente Hospital in Medellín and Universitario de Valle in Cali, Colombia. Open to second-year acute care surgery fellows, the monthlong experience covers advanced penetrating operative trauma, advanced burns, and emergent general surgery techniques. The program offers administrative, research, and trauma system development opportunities based on the level of education and the fellow's interest in health systems.

Alumnus Paul Truche, MD '16, now in his second year of surgical residency at Robert Wood Johnson Medical School, began his track in global surgery as a medical student. His first task was to broker a formalized international research collaboration agreement between two Colombian institutions. This required meeting with stakeholders to determine the parameters for legal and ethical research and developing protocols for collecting pre-hospital and patient outcomes data. His work has continued through his residency with an active role in the Global Surgery Program.

“There are a number of barriers to performing research activities internationally,” says Dr. Truche. “I found that forming relationships with international partners takes cultural humility, tact, and communication skills. Working in global surgery, I was able to learn from my mistakes, improve my interpersonal skills, and work to embody the trust needed for sustainable partnerships.”

Unique to his experience, says Dr. Truche, is being the “boots on the ground” in shaping not only how the Global Surgery Program at the medical school evolves, but also how its partners’ programs do, as well as collaborative surgical care and research around the world.

Dr. Truche’s dedication to surgery and research has paid off: he has been accepted to the prestigious Paul Farmer Global Surgery Fellowship at Harvard Medical School. The two-year program trains physician-leaders to develop academic, clinical, and administrative skills in global surgery, surgical systems development, and humanitarian aid. He will concurrently complete a master’s degree in public health at Harvard. After his fellowship, he will return to Robert Wood Johnson Medical School to complete his general surgery residency. He plans to focus on delivering and improving surgical care in areas that have traditionally lacked access.

“Robert Wood Johnson Medical School afforded me the opportunity to hold an administrative role in global surgery, laying the groundwork for the next step in my career,” says Dr. Truche. “It’s a unique experience that’s not possible at most institutions. Dr. Peck embraced my interest in global surgery and allowed me to work closely with him to help evolve the program.”

The Details of Data Collection

Determining best practices for surgical systems requires evaluating the system and its components, analyzing how each part relates to the others, and developing ways to improve each part to strengthen the entire chain. However, Dr. Peck notes, the methodology to do this is lacking, as are the number of surgeons needed.

The global surgery fellowship recently helped develop the Latin American Research Indicator Collaboratory (LAIRC) to drive data collection, analysis, and interpretation around the six indicators and NSOAP processes. Because very little global surgery science exists, the LAIRC is an active participatory research engine that brings together diverse parts of the academic community; teams of surgeons with varied skills, backgrounds, and clinical experience; and the public health sector key to surgical systems research. The effort seeks to team an institution in a high-income country with one in a low- to middle-

income country, usually in the form of a research fellow working one-on-one with a faculty member at both institutions. This forms a Global Surgery Research Unit (GSRU). Currently, four GSRUs are aligned to conduct research in the Colombian cities of Bogotá, Medellín, and Cali. The units will review and disseminate existing literature and research; adopt the academic themes of the World Health Organization and LCoGS to drive institutional engagement in the research; and begin data collection, analysis, and interpretation.

Applying Global Concepts Locally

While Dr. Peck is passionate about improving surgical systems in Latin America, he says that lessons learned there can and should be easily applied in the United States.

“There are vulnerable populations throughout our country,” says Dr. Peck. “The United States spends more money on health care than any other country, yet it ranks 30th in life expectancy and in quality indicators. Why is there a discrepancy? How are we spending so much money, yet outcomes in the socioeconomically disadvantaged populations equal those in [low- and middle-income communities]? I think we have so much to learn.”

The key, he says, is tapping health systems science to drive better outcomes at lower costs. Surgical care is no longer volume based, but value based. The care that’s delivered must be timely, safe, and affordable. Whether the road map to do it is developed in Latin America or in North America, the result is a shared language and a process for effectively assessing and informing health system management.

Reflecting on the Global Surgery Program, Dr. Peck says it has demanded that he think differently. “As a trauma surgeon, you have to react quickly or people bleed to death in front of you. There’s no time for hesitation or doubt, no time to evaluate your next move,” he explains. “Building this program has taught me to think and then think more, not just react. When talking to governments, to researchers, to vulnerable populations, you can’t be reactionary. Your words and actions have to be well thought out, consistent, and inclusive.”

The program has gained support from Rutgers Biomedical and Health Sciences including the School of Nursing, School of Public Health, and School of Health Professions. Additional partnerships with local, national, and international organizations will help fund the growth of the program and offset costs.

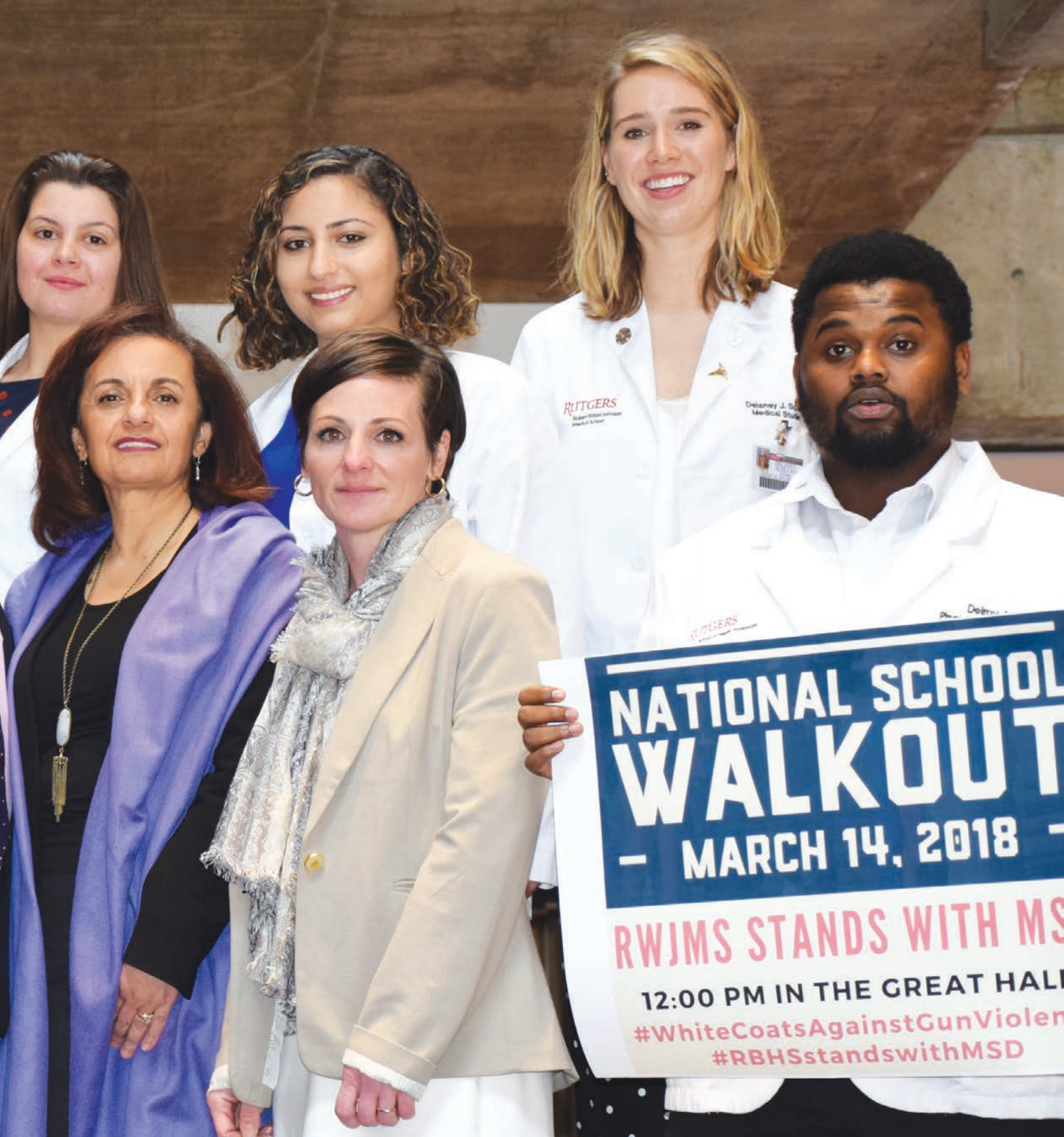
“We’ve done a significant amount of work in a short period of time,” Dr. Peck says. “Some would say that we’ve been relentless, but we’re gaining traction—and attention. Inertia is on our side. The science is our next step.” **M**



Students
Speak Out:

GUN

VIOLENCE



Is a Public Health Issue

BY KATE O'NEILL

On March 14, Robert Wood Johnson Medical School students organized “Gun Violence Is a Public Health Issue,” with the fully engaged support of the administration of Rutgers Biomedical and Health Sciences (RBHS). Above, front row, left to right: Ava Hart '21; event co-organizer Anna Olds '19; Chancellor Brian Strom, MD, MPH; Dean Sherine E. Gabriel, MD, MSc; Bernadette Hohl, PhD, MPH, School of Public Health; and physician assistant candidate Delroy Allen. Back row, left to right: Rajiv Shah '21, Nicole Krumrei, MD, Ali Cooper '21, co-organizer Sally Tarabey '21, and Delaney Scollan '21.



Dean Sherine E. Gabriel, MD, MSc, applauded student organizers, sharing, “I am proud of our Rutgers students for stepping forward today to raise awareness of gun violence, and to remind us all that this is not something that happens to other people, to other families. It is an American problem, and I am grateful that as young American leaders you are lending your voices to this important issue.”

On Valentine’s Day 2018, a student armed with a highly lethal, military-grade AR-15 semiautomatic rifle prowled the corridors of Marjory Stoneman Douglas High School (MSD), in Parkland, Florida, methodically ending 17 lives. Another 17 were critically injured.

Within one day, MSD student activists were calling for students nationwide to join them in demanding legislation to deter gun violence. They declared March 14 as the National School Walkout, inspiring an estimated 1 million young people to respond, including students at Rutgers Robert Wood Johnson Medical School. In all 50 states and Washington, D.C., students and their supporters gathered to memorialize the 17 killed in Parkland and insist on legislative action. Across the United States, medical students used hashtags including #whitecoatsagainstgunviolence to rally support behind the MSD students’ call for action.

At Robert Wood Johnson Medical School, students organized “Gun Violence Is a Public Health Issue,” with the fully engaged support of the administration of Rutgers Biomedical and Health Sciences (RBHS). “We organized our walkout around the need to raise awareness about gun violence as a public health concern,” says Anna Olds ’19, who co-organized the event with Sally Tarabey ’21. “We emphasized the importance of taking a stand as medical and health professionals and stressed the need for more research in the field.”

Local chapters of the Association of Women Surgeons and the American Medical Women’s Association co-sponsored the

program, a collaboration of the medical school, the Rutgers School of Public Health, and the Rutgers School of Health Professions. It took place in the Great Hall, Piscataway, and was complemented by a student-coordinated event hosted by Rutgers New Jersey Medical School, in Newark. Among the faculty participants in Newark were critical care surgeon Stephanie Bonne, MD, assistant professor of surgery, and Anne C. Mosenthal, MD, Benjamin F. Rush, Jr. Endowed Chair, and professor and chair, Department of Surgery.

The one-hour program in Piscataway addressed multiple facets of the gun violence epidemic. Speakers included Brian L. Strom, MD, MPH, chancellor, RBHS; Sherine E. Gabriel, MD, MSc, dean, Robert Wood Johnson Medical School; trauma surgeon Nicole Krumrei, MD, assistant professor of surgery; and Bernadette Hohl, PhD, MPH, assistant professor of epidemiology, Rutgers School of Public Health. Illustrating the dimensions of the epidemic, Olds cited data from the Gun Violence Archive: by March 14, only 73 days into 2018, there had been 2,676 gun-violence—related deaths in the United States, including 25 school shootings and 623 children and teenagers shot and killed. Suicides were responsible for 60 percent of the deaths. The program concluded with two medical students and a physician assistant candidate reading the names of those who lost their lives at MSD, along with a brief tribute to each of the 17 victims. Dean Gabriel applauded student organizers, sharing, “I am proud of our Rutgers students for stepping forward today to raise aware-

ness of gun violence, and to remind us all that this is not something that happens to other people, to other families. It is an American problem, and I am grateful that as young American leaders you are lending your voices to this important issue.”

The Need for Research

The Centers for Disease Control and Prevention (CDC) is the nation’s leading public health agency. None of its successes, such as malaria control, reduction of casualties related to motor vehicle accidents, vaccine development, a decrease in infant mortality, and prevention and treatment of infectious diseases including AIDS, could have been achieved without federal funding and support for the implementation of evidence-based policies and interventions.

Conspicuous in its absence from this list is abatement of firearms violence. For the past 22 years—a full generation—a one-sentence 1996 amendment to the federal budget has essentially defunded CDC research on gun violence. The amendment, informally named for its author, the late Rep. Jay Dickey (R-AR), was tacked onto the appropriation earmarked for the CDC’s study of injury prevention and control. Although \$2.6 million was appropriated, the amendment stated that “none of the funds made available for injury prevention and control at the Centers for Disease Control and Prevention may be used to advocate or promote gun control.”

Subsequently, CDC researchers who studied gun violence, even without advocating or promoting gun control, found themselves called before congressional hearings and then defunded in the exact amount of the appropriation. Neither the individual scientists nor the agency could withstand the loss of financial support, and so, by 1999, CDC research on gun violence had ground to a halt. Without funding, the agency cannot provide the hard data a congressional committee would require to frame legislation that could deter not just mass shootings but all kinds of intentional and unintentional firearm-related casualties.

In 2012, after a shooter in a crowded Aurora, Colorado, movie theater killed 12 and injured scores more, Dickey (no longer in the House) recanted in a *Washington Post* op-ed piece: research could have been conducted without encroaching on the rights of legitimate gun owners, he said. In 2015, he told National Public Radio reporter Steve Inskeep, “All this time that we have had, we would’ve found a solution, in my opinion. And I think it’s a shame that we haven’t.” Still, despite subsequent modifications and across-the-aisle attempts at compromise, the Dickey Amendment continues to carry weight, restricting research.

“As a researcher, I am distressed that the politics involved are also systematically suppressing the free and open scientific

inquiry into this very real health issue at the CDC and the NIH [National Institutes of Health],” Dr. Strom told the Great Hall crowd. “We as scientists, health care professionals, and public health officials are being blocked from using the analytical and clinical tools at our disposal to save children’s lives.”

Advocates of unrestricted gun ownership curtail the wording of the Second Amendment—which begins, “A well regulated Militia, being necessary to the security of a free State”—to reinterpret the “right of the people to keep and bear Arms” for their own purpose, adds Dr. Strom. “The gun owners’ lobby puts its supporters’ privacy first, and their pressure in the U.S. Congress continues to block the resumption of research.”

In Piscataway and Newark, Walkout speakers underscored the need for research to obtain a better grasp of the many factors driving gun violence and how much each contributes: for example, mental health, addiction, age, and societal disparities. Without that research, there is no hard evidence to explain why, in this century, there has been a sudden spike in deadly mass shootings; why, in November 2017, a Las Vegas gunman used an arsenal of legally amassed automatic weapons to kill 58 concertgoers and injure hundreds more, before taking his own life; or why, in May of this year, a 17-year-old with no history of violence took two of his father’s guns to school in Santa Fe and killed eight fellow students and two teachers.

Searching for Solutions: Research, Prevention, and Education

If the federal government won’t act, state governments can. New Jersey’s governor Phil Murphy announced that a Gun Violence Research Center will be established for the state, located at Rutgers University. “As New Jersey’s pre-eminent research university and a national leader in addressing key issues facing our society, Rutgers will bring expertise across many disciplines to this bold and comprehensive effort to reduce gun violence,” said Dr. Strom to *Rutgers Today*. “Our teachers, clinicians, and scientists have unparalleled experience in improving our collective wellbeing, and this new research center, among the first of its kind in the nation, will allow us to deliver insights that inform public policies and prevent the tragedies that have become all too common in American society.”

“Malaria was not controlled by eliminating mosquitoes,” adds Dr. Strom. “But mosquito nets, which protect people when they are sleeping and at their most vulnerable, have proven to be the single most effective means of preventing transmission of the malaria virus.” By the same reasoning, he says, keeping people out of the line of fire by requiring safe



“We organized our walkout around the need to raise awareness about gun violence as a public health concern. We emphasized the importance of taking a stand as medical and health professionals and stressed the need for more research in the field,” says event co-organizer Anna Olds ’19, who adds that “the determination that marked the National Student Walkout will continue.”

and secure storage of firearms and ammunition would go a long way toward reducing casualties.

Research shows that having a gun in the home actually increases a person’s risk of gun-related injury. Engineering solutions such as fingerprint recognition—comparable to technology used in iPhones—could prevent firearms from being discharged by a child or other unauthorized user. But for now, simpler measures such as gun lockers in homes could have made the difference between life and death last year for more than 100 American children, many of whom knew where the gun was kept and used it in play; 80 percent of firearm deaths of children under 15 occurred in a home.

“Physicians can also make a significant difference by educating parents,” says Dr. Krumrei, who has treated hundreds of gunshot victims. “When patients come for a checkup, we ask questions about gender choice, smoking, alcohol consumption, and other possibly sensitive lifestyle issues,” she says. “However, many physicians are uncomfortable asking, ‘Do you have a gun in the house?’ and, if so, ‘How is it stored?’ If they do ask, many patients refuse to answer, feeling it is an invasion of their privacy.” Dr. Krumrei hopes all physicians will come to appreciate the importance of gun safety as a public health issue: they *should* ask about it, she says, and should provide educational materials, just as they do for signs of a stroke or to promote regular testing for cancer.

Keep Up the Pressure: Stop the Bleed

The determination that marked the National Student Walkout will continue, says Olds. Organizers will encourage students to remain active by volunteering for the Stop the Bleeding Coalition’s campaign to train bystanders to respond to gunshot wounds. The campaign reflects the damage-control protocol of military trauma centers, where containment of bleeding, not resuscitation, has proved to be the most successful first response in treating a victim of firearm-caused wounds.

Knowing that hemorrhage is the leading cause of preventable death from gun violence, students will teach potential bystanders of all ages to apply tourniquets correctly, controlling blood loss while preserving limbs. This is good news to trauma surgeons like Dr. Krumrei. She says, “we need people in the street who can respond immediately and competently to stop serious bleeding in an emergency.”

“People are asking medical students’ advice about what to do regarding gun violence, especially where children are involved,” says Olds. After a season of intense student activism, Olds is concerned that “things are getting quiet” among people calling for gun safety legislation. “We have to keep up the pressure on Congress to write and pass legislation to stop gun violence,” she adds. “And we have to work to improve research on the topic of gun violence as a public health issue. We are ready: we are the future of medicine and public health.” **M**



New Jersey
Public Health Laboratory
Collaboration with
the Medical School is a

Win Win

By Lynda Rudolph
Photos by Steve Hockstein

W

hat happens when a public health laboratory looks to a university for leadership? A unique partnership can form that benefits everyone. Rutgers Robert Wood Johnson Medical School and the New Jersey Department of Health have been working with each other for several years. But the formalized agreement that brought a member of the medical school's faculty in as medical director of the laboratory is just a year old. The arrangement is already benefiting both.

The partnership between the medical school and the New Jersey Department of Health has been shepherded through its many stages by Chen Liu, MD, PhD, professor and chair, Department of Pathology and Laboratory Medicine, at both Robert Wood Johnson Medical School and New Jersey Medical School (above).



The laboratory, which handles everything from rapid response emergencies to clinical testing to newborn screening, is a certified Clinical Laboratory Improvement Amendment (CLIA) site. Thomas J. Kirn Jr., MD, PhD, associate professor of pathology and laboratory medicine, assumed the role of medical director in 2017.

“Three major programs report to me,” Dr. Kirn says. The public health laboratory service, which provides clinical diagnostic and surveillance testing; the clinical lab improvement service, which handles inspections and protocol compliance; and the environmental chemical lab service, which is responsible for testing drinking water and groundwater, as well as handling environmental evaluations of pollutants, toxins, and heavy metals, are all part of Dr. Kirn’s responsibilities. He also supervises the testing of medicinal marijuana.

“We are involved in everything from disease response and surveillance to testing rabies in animals that have been interacting with humans to testing mosquitoes for West Nile and other viruses,” Dr. Kirn says. The data generated about the mosquito population in particular affects the state’s mosquito

abatement efforts to contain the threat of West Nile virus.

The partnership between the medical school and the New Jersey Department of Health has been shepherded through its many stages by Chen Liu, MD, PhD, professor and chair, Department of Pathology and Laboratory Medicine, at both Robert Wood Johnson Medical School and New Jersey Medical School, along with his team. Dr. Liu, who has made significant contributions in cancer research, saw the unlimited potential of a collaboration with a state public health laboratory. “One of the missions of the medical school is to provide public service to the state and to the community through outreach efforts,” Dr. Liu says. “I saw the benefit in working with the state to provide better-quality lab testing for the public health arena, while giving us multiple opportunities to enhance our educational activities.”

Under Dr. Liu’s leadership, what began as two faculty members rotating to take on the responsibilities of a medical director has become a formalized full-time directorship responsible for all laboratory operations. Dr. Liu has also spearheaded related activities, including opportunities for researching infec-



“One of the missions of the medical school is to provide public service to the state and to the community through outreach efforts. I saw the benefit in working with the state to provide better-quality lab testing for the public health arena, while giving us multiple opportunities to enhance our educational activities,” says Chen Liu, MD, PhD (above right). “This is not something that has been done,” says Thomas J. Kirn Jr., MD, PhD, associate professor of pathology and laboratory medicine (above left). “We have the advantage of access to unique patient materials and information that feeds our research opportunities.”

tious diseases and the rotation of medical students and residents. That benefit, in particular, has proved to be invaluable. Experiencing what it’s like to do public health testing in the state’s laboratory helps medical trainees learn how such labs play a role in the public health arena.

Dr. Kirn sees the advantages for the state. “On the flip side, sometimes public health laboratories work in a vacuum, not fully grasping the larger landscape of patient care,” he says. “I

get to share a unique perspective on how the laboratory can add value to that.”

Although the formal partnership involving Dr. Kirn as medical director is just a year old, there had been involvement between the state and the medical school on a smaller scale in prior years. When Dr. Kirn first came to the medical school in 2008, the relationship was in its infancy. “We had two faculty rotate at that time, who were providing medical directorship,” Dr. Liu says. “That was at the start.” In 2017, the collaboration expanded. “We entered into a different management structure, where we could both achieve more,” Dr. Liu says.

Currently, there are also research opportunities being pursued in the area of infectious disease. Dr. Liu is personally involved in research on the Zika virus. “Things are in place, and we are excited to move forward on many initiatives,” Dr. Liu says.

The vision is to create intellectual and academic opportunities at the interface of public health and research. “This is not something that has been done,” Dr. Kirn says. “We have the advantage of access to unique patient materials and information that feeds our research opportunities.” **M**

There's an App for That:

Ensuring Babies Sleep Safe

BY JACQUELINE CUTLER

PHOTOS BY JOHN EMERSON





The grief that consumes parents when they discover their infant lifeless haunts them forever. It's hardly easier when parents know why a baby died; however, a medical condition at least offers an explanation. To be left wondering compounds the pain of loss, as parents mull over what led to their child's final moments. Sudden Infant Death Syndrome (SIDS) is such a death, one for which no explanation has been found despite a thorough medical investigation.

Yet, while the causes of SIDS remain elusive, the conditions that increase risk are now well known and inform the safe infant sleep policy statement of the American Academy of Pediatrics (AAP), resulting in significant declines in this leading cause of infant mortality. The same guidelines that address SIDS also reduce the risk of two other categories of sleep-related infant deaths: accidental suffocation and strangulation in bed, and ill-defined and unknown causes. The three fall under the term Sudden Unexpected Infant Death (SUID).

All who have lovingly tucked in a baby assume they are doing that correctly. Yet even the phrase "tucking in" indicates they are not adhering to the latest guidelines for safe infant sleep. Infants should be placed to sleep on their backs in a clutter-free crib, which means no pillows, bumpers, blankets, stuffed animals, or any of the other accompaniments traditionally found in cribs.

Having information on safe sleep for the first year of life offers parents and caregivers the opportunity to do more than just hope for a good outcome. To help provide it, the SIDS Center of New Jersey at Rutgers Robert Wood Johnson Medical School developed a free mobile phone app teaching safe sleep practices, using both text, in English and Spanish, and graphics. To overcome literacy challenges, the text is recited in a woman's and a child's voice. Funding was provided by the New Jersey Department of Health.

The app is the newest way the SIDS Center educates New Jersey's providers and caregivers. It joins the center's instructional website (www.rwjms.rutgers.edu/sids), videos, fliers, and educational programs for hospitals; health, social service, and child care providers; schools; first responders; clergy; and the public. Tapping into most people's obsessions with their phones was a natural way to reach as many as possible.

"Young parents are very in tune with going to their phones for answers, so acquiring knowledge through apps contemporizes how information about safe infant sleep is shared," says Barbara M. Ostfeld, PhD, professor of pediatrics and program director of the SIDS Center. To develop the app, Dr. Ostfeld collaborated with her husband, Thomas Hegyi, MD, professor and vice chair, Department of Pediatrics, director of the neonatal-perinatal medicine fellowship program, and medical director of the SIDS Center. In recognition of this new educa-

tional tool, the Department of Health in New Jersey presented the SIDS Center with a Public Health Innovator Award.

"We developed the app to help physicians, nurses, and others offer this education as efficiently as possible," says Dr. Ostfeld. "One goal is that hospitals will adopt it as a tool for nurses to use to educate families, one that they can then help parents download to their phones to review and share with grandparents and babysitters," she says. "The app also supports professional education with links to scholarly articles, supplementary tools, and information about continuing education."

"Young parents are very in tune with going to their phones for answers, so acquiring knowledge through apps contemporizes how information about safe infant sleep is shared," says **Barbara M. Ostfeld, PhD, professor of pediatrics and program director of the SIDS Center (facing page, right), who collaborated with her husband, Thomas Hegyi, MD, professor and vice chair, Department of Pediatrics, director of the neonatal-perinatal medicine fellowship program, and medical director of the SIDS Center (facing page, left), to develop the app.**

The app, available for iPhone and Android, can be accessed by typing the words "SIDS Info" into the GooglePlay or Apple Store search bar. "Although we intended it for New Jersey," notes Dr. Ostfeld, "it has generated national interest."

Guidelines include placing babies to sleep on their back, named one of the seven most important pediatric research findings in the past 40 years, and avoiding bed sharing. The guidelines are fine with bringing a baby into bed for feeding, snuggling, and comforting. However, when the parents are ready to sleep, they are encouraged to return the baby to a crib, bassinet, portable crib, or play yard in the parents' room, close by their bed, using a product that meets current Consumer Product Safety Commission safety standards. The risk from bed sharing increases if a baby is less than 4 months of age or preterm, if there is loose bedding, or if the parent smokes or has impaired arousal from alcohol, drugs, or fatigue. Babies should never sleep on a sofa or chair, alone or with anyone else.

The crib or bassinet should be free of all accoutrements, including blankets, any of which could prove fatal if the baby becomes entangled in it. "A bare crib is a beautiful crib," Dr. Ostfeld says. And while well-intended caregivers sometimes add mattresses to portable cribs and play yards, which typically have thinner mattresses, she advises otherwise: "The guidelines and manufacturers point out that the mattress should be the type intended for the product." For warmth, the guidelines recommend an appropriately sized wearable blanket.

Another way to reduce SIDS is by breastfeeding. New mothers are encouraged to nurse, often meeting with lactation specialists before being discharged. Ideally, just as hospitals have made breastfeeding instructions protocol, they will do the same with safe sleep practices.



Before the app, families of newborns were sent home with paperwork, but as Dr. Ostfeld knows, “in a busy household with a new baby, a flier can get lost in five minutes.” Regardless of the organizational skills of a new parent, a newborn adds a level of chaos to a household. Further, the lack of sleep that saps new parents’ energy is disorienting at best and often debilitating. The app should help.

“Most babies do not just have mother’s hands on them; often there is a well-meaning grandma,” Dr. Ostfeld notes. “But grandparents who raised their children on Dr. Spock were told to put the baby on his or her stomach. They say, ‘I raised my children like that, and they were fine.’ We say, ‘Not fine . . . lucky.’”

As research has revealed what works and sleep protocol has evolved, the rate of sudden unexpected infant deaths has declined. While that is encouraging, “even one death is one too many if, as is the case with SUID, a portion can be prevented,” Dr. Ostfeld says.

With its many educational initiatives, New Jersey has one of the lowest SUID rates in the country, 0.6 per 1,000 live births compared to 0.9 per 1,000 in the United States as a whole, according to 2013–2015 data, the most recent available from the Centers for Disease Control and Prevention. That translates to approximately 62 deaths a year in New Jersey and 3,500 nationally.

As with so many health problems, the risk of SUID is greater for African Americans. And as critically important as safe sleep practices are, they are not the only contributor to SUID. “Population health matters too,” Dr. Ostfeld says, referring to racial disparities in premature birth, poverty, and smoking. “Preterm birth is a major risk factor for SUID. Our research has shown that infants born between 24 and 27 weeks of gestation have over three times the risk compared to full-term infants.” In New Jersey, the preterm birth rate for black women is 44 percent higher than for all other women.

According to the U.S. Census Bureau, New Jersey has one of the largest racial disparities in poverty. “Why does poverty matter?” asks Dr. Ostfeld. “In a multitude of ways! It diminishes access to health care and healthy food. Substandard housing affects choices parents make about safe sleep. By asking not only what a parent does but why, we learn that a moth-

er who knows the risk of bed sharing may still choose it because she fears that she could not protect her infant from a drive-by shooting or infestations untreated by landlords. Who should have to make such a choice?”

Dr. Ostfeld also emphasizes the effects of smoking. “Smoking is a major contributor to so many health problems, and this is the case with SUID as well,” she says. “The risk of SUID increases up to sixfold when a pregnant woman smokes.” Household smoke matters too, and a higher percentage of black males smoke, according to the New Jersey Behavioral Risk Factor Survey.

Dr. Ostfeld’s empathy is palpable. She has testified on infant mortality before the New Jersey Senate Health, Human Services



According to the latest guidelines for safe infant sleep, infants should be placed to sleep on their backs in a clutter-free crib (above), which means no pillows, bumpers, blankets, stuffed animals, or any of the other accompaniments traditionally found in cribs (below).



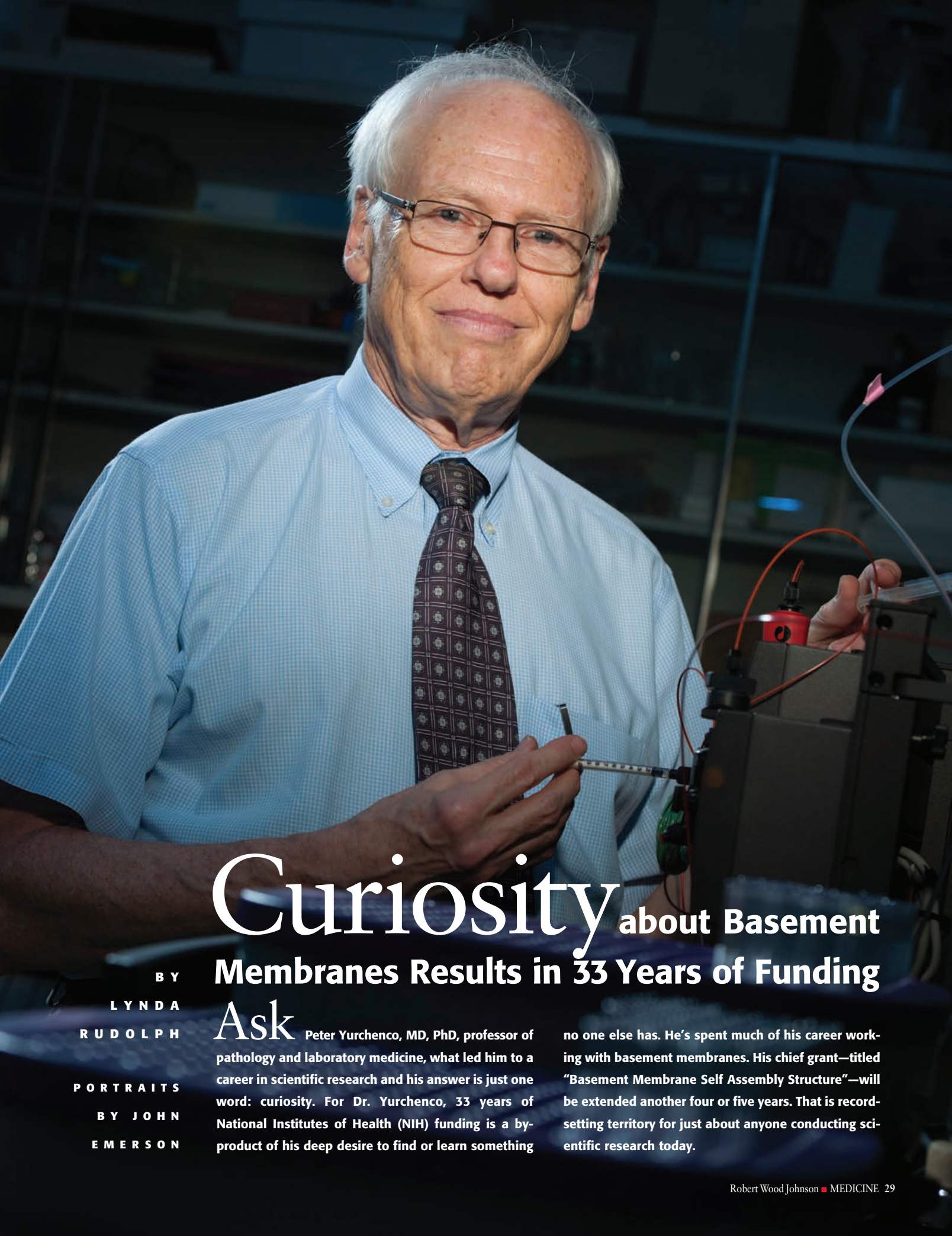
and Senior Citizens Committee, and collaborated on public health initiatives. She conducts some 40 presentations a year to save the most vulnerable of lives. A psychologist who earned her doctorate in developmental psychology from the Rutgers University School of Arts and Sciences, Dr. Ostfeld has worked for many years in the division of neonatology, part of Robert Wood Johnson Medical School’s Department of Pediatrics, supporting families, studying health outcomes, and serving as program director for the high-risk-infant follow-up program. She was among those who, along with Dr. Hegyi, helped establish the SIDS Center in 1988; it was created to offer bereavement services, study SUID, and educate, and it is funded in part by the State Department of Health.

Dr. Ostfeld’s research contributed to the AAP’s safe sleep policies. Yet as she

talks, it is evident that an emotional dimension underpins the scientific knowledge, one that could only be a result of enduring the loss of a child.

“In the 1970s, two of my children died of Tay-Sachs disease, which was and remains incurable and fatal,” Dr. Ostfeld says. “We, at least, knew ultimately what happened. With SIDS, families have no answer, and I learned from meeting with many parents how that void added to their vulnerability and pain.”

No parent should ever experience this agony. Until then, this mother of four and grandmother of seven remains a woman on a mission, determined to enlighten people on how best to keep babies safe. **M**



Curiosity about Basement Membranes Results in 33 Years of Funding Ask

BY
LYNDA
RUDOLPH
PORTRAITS
BY JOHN
EMERSON

Peter Yurchenco, MD, PhD, professor of pathology and laboratory medicine, what led him to a career in scientific research and his answer is just one word: curiosity. For Dr. Yurchenco, 33 years of National Institutes of Health (NIH) funding is a by-product of his deep desire to find or learn something

no one else has. He's spent much of his career working with basement membranes. His chief grant—titled "Basement Membrane Self Assembly Structure"—will be extended another four or five years. That is record-setting territory for just about anyone conducting scientific research today.



Dr. Yurchenco's interest in basement membranes began during his anatomical pathology residency and fellowship at Yale. At the time, basement membranes were a great mystery. Although it had been widely known for decades that they were present in tumors in mouse models, few people were conducting research on them. For Dr. Yurchenco, that may have been the biggest attraction of all. His work was the beginning of decades of NIH-funded research that has already produced significant clinical insights.

Understanding Basement Membranes

Basement membranes are found throughout the body—they coat epithelial cells found in the gut, skin, and glands, vascular endothelium, fat cells, and muscle. These extracellular

matrices provide a support structure that holds tissues together and also protects them from mechanical stress, playing a role in wound healing and nerve regeneration.

In the research Dr. Yurchenco initiated at Yale, he sought to discover the role that basement membranes play in diabetes. In the kidney glomerulus, the basement membrane (GBM) acts as a molecular sieve. In diabetes, or in those with diabetic kidney disease, the GBM becomes defective. Albumin begins to leak through and can do so in large amounts, producing nephrotic syndrome. Oddly enough, despite the leaks, the defective basement membrane is thicker. Dr. Yurchenco's early research focused on understanding the molecular architecture of basement membranes in order to explain the sieving function. That initial study, which began in 1982, revealed that a type IV collagen



The work that Peter Yurchenco, MD, PhD, professor of pathology and laboratory medicine, is doing could change the destiny of those with certain genetic diseases. “What keeps me going? It’s like an adventure. You’re like an explorer—you get hooked on it,” he says.

forms a mesh-like structure creating the basement membrane backbone. It was the start of a decades-long search to understand the structure of basement membranes and how they play a role in the development of disease or disease states.

Studying the Membrane Matrix Assembly

Dr. Yurchenco joined the pathology faculty at Rutgers Robert Wood Johnson Medical School in the fall of 1984. There he set up his own laboratory and obtained funding from the NIH that started in January 1986. In the early years, he and his team were looking at type IV collagen assemblies and another major protein, called laminin 111. “I was studying laminin 111 type IV collagen assembly to learn how a basement membrane matrix is formed,” he says. Key discoveries were how the laminin polymerizes and binds onto the cell surface, and how the laminin

and collagen work together to create the basement membrane. The next step was to study how a newly assembled basement membrane promotes cell polarization and also embryonic development and growth.

Basement Membrane’s Role in Disease

So how does all this apply to clinical practice? Learning the basics about basement membranes has contributed to discovering more about how they influence the pathogenesis of genetic diseases. “A major congenital muscular dystrophy (CMD) is caused by laminin mutation in the alpha2 subunit,” Dr. Yurchenco says. “In CMD, the muscle fibers can easily become damaged through physical activity, leading to regeneration, inflammation, and scarring that produces progressive

weakness.” Laminin mutations are devastating and can present as early as birth. Many patients don’t live long, as a result of respiratory failure. To date, there are no effective treatments for CMD.

Dr. Yurchenco’s approach, as always, began with understanding the basement membrane. “We know about basement membrane assembly, so we wanted to exploit that knowledge to get around the missing chain of functional laminins,” he says. “What’s been found is that although the alpha2 chain is missing, there is compensatory expression of laminin alpha4. We thought we could bind proteins to alpha4 so that it behaves like alpha2.”

Dr. Yurchenco is collaborating on the muscular dystrophy research with Markus Rüegg, PhD, a neurobiologist and professor at the Biozentrum of the University of Basel in Switzerland. Dr. Rüegg had been studying two proteins designed to compensate for the genetic defect in mouse models, helping them to recover muscle force and restore a normal life span. In mouse models, some of the genetically modified mice regained healthy muscle structure and body weight and lived on average up to two years—a normal life span. Advanced research is currently under way with new mice models and has resulted in even further improvement.

“We are thinking these two new proteins are small enough to be developed into gene therapy where they would be inserted into a virus to deliver DNA to target tissue,” Dr. Yurchenco says. “We are hoping the work we are doing now will lead to clinical trial.”

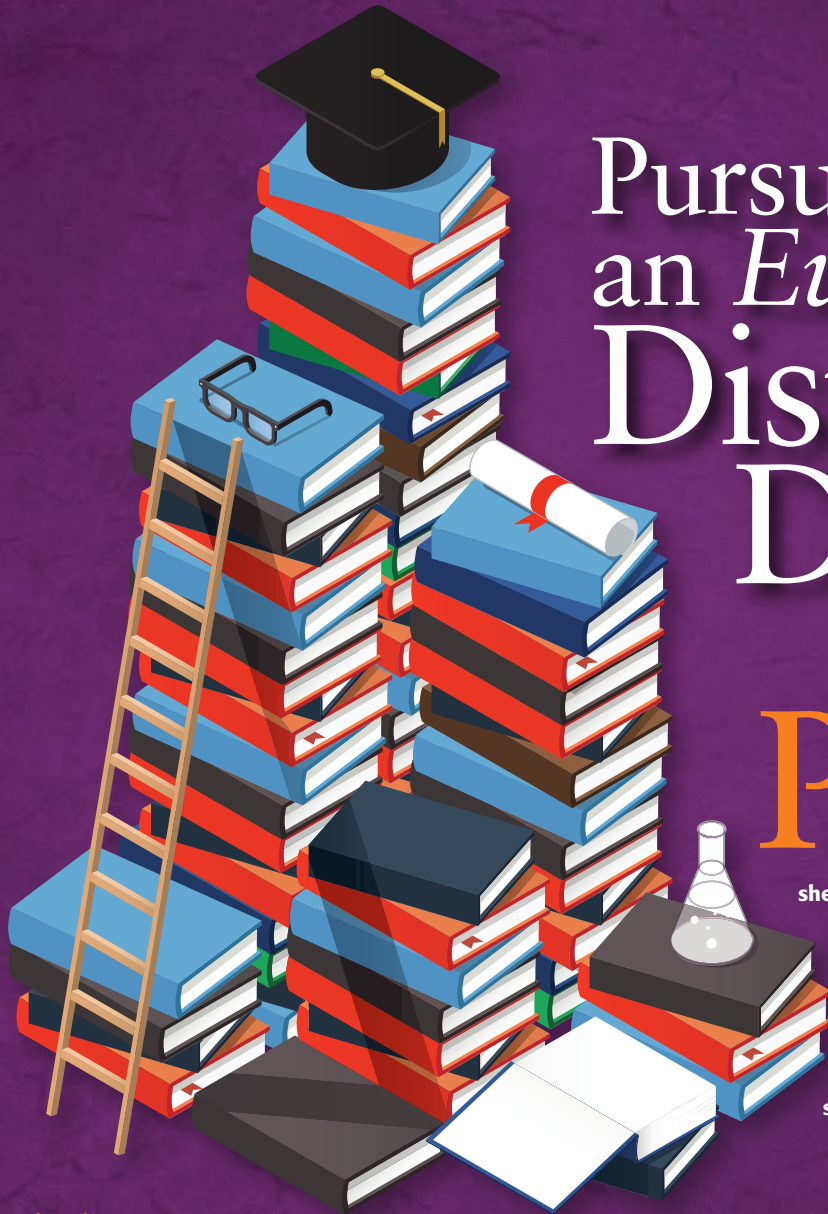
There are other disease applications as well. A related approach could potentially be used for Pierson syndrome, a very rare condition that affects newborns, resulting in renal failure and blindness. Defects in the beta2 chain of laminins in various basement membranes of the eye, including the retina, are the cause. Dr. Yurchenco is collaborating on the development of potential therapies with another investigator, Jeffrey H. Miner, PhD, FASN, professor of medicine, division of nephrology, at the Washington University School of Medicine in St. Louis.

What’s Next?

Dr. Yurchenco still feels there are questions he can’t resist trying to answer. The excitement keeps pulling him in. “What keeps me going? It’s like an adventure,” he says. “You’re like an explorer—you get hooked on it. You can’t even think of other things you want to do.”

Thanks to the work Dr. Yurchenco is doing that could change the destiny of those with certain genetic diseases, it’s an adventure that could result in even more lifesaving discoveries. **M**

By Jacqueline Cutler



Pursuing an *Even More* Distinctive DEGREE

Pursuit of a doctor of medicine degree (MD) requires extreme dedication and commitment to science and clinical medicine. While the MD is distinctive for the sheer number of years needed to practice (medical school plus residency training), nearly 20 percent of Rutgers Robert Wood Johnson Medical School students decide to enrich an already rigorous curriculum by signing on for one of the distinction programs.

The creativity and commitment of Robert Wood Johnson Medical School faculty have led to the creation of seven programs focusing on seven specialties: Distinction in Bioethics, Global Health, Leadership in Academic Healthcare, Medical Education, Medical Innovation and Entrepreneurship, Research, and Service to the Community. All are designed to further inspire students' already piqued interests in divergent facets of medicine.

"It gives students the opportunity to develop a passion with depth," says Carol A. Terregino, MD '86, associate professor of medicine, senior associate dean for education and academic affairs, and associate dean for admissions. "It distinguishes the individuals as students who go above and beyond and enrich their medical education. Medical school, in many ways, can be like a liberal arts education. You learn what your interests and strengths are. The distinction programs afford the opportunity to develop expertise."

Each distinction program is tailored to the discipline and includes seminars, presentations, and a final, individualized scholarly project. A student pursuing distinction in research completes a hypothesis-driven research project. Students apply to the respective distinction through faculty committees.

An additional benefit of the distinction program is that by reaching beyond the required classwork, students graduate better prepared, with broader horizons, evident as they interview for their residencies.

"It gives them the opportunity to talk about something unique during interviews," Dr. Terregino says. "These are students who thought about a problem, selected a program, and made sure it was sustainable. It gives them a niche. It makes them stand out among academic peers."

Seven students and graduates, representing each of the distinctions, share why this program has been rewarding.



KIM SOKOLOFF

Oby Ibe, MD '18, MPH

Distinction: Service to the Community

Residency: University of Pennsylvania

Education: Villanova University, majored in psychology and minored in biology; master's from George Washington University in community-oriented primary care

Hometown: Neshanic Station

Why this distinction program:

"I have a master's in public health, with a concentration in community-oriented primary care. The program enabled me to continue my passion for community health in medical school."

Specific project:

Dr. Ibe developed innovative ways to educate 16- to 24-year-olds about sexual health; in turn, they could use their knowledge to teach sexual health to peers. She and colleagues devised materials, fliers, PowerPoint presentations, and games, such as STI Bingo and Family Feud on eight sexually related topics.

How the program added to your medical school experience:

"This project is one of my proudest accomplishments during medical school. This was a venture that I envisioned, worked with the community to assess their strengths and concerns, and implemented with guidance from community members. The experience pushed me out of my comfort zone, challenged me to discuss sensitive topics, and helped prepare me to have these conversations with my future patients."

Roxana Amirahmadi, MD '18



KIM SOKOLOFF

Distinction: Research

Residency: University of Maryland

Education: Cornell University, majored in chemistry

Hometown: Princeton

Why this distinction program:

"I completed research at Cornell in chemistry, which I liked because I naturally ask questions about why things work the way they do. The distinction program allowed me to pursue research during medical school and tap into my natural curiosity about medicine in an organized way."

Specific project:

Researching specific genetic patterns to identify women at risk of developing pelvic organ prolapse and then to provide preventive measures. With the recognition that not many studies have been conducted on this topic, and that minority women seemed disproportionately affected, the research looked at genetic markers that could serve as predictors.

How the program added to your medical school experience:

"It helped inform who I want to become as a physician. During medical school, we learn not only how to help people, but ways of analytical thinking with the freedom to shape our careers. The program gave me the freedom to work in medicine and academia to research community service policy. It also helped me gain better insight into what it means to be a better investigator as a physician."

Lauren Sheidler Crafts, MD '18



KIM SOKOLOFF

Distinction: Medical Education

Residency: Boston Children's Hospital

Education: Georgetown University, majored in human science and minored in theology

Hometown: Pennington

Why this distinction program:

"While working at Deloitte before medical school, I was involved in teaching by developing training on finan-

cial management. The position at Deloitte solidified my love for teaching."

Specific project:

Researching medical students' quality of life during the stress of board exams, Dr. Crafts queried medical students, and a separate control group, to compare the quality of life during the regular second year versus dedicated study time. She presented at conferences and wrote an article currently under review for a medical journal.

How the program added to your medical school experience:

"It helped me learn and incorporate the scientific method in

my education applying for Institutional Review Board. The program also teaches you about the importance of medical education and the pathways for future physicians who will

become teachers as residents and as attendings, and how to improve those skills in the medical community.”

Matthew Joseph Michel, MD '18



Distinctions: Medical Innovation and Entrepreneurship, and Service to the Community

Residency: New Jersey Medical School, Department of Orthopedic Surgery

Education: Lehigh University, majored in bioengineering; master's from Rutgers in biomedical science

Hometown: Wall Township

Why these distinction programs:

“It’s always important to give your

time to helping others, and it seemed like the Distinction in Service to the Community would be an excellent way to give back. For the Distinction in Medical Innovation and Entrepreneurship, classmates John Dutton, Steven Shterenberg, and I created a program for medical students that would allow them to turn their solutions to clinical problems into real products and businesses. I had experience in

this as a bioengineer and in my previous career as an engineer. It was a constructive outlet for my creativity that I thought could benefit other medical students and ultimately provide new innovations that could help our patients.”

Specific projects:

For the Service to the Community Distinction, Dr. Michel helped develop a mentorship program for pediatric HIV patients. This evolved from a monthly group session to helping students in various facets, including assisting with college applications and advising on safe sex practices. For Medical Innovation and Entrepreneurship, he helped develop a special catheter that delivers chemotherapy directly to tumors in the lungs instead of spreading it throughout the body.

How the program added to your medical school experience:

“There are not always outlets for creativity in medical school. I created something that allowed students to think outside of the box and come up with solutions to real problems and help people. I am not necessarily an artist, but I am a thinker. And I wanted to be able to take those ideas and make them a reality.”

Deesha Sarma, Class of 2019

Distinction: Global Health

Education: Princeton University, majored in public policy and minored in global health and health policy

Hometown: Plainsboro

Why this distinction program:

“I’ve been interested in global health and policy since college. At Bain & Company [the consulting firm where she worked before medical school], I worked on projects that were health-care oriented and gained very useful, transferable skills, such as time management, communication, and working with a wide range of people. But what I realized was missing was the personal impact that is present in medicine, the ability to talk to a patient, complete a history and physical, come to a diagnosis, and recommend management. Going into global health through an MBA would have been higher-level policy work



that has an impact on a lot of people, but takes a long time to accomplish. By going to medical school, I have the ability to work with people—patients one-on-one—while still pursuing larger global health and policy research projects.”

Specific project:

Working with mentors to ensure access to surgical care in Colombia, Sarma traveled to Medellín and examined what data

existed and the infrastructure for available care. She also explored establishing contacts with the Ministry of Health and joined ride-alongs in ambulances.

How this program adds to your medical school experience:

“My experience in the back of the ambulance informed and led me to choose emergency medicine as my specialty.”

Peter Trinh, Class of 2020



JOHN EMERSON

Distinction: Leadership in Academic Healthcare

Education: Princeton University, majored in molecular biology and minored in global health policy. He is in the midst of applying to enter an MBA program

Hometown: Roseland

Why this distinction program:

“I eventually want to be an administrator in a hospital and need the skills I am learning in the distinction program to be a successful leader. Leadership in Academic Healthcare has given me the right tools to foster those skills.”

Specific project:

Trinh’s project involves shadowing institutional leaders and attending monthly meetings. He observed the chief strategy officer at Robert Wood Johnson University Hospital, and spent time at the Cleveland Clinic to widen his perspective on how different health systems operate. He is now working with the senior associate dean of safety, quality, and clinical affairs to implement a leadership and quality improvement project inspired by his experiences.

How this program adds to your medical school experience:

“I love the leadership program, and I am not sure many schools allow you to have this experience. Typically, there were only a handful of students at the sessions, allowing for more intimate conversations with the administrators giving you the ins and outs of what they do for a living. Speakers who represent various aspects of the health care industry, such as legal, finance, and academic, all addressed students in the leadership distinction. They were very open and candid and gave real insight.”

Stephanie Latham, Class of 2021

Distinction: Bioethics

Education: U.S. Naval Academy, majored in English

Hometown: North Easton, Mass

Why this distinction program:

“Bioethics resonates with me. The more amazing advances that are made in technology, the more ethical situations we will address as physicians, and I enjoy talking about them. There aren’t many black-and-white issues.”

Specific project:

Latham is researching how physicians can talk to healthy patients about death and dying so that patients consider creating end-of-life directives when they are still relatively healthy. Latham is in the early stages of the project, conducting background research and talking with potential mentors.



JOHN EMERSON

How this program adds to your medical school experience:

“Unlike mandated courses and programs, the distinction program allows me to explore unique aspects of the medical profession. Medical school is centered on learning the basic tenets of medicine, but I also believe that the art of medicine lies in the intangibles. Working on my distinction project will allow me to pose questions that are compelling to me and develop into an independent

lifelong learner. When I graduate medical school, and return to the Navy, there will not be syllabi, or project due dates, but hopefully working on this project will set the foundation for me to know how to continue to search for answers.” **M**

R W J M S NEWS

Graduation for the Class of 2018



1 The 50th Convocation of Rutgers Robert Wood Johnson Medical School was held on May 14, during which 127 graduates were awarded the doctor of medicine degree. The

1. Left to right: Thomas Hecker, PhD, Robert Wood Johnson Medical School; Jeffrey Carson, MD, Robert Wood Johnson Medical School and Rutgers Biomedical and Health Sciences (RBHS) Provost; John Gantner, Robert Wood Johnson University Hospital president; RBHS Chancellor Brian Strom, MD, MPH; and Robert Wood Johnson Medical School Dean Sherine E. Gabriel, MD, MSc.



4 Convocation speaker was **Carl P. Giordano, MD '86**, who shared with the graduates his story about resilience and determination after surviving a plane crash. *Read more about Dr. Giordano on page 42.*

Welcome to the alumni community, Class of 2018! ■



2. From left to right: Julia Bard, MD '18; Gregory Brody, MD '18; Maxwell Blodgett, MD '18; and Tausif Billah, MD '18.

3. From left to right: Jae-Yean Lee, MD '18; Vishal Patel, MD '18; Roxana Amirahmadi, MD '18; Gaby Ghobrial, MD '18; and Christopher Kim, MD '18.

4. Michael Robinson, MD '18, with his daughter.

5. Oby Ibe, MD '18, MPH.



PHOTOS BY STEVE HOCKSTEIN

Pediatric Surgical Care for Kids Opens a New Location

To better serve patients, Rutgers Health's Surgical Care for Kids at Rutgers Robert Wood Johnson Medical School has moved to a new location, at the Clinical Academic Building in New Brunswick. The newly refurbished offices feature additional exam rooms, a spacious waiting room, and more patient-friendly space, designed specifically with the comfort and care of children



and their families in mind. The new space will also enhance and expand the services provided, including the addition of a fetal counseling center, intestinal care center, coordinated trauma care, special procedures

Medical School Appointments

Keith P. Lewis, MD, RPh, Appointed Chair of Anesthesiology and Perioperative Medicine

Keith P. Lewis, MD, RPh, joined the medical school as professor and chair, Department of Anesthesiology and Perioperative Medicine, on September 10. Dr. Lewis will also serve as chief of anesthesia and director of perioperative quality and safety at Robert Wood Johnson University Hospital, an RWJBarnabas Health facility.

Dr. Lewis joins the medical school from Boston University School of Medicine and Boston Medical Center (BMC), where he served as professor and chair, Department of Anesthesiology, and



Keith P. Lewis, MD, RPh

COURTESY: KEITH P. LEWIS, MD, RPh

chief of anesthesiology, respectively. He was integral in building the BMC operating rooms into well-recognized areas of excellence, creating state-of-the-art facilities and innovative programs, and revitalizing the department's residency program. Dr. Lewis also successfully merged the Boston City Hospital and Boston University Medical Center Hospital operating rooms, dramatically increasing OR case volume and cases requiring anesthesia outside the OR. ■

Anil Nanda, MD, MPH, Appointed Chair of Neurosurgery

Anil Nanda, MD, MPH, was appointed chair, joint Department of Neurosurgery at Rutgers Robert Wood Johnson Medical School and Rutgers New Jersey Medical School, on July 1. In addition to Dr. Nanda's academic and clinical roles at Rutgers, he will serve as the senior vice president for neurosurgical services at RWJBarnabas Health.

In these roles, Dr. Nanda aims to lead the development of a dynamic neurosciences institute that will provide high-quality health care in a compassionate setting, creating a statewide neurosciences network and nationally recognized "destination" neurosciences center. He seeks to strengthen and expand endovascular services, as well as care for neurotrauma, peripheral nerve, neuro-oncology, stroke, spine, and other affiliated specialties. In addition to enhancements in clinical services, Dr. Nanda envisions a department with increased research capabilities and funding, as well as expanded residency training and continuing medical

education programs.

Internationally renowned for his clinical, research, and academic achievements, Dr. Nanda was professor and founding chair of the Department of Neurosurgery at Louisiana State University Health Sciences Center, Shreveport. During the 27 years of his leadership, the department's reputation grew exponentially, becoming internationally known not only for its expertise and Dr. Nanda's vision but also for its residency training program, which he launched in 2003.

Dr. Nanda has been recognized as a global leader in neurosurgery by the World Federation of Neurological Societies, and he has held significant leadership roles in numerous professional organizations. Having performed more than 16,000 surgeries, Dr. Nanda is considered an expert in several advanced neurosurgical techniques. He specializes in skull base, vascular, and spinal neurosurgery, including Gamma Knife radiosurgery. ■



Anil Nanda, MD, MPH

JOHN EMERSON



VIA SCIENCE WIS

rooms, and larger consultation areas for multidisciplinary care of children with more advanced surgical needs. ■

At the ribbon cutting for the new location for Rutgers Health's Surgical Care for Kids (left to right): Joelle Pierre, MD; John Gantner, Robert Wood Johnson University Hospital; Leonard Y. Lee, MD '92; Vicki Craig, MD; Yi-Hong Lee, MD; Shaheen Timmapuri, MD; Kathy Morgan Gorman, BSN, MS, RN; Sally Radovick, MD; Prithvi Narayan, MD; Robert E. Steckler, MD; and Thomas Hecker, PhD.

\$3M Grant Supports Rutgers Initiative to Study Tobacco 21 Laws

Shawna V. Hudson, PhD, professor of family medicine and community health and chief, division of research in the department, was awarded a \$3 million grant from the National Cancer Institute, along with co-principal investigator Cristine Delnevo, PhD, MPH, director of the Center for Tobacco Studies at Rutgers School of Public Health and co-leader of the Cancer Prevention and Control Research Program at Rutgers Cancer Institute of New Jersey. The team will study the effectiveness of Tobacco 21 laws in the hopes of helping to determine how tobacco-control policies aimed at young people can be strengthened to improve their



STEVE HOCKSTEIN

Shawna V. Hudson, PhD

health and avoid untimely deaths due to tobacco-related illness.

Tobacco 21 laws raise the legal age to purchase tobacco products to 21 years old. Today, five states, including New Jersey, and more than 310 cities have enacted this policy, and passage of similar laws is spreading quickly. Because of the novelty of Tobacco 21 laws, however, it is unclear how successful this type of policy change is, researchers say. Using this new grant, Dr. Delnevo and Dr. Hudson will examine how the adoption, implementation, and maintenance of these policies affect public health outcomes, while also using the evidence to determine the impact on different racial and ethnic groups. ■



STEVE HOCKSTEIN

Welcome, Class of 2022

Rutgers Robert Wood Johnson Medical School welcomed 190 new students into the **Class of 2022** during the medical school's annual **White Coat Ceremony** on August 3. The ceremony culminates the week-long orientation and signifies the

students' entrance into the medical profession.

Surrounded by family and friends, and assisted by a faculty member, students were helped into their white coat, which will be worn throughout the four years of medical education. ■

Research Grants

The National Institutes of Health awarded grants of \$1 million or more to the following members of the Rutgers Robert Wood Johnson Medical School faculty:

- **Zhaohui Feng, MD, PhD**, associate professor of radiation oncology and resident member, Rutgers Cancer Institute of New Jersey, and **Wenwei Hu, PhD**, associate professor of radiation oncology and resident member, Rutgers Cancer Institute, a five-year, \$1,818,565 multi-principal-investigator (PI) R01 grant for "Metabolic Reprogramming in Breast Cancer."
- **Sharon Manne, PhD**, professor of medicine and resident member, Rutgers Cancer Institute, a five-year, \$2,727,939 R01 grant for "Facebook Intervention for Young Onset Melanoma Patients and Families."
- **Steven Silverstein, PhD**, professor of psychiatry, a two-year, \$1,460,131 multi-PI, R61 grant for "Visual Remediation in Schizophrenia."
- **Omar Tliba, PhD**, associate professor of medicine and member, Rutgers Institute for Translational Medicine and Science, a four-year, \$1,706,402 R01 grant for "Airway Inflammatory Pathways Regulating Glucocorticoid Receptor Phosphorylation."



Grants of \$1 million or more from other sources include:

- **Nina A. Cooperman, PsyD**, associate professor of psychiatry, a four-year, \$1,945,000 grant from the Laura and John Arnold Foundation for "Evaluating the Effectiveness of New Jersey's Opioid Overdose Recovery Program in Linking Opioid Overdose Survivors to Medication-Assisted Treatment."
- **Anna Kline, PhD**, adjunct associate professor of psychiatry, a three-year, \$1,500,000 grant from the New Jersey Department of Health for "New Jersey Household Survey and Family of Studies."
- **Eugene Martin, PhD**, professor of pathology and laboratory medicine, a one-year, \$2,228,656 competitive renewal from the New Jersey Department of Health for "HIV/AIDS Counseling and Testing Notification Assistance Program."
- **Vikas Nanda, PhD**, associate professor of biochemistry and molecular biology and resident member, Center for Advanced Biotechnology and Medicine, together with lead principal investigator Paul Falkowski, PhD, distinguished professor, and Bennett L. Smith Chair in Business and Natural Resources, Departments of Earth and Planetary Sciences and Marine and Coastal Sciences, and Board of Governors Professor and director, Rutgers Energy Institute, and their co-investigators, \$1,133,509 for the first year of a five-year, \$5 million award from the NASA Astrobiology Institute for "ENIGMA: Evolution of Nanomachines in Geospheres and Microbial Ancestors."
- **Gratian Salaru, MD**, associate professor of pathology and laboratory medicine, a one-year, \$1,324,575 competitive renewal from the New Jersey Department of Health for "MOA—Rapid HIV Testing Service."

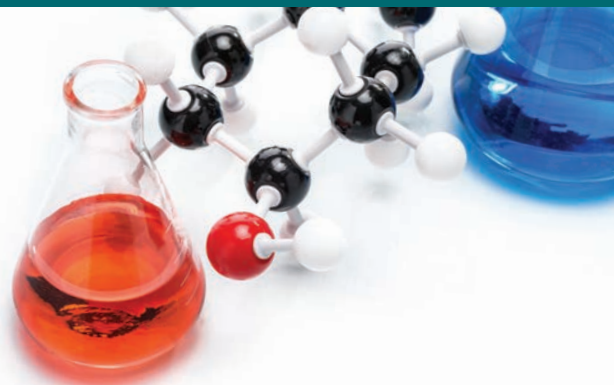
(Compiled with the assistance of the Research Support Team, Robert Wood Johnson Medical School.)

Published Research

The following is a representative sample of articles by Rutgers Robert Wood Johnson Medical School researchers, recently published in leading biomedical journals:

- **Elisa V. Bandera, MD, PhD**, associate professor of medicine and resident member, Rutgers Cancer Institute of New Jersey, was lead author of "Obesity, Body Composition, and Breast Cancer: An Evolving Science," an invited commentary published in *JAMA Oncology* June 1, 2018;4(6):804–805.
- **Jyoti Malhotra, MD, MPH**, assistant professor of medicine and resident member, Rutgers Cancer Institute, was the coauthor of "Impact of Heart Failure on Cancer Incidence: A Complicated Question," an editorial comment published in the *Journal of the American College of Cardiology* April 10, 2018;71(14):1511–1512. (Epub ahead of print, April 7, 2018.)
- **Vikas Nanda, PhD**, associate professor of biochemistry and molecular biology and resident member, Center for Advanced Biotechnology and Medicine, was senior author of "Modular Origins of Biological Electron Transfer Chains," published in *Proceedings of the National Academy of Sciences USA* February 6, 2018;115(6):1280–1285. (Epub ahead of print, January 22, 2018.)
- **Coral Omene, MD, PhD**, assistant professor of medicine and resident member, Rutgers Cancer Institute, was first author of "Anti-VEGF Therapy—A Role in Obesity-Related Breast Cancer," published in *Nature Reviews Endocrinology* June 1, 2018;14(6): 329–330. (Epub ahead of print, April 27, 2018.)
- **Elisa V. Bandera, MD, PhD**, associate professor of medicine and resident member, Rutgers Cancer Institute, was senior author of the article.
- **Reynold A. Panettieri, MD**, professor of medicine, vice chancellor for translational medicine and science at Rutgers, and director, Rutgers Institute for Translational Medicine and Science, was one of the lead authors of "Tralokinumab for Severe, Uncontrolled Asthma (STRATOS 1 and STRATOS 2): Two Randomized, Double-Blind, Placebo-Controlled, Phase 3 Clinical Trials," published in *Lancet Respiratory Medicine* July 2018(6)7:511. (Epub ahead of print May 25, 2018.)
- **Hadie Razjouyan, MD**, assistant professor of medicine; **Steven R. Brant, MD**, professor of medicine and chief, division of gastroenterology and hepatology; and **Michel Kahaleh, MD**, professor of medicine and clinical director of gastroenterology, were coauthors of "Anesthesia Assistance in Outpatient Colonoscopy," a letter to the editors of *Gastroenterology* June 2018;154(8):2278–2279. (Epub ahead of print, May 11, 2018.)

(Compiled with the assistance of the Robert Wood Johnson Library of the Health Sciences.)

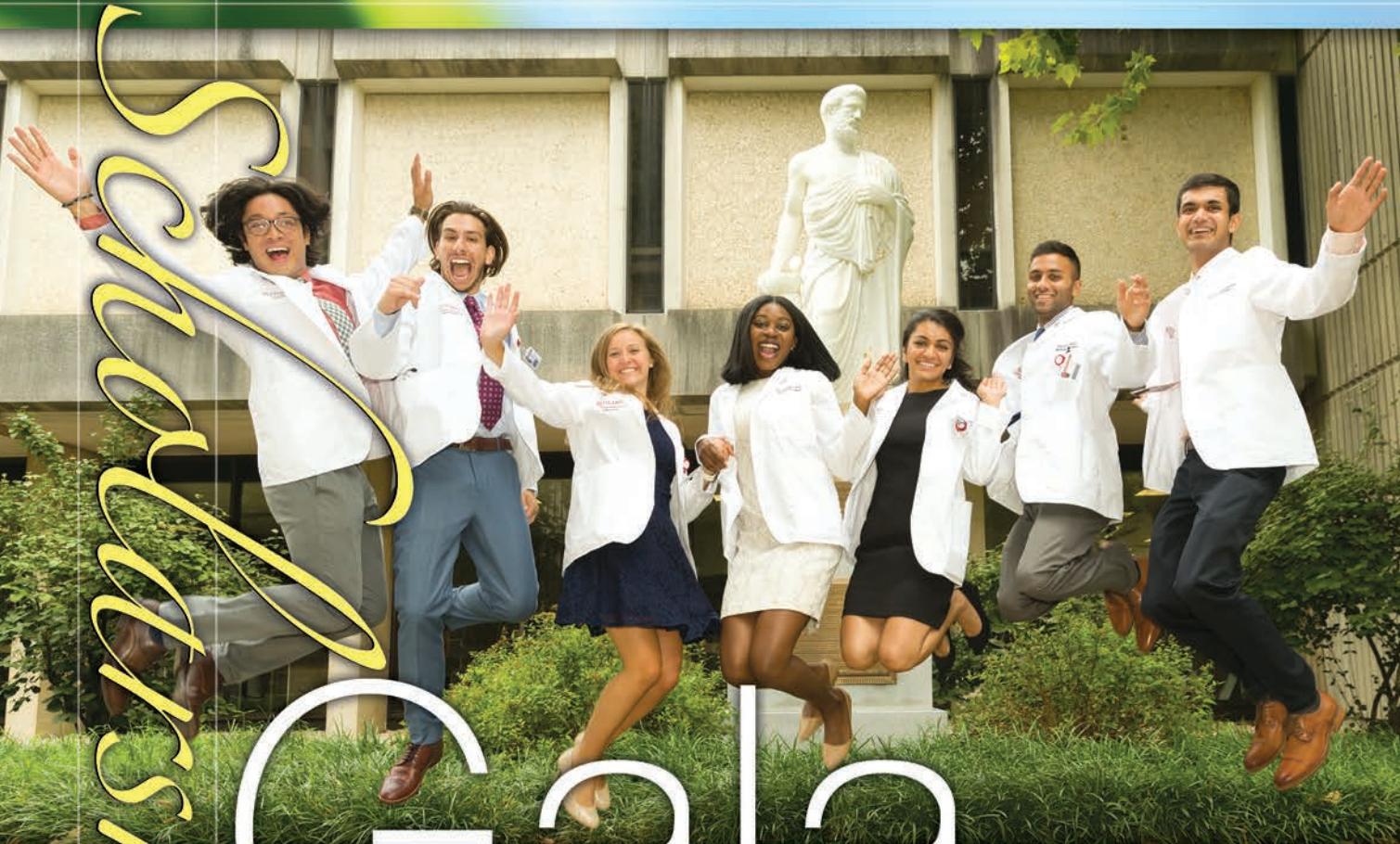




RUTGERS

Robert Wood Johnson
Medical School

9th
Annual



Scholarship

Gala

To Celebrate with Alumni and Friends

Join Us!

2019

Saturday ■ April 6, 2019

**6:00 PM ■ The Heldrich
New Brunswick**

Honoring the Classes:

**50th: 1969 ■ 45th: 1974 ■ 40th: 1979 ■ 35th: 1984 ■ 25th: 1994 ■ 20th: 1999 ■ 15th: 2004
10th: 2009 ■ 5th: 2014 ■ RSVP: Lauren Marshall at Lsm115@rwjms.rutgers.edu**

LETTER FROM THE
ALUMNI ASSOCIATION
PRESIDENT

Dear Alumni and Friends:

Calendar year 2018 has been fruitful and active for alumni. I am pleased to report that alumni, faculty, and friends have proudly supported the **Chancellor's Scholarship Challenge**, raising nearly \$1 million for students. Further, some donations already have resulted in new dedicated scholarships. Not only will this support help reduce our students' average \$180,000 debt upon graduation, but these and additional new scholarships will help attract the best and brightest future physicians. *There is still time* for your donation to be matched, 1:1 for any gift to student scholarships and 2:1 for faculty alumni and new donors. You can mail in a donation using the enclosed envelope, or contribute online at support.rutgers.edu/RWJMS.

We have bolstered the relationship between our students and alumni through the **alumni-student mentorship program**. As part of this initiative, a database was created so alumni can identify the ways in which they would like to help current students—shadowing, researching, speaking at lectures, or providing resources for residencies and away rotations. At our recent first-year medical student orientation, I learned firsthand about the students' keen interest in shadowing and research. If you are interested in the mentorship program, I encourage you to visit rwjms.rutgers.edu/alumni/alumnimentorship. Please also be sure to save the date for **Career Night** in Piscataway on March 5, 2019.

In addition, alumni have hosted social events in New Jersey, Philadelphia, and New York. If you are considering planning an event, contact Jillian Prior, MPA, manager of alumni affairs, at jillian.prior@rwjms.rutgers.edu. One of our biggest alumni social gatherings is the **Annual Scholarship Gala**, which serves as a reunion for alumni. On April 6, 2019, we will celebrate the classes of 1969, 1974, 1979, 1984, 1989, 1994, 1999, 2004, 2009, and 2014 at The Heldrich in New Brunswick. Congratulations to our alumni celebrating this milestone.



COURTESY OF PAUL F. WEBER, MD '87, RPh, MBA

I hope you enjoy the following stories about our diverse alumni. We are also eager to hear what you are up to. Please verify your email address so you receive event invitations, medical school news, and special opportunities by visiting our website and updating your information. Also be sure to follow us on Facebook ([@RWJmedicalschoo](https://www.facebook.com/RWJmedicalschoo)) and Instagram ([@RWJMS](https://www.instagram.com/RWJMS)) for the most up-to-date medical school news.

Sincerely,

Paul F. Weber, MD, RPh, MBA

Paul F. Weber, MD '87, RPh, MBA
President, Robert Wood Johnson Medical School Alumni Association

Carl P. Giordano, MD '86: Giving Up Was Never an Option

Carl P. Giordano, MD '86, had been working on his Convocation speech for the Rutgers Robert Wood Johnson Medical School graduation in May but was taking a break to compete in a three-day squash tournament. At 58, competing in this demanding sport against men younger than his three sons is impressive. Playing at all, let alone walking, is remarkable.

Only three years ago, Dr. Giordano was in a horrific plane crash. On August 16, 2015, he was the copilot in a single-engine two-seater that took off from Westhampton Beach, Long Island, headed to Morristown. Around 11 minutes into the flight, he and his best friend, the pilot, heard an unusual sound coming from the engine of the Beechcraft C35 Bonanza.

“Then a flicker of bright light flashed from under the motor cowling, followed by a puff of smoke and a distinctive oily odor,” he writes in his memoir, *Shoot the Moon*, which describes how his training as a physician

helped him survive the crash.

Moments later, they careened to the ground from 6,500 feet in the air. His friend was killed. Dr. Giordano never fully lost consciousness.

“I can’t explain it,” he says of surviving. “Partly my survival was the invisible hand, partly great piloting, and partly my instincts and training, but I don’t want to take too much credit.”

Some of the credit, he acknowledges, results from his physical and mental fortitude; he was in terrific shape, having played squash since he was a student at Robert Wood Johnson Medical School, and it was at medical school where he learned to be deliberately unflappable.

Dr. Giordano’s years as an orthope-

dic surgeon in Morristown, at Atlantic Spine Specialists; his residency at the Hospital for Joint Diseases, now part of New York University’s residency program; and his medical school training all kicked in during the 92-second descent.

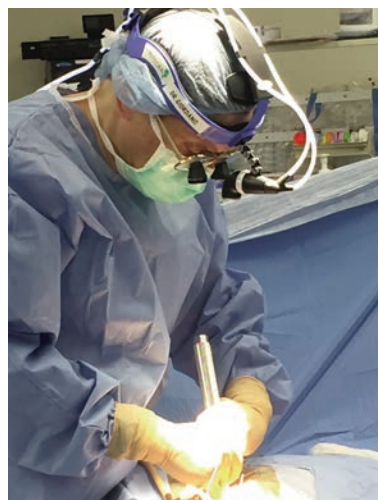
At medical school, he says, he learned the importance of “remaining focused and staying calm in the face of distress and despair. That no matter what, I needed to constantly keep putting one foot in front of the other, to keep marching forward and do the best I could and not look back. There was no value in despair.”

Naturally, Dr. Giordano did not simply walk away from this accident. He suffered a fractured jaw that “looked like it took a gunshot wound.” Still, he was extraordinarily lucky: “I didn’t lose any teeth.”

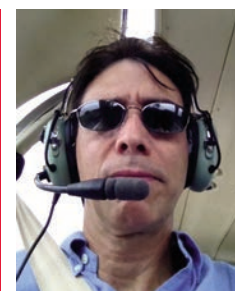
Additional injuries included fractured ribs, a concussion, pulmonary contusion, fractured finger, deep laceration in the leg, and a knee injury. Despite all this, three months later, Dr. Giordano returned to work as an orthopedic surgeon, specializing in spinal surgery.

He finds the work fascinating, and in addition to his position at Atlantic Health, he serves on boards and is the

BY JACQUELINE CUTLER



Carl P. Giordano, MD '86, speaking at Robert Wood Johnson Medical School's Convocation on May, 14 (far left, and above), with Dean Sherine E. Gabriel, MD, MSc; performing surgery (left); and in the cockpit (right) of his Beechcraft C35 Bonanza (below).



The qualities that propelled Carl P. Giordano, MD '86, to medical school and served him well—hard work, perseverance, and preparation—are the recipes for success that he shared with the Class of 2018 at Convocation.

chief of the orthopedic spine section at Morristown Medical Center.

Dr. Giordano always knew that he wanted to follow in his father's footsteps and become a physician. His father attended NYU School of Medicine, a tremendous achievement considering he tried to quit school when in kindergarten. Dr. Giordano's grandmother had already arrived in America, and while relatives were taking care of his father as a child in Italy, the boy skipped school to spend time with horses in the countryside. Soon,

Dr. Giordano's father was placed on a ship from Sicily and immigrated alone to the United States—at age 6.

Dr. Giordano remains proud of his father and his accomplishments as a physician and immigrant. As one of five children—the others are dentists—Dr. Giordano felt responsible for contributing toward his own education. After graduating cum laude from Villanova University, Dr. Giordano chose Robert Wood Johnson Medical School (then Rutgers Medical School) in part because of its affordable

tuition.

Having saved his wages from cutting grass and cleaning pools, he was determined to make a financially wise decision. "My goal was to alleviate my father's burden," he says. "At the time, my medical tuition was about \$5,000 a year."

Those transformational years at the medical school were on his mind as he wrote the speech he delivered at the May 14 ceremony.

"During residency, I didn't need a watch because it didn't matter what time it was," Dr. Giordano said, addressing the graduates. "I didn't need a day planner because it didn't matter what day it was. I didn't need a calendar because it didn't matter what month it was. I worked all the time.

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Jacob Nettleton, MD '14, MPH '14: Sowing the Seeds of Global Health in the 'Warm Heart of Africa'

For Jacob Nettleton, MD '14, MPH '14, pursuing health equity in Africa is a natural extension of his varied skill set.

At a young age, Dr. Nettleton's inquisitive nature and reasoning skills were nurtured by his grandfather, a physician; his mother, a museum educator; and his father, a city planner. As an undergraduate at Brown University, a proclivity for science led to an interest in medicine.

His resolve wavered, however, when he became tired of rote preclinical coursework. It was his studies in anthropology that allowed him to see the field of medicine through the lens of social justice, sparking his passion for global health. Now, as a volunteer clinical educator and visiting lecturer in Malawi, Dr. Nettleton is combining those interests by educating local physicians to strengthen Malawi's health systems.

Practicing Medicine in Malawi

Modeled after the British health care system, medicine in Malawi is delivered at large central hospitals

BY JODI MCCAFFREY

and through smaller district hospitals, which see the majority of patients. As a visiting lecturer in the Department of Family Medicine at the University of Malawi College of Medicine, Dr. Nettleton instructs medical students during their family medicine rotations at the district hospital level. The six-week rotation combines lectures and case discussions with patient rounds at the 400-bed district hospital. His goal is to help expose students to family medicine and train family medicine physicians to become district-level leaders.

Dr. Nettleton's work in Malawi began in late 2016 during his third year of family medicine residency at the University of Washington. A mentor told him about a global family medicine opportunity in the township of Mangochi with Seed Global Health, a nonprofit organization that pairs American clinicians with local medical and nursing faculty with an aim toward strengthening health systems by bolstering clinical education

in underserved countries. He spent one month with the program before returning to Seattle to complete his residency. However, his time stateside was short-lived: he was back in Malawi soon after graduation.

"One of the critical needs of health systems abroad is bolstering medical education, but the challenge is learning how to intervene in a constructive way," Dr. Nettleton explains. "There's huge potential for family medicine-trained physicians to impact care and strengthen systems here."

Mangochi, in south-central Malawi, began as a British colonial defense post. Many Malawians suffer from malnutrition, and the adoption of Western lifestyle habits are compounding the issue. In addition to a high number of HIV, tuberculosis, and malaria cases, more patients are presenting with diabetes, hypercholesterolemia, and hypertension, conditions that African doctors generally have little experience treating. Dr. Nettleton's training at Rutgers Robert Wood Johnson Medical School gave him the tools to educate local doctors about appropriate treatment protocols. He is heavily involved with the hospital's weekly diabetes and hyper-



“I’m seeing learners make that next step in clinical reasoning, which is gratifying as a teacher,” says Jacob Nettleton, MD ’14, MPH ’14, at the Mangochi District Hospital in Malawi, Africa (above), and discussing a case with a Malawian colleague (right).



PHOTOS COURTESY OF JACOB NETTLETON, MD '14, MPH '14

tension clinics, which help address the growing need.

“I’m seeing learners make that next step in clinical reasoning, which is gratifying as a teacher,” says Dr. Nettleton. He’s also helping shape curricula for the school’s new family medicine residency program, which will graduate its first cohort next year.

He’s further energized by the collaborative efforts at the district hospital, where administrators and clinicians are working together to develop a medical education teaching center. Malawian clinicians are empowered to help seek solutions to system problems. In April, for example, when a fire destroyed an outpatient wing in

the district hospital, clinicians collaborated to engineer work-arounds to prevent a disruption in service.

A Firm Foundation on Which to Grow

Robert Wood Johnson Medical School’s family medicine faculty were strong leaders and clinical role models, Dr. Nettleton says, and he’s grateful for the opportunities he’s been afforded through his affiliation. The medical school funded his postgraduate work in public health, which enabled him to continue exploring the nexus of medicine and health policy.

When asked how his life in Africa compares with his life in the United

States, Dr. Nettleton says, “It’s easy to focus on how the countries are different, but for me, it’s more important to think about how they are similar. We’re all humans working to get similar things out of life.”

Called the “warm heart of Africa” for its friendly people, Malawi is burdened by disease and suffering, but the needle is moving. Dr. Nettleton says the country has made strides, for example, in improving maternal-child health services and reducing child mortality rates.

Dr. Nettleton plans to continue his work in Malawi through September 2019. Once his time there ends, he says

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In Memory of Lloyd A. McPherson, MD '76: A Fearless Advocate for Minority Students

Last fall, just before Thanksgiving, Lloyd McPherson, MD '76, met Rutgers Robert Wood Johnson Medical School classmate and longtime friend Karl Russell-Brown, MD '76, to catch up over a cup of coffee. Their get-togethers had become all too rare: since 1998, Dr. McPherson had worked as an emergency room physician on Native American reservations from Arizona to North Dakota, serving two weeks on, then spending two weeks off, back home in Mountainside. Now he was returning to the reservation hospital in Belcourt, North Dakota. Seeing that his friend was not well, Dr. Russell-Brown urged him to consider retiring. “No. This is what I love,” said Dr. McPherson. “Day to day, it’s never the same, and it keeps me going.”

“Lloyd recruited me to the medical school,” says Dr. Russell-Brown. “Later, I was best man at his wedding and godfather to his first son. We’d been friends for more than 40 years, and as we said good-bye, we vowed to see each other more regularly. But it was not to be: Lloyd suffered a fatal heart attack a week after returning to Belcourt.” Dr.

BY KATE O’NEILL

McPherson passed away on November 28, 2017, at age 72.

As medical students, Dr. McPherson and Dr. Russell-Brown bonded when they discovered that their fathers, both immigrants from Jamaica, had worked at Seabrook Farms, deep in New Jersey’s Cumberland County. Sharing childhood memories, Dr. Russell-Brown told Dr. McPherson that his sister died accidentally at age 4, but he’d never

been able to find where she was buried. “Typically, Lloyd offered to go back to Bridgeton with me to help in the search,” says Dr. Russell-Brown. “He knew where the segregated African-American cemetery was, and together, we found her grave.”

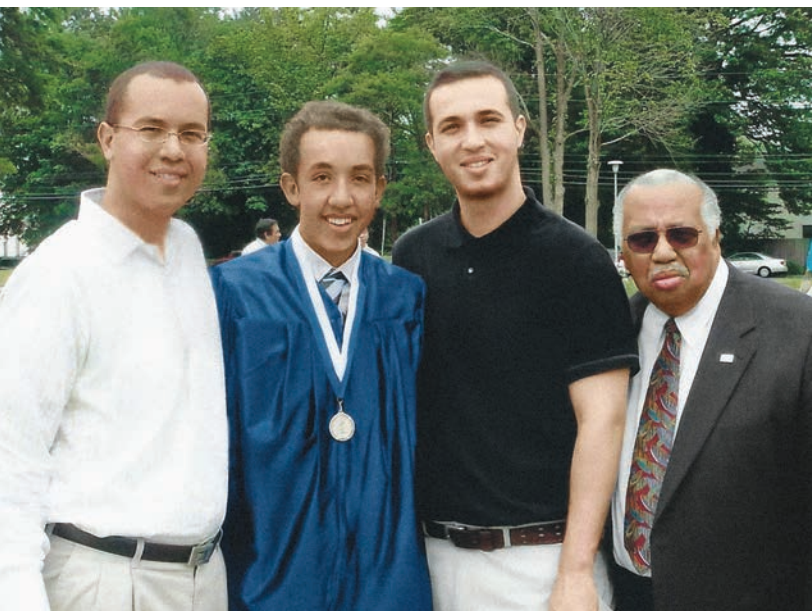
Dr. McPherson fulfilled his childhood dream of becoming a doctor. As a pre-med at Howard University, he earned a bachelor of science degree and then taught science classes at Swarthmore College while working at Bryn Mawr Hospital. A year later, he was recruited by Alexander Sutton, an assistant to the dean at then Rutgers Medical School, to spearhead the recruitment of minority students.

In his first year, Dr. McPherson founded the local chapter of the Student National Medical Association, an advocacy and support group for minority students, and subsequently served as its president. “The dean liked Lloyd from the day they met,” says Dr. Russell-Brown, referring to James Mackenzie, MD, professor and founding chair, Department of Surgery, and dean of the medical school from 1971 to 1975. “He gave him leeway to do his recruiting, and Lloyd loved him.”

Dr. McPherson was “low-key,” says



COURTESY OF ARLENE MCPHERSON



Clockwise from upper left: Members of the Class of 1976 celebrate their reunion at the Hilton in New Brunswick (left to right): Robert Rosado, MD; William Mullally, MD; Lloyd McPherson, MD; Marie Trontell, MD; Karl Russell-Brown, MD; Julio Hip-Flores, MD; Cedric Gill, MD; and Edmund Michaels, MD. ■ Richard Reynolds, MD, MPH, former dean (center), congratulates leaders of the newly established Rutgers Medical School Alumni Association (left to right): Jay Cohen, MD '76, president; Richard Levandowski, MD '75; Robert Eidus, MD '74; and Dr. McPherson. ■ Dr. McPherson and his wife, Arlene, on their wedding day in April 1979. ■ Dr. McPherson (far right), and his three sons (left to right) Christopher, Trevor, and Kyle, at Trevor's graduation from Union Catholic High School.

Dr. Sutton, but he was passionate about his mission. “He put his future on the line in actively advocating for minority students matriculating through medical school. Lloyd fearlessly pressed for higher admission rates and adequate financial aid for minorities, for continuation of academic support programs, and more medical student placements in low-income, primary care hospitals in New Jersey.”

He supported high school and undergraduate programs that introduce careers in medicine to minority students and show them that “this is possible,” says Dr. Sutton, adding that once Dr.

McPherson had recruited a candidate, he never gave up on him or her: he put his credibility on the line, and “he raised hell if one of his students wasn’t admitted.”

Dr. Russell-Brown, who continues to practice pediatrics at age 80, was doing research at Princeton University when Dr. McPherson recruited him. Later, Dr. Russell-Brown would serve on the admissions committee, the only nonwhite member. “The school needed Lloyd’s perspective. He was familiar with the strong, traditionally black colleges,” says Dr. Russell-Brown. “He knew where to find good candidates, and he

encouraged them to come for an interview. Many, like me, were nontraditional students—married with children, more mature and settled.”

“Lloyd was very successful,” says Dr. Sutton. “By graduation, he was responsible, either directly or indirectly, for recruiting 200 minority students to the medical school.”

During his flex year in medical surgery at Muhlenberg Hospital, Dr. McPherson met his future wife, Arlene Raczkowski, the blond, blue-eyed nurse he would always call “my golden angel.” The McPhersons were married

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Marilyn Heine, MD '82: A Passion to Practice Medicine and Influence Policy

The work of Marilyn Heine, MD '82, on patient-advocacy policy development is profound.

Dr. Heine serves on the American Medical Association (AMA) Council on Legislation and previously was a board member for the AMA's Political Action Committee. A past president of the Pennsylvania Medical Society and a member of its AMA delegation, she has testified before Congress and the Pennsylvania General Assembly. Dr. Heine was appointed by then governor of Pennsylvania Ed Rendell to serve on the Commonwealth Health Care Reform Implementation Advisory Committee and by Rendell's successor, Tom Corbett, to the State Board of Medicine, where she served as chair.

It is perhaps no surprise that Dr. Heine—an internal medicine specialist, with subspecialties in emergency medicine and hematology oncology—recently received the Colin C. Rorrie Jr., PhD Award for Excellence in Health Policy from the American College of Emergency Physicians

(ACEP). The award is given annually to an individual who has demonstrated outstanding skills, talent, and commitment as an administrative or political leader. The award was named for Colin C. Rorrie Jr., who served as ACEP's executive director from 1982 to 2003, and recognizes his role in elevating the stature of emergency medicine's advocacy efforts.

Dr. Heine takes her role as a policy influencer seriously and believes all physicians should be aware of how much they can inspire change. "Physicians have a vital role to play as advocates," she says. "Not only at the bedside with patients, but to educate lawmakers and help them shape legislation that impacts our profession."

Dr. Heine's work is centered around patient advocacy, ensuring patients' access to emergency care. Case in point: in the 1990s, she saw patients who delayed coming to the emergency department for care even when they thought it was necessary. Patients knew health insurers rou-

tinely refused to cover their evaluation and treatment if the discharge diagnosis was considered not to be an emergency. "One young man received a bill after he was seen for chest pain that was diagnosed as a non-emergent condition," Dr. Heine says. "Later, when he had a different chest pain, he hesitated to go to the ER, but on arrival he was found to be having a myocardial infarction." His outcome would have been better if he had presented promptly. He and patients like him motivated Dr. Heine and her colleagues to advocate for state and federal laws to require health insurers to cover emergency care if a patient presents with symptoms that a prudent layperson would consider an emergency.

Dr. Heine also organized a grassroots, letter-writing initiative that prompted her congressional representative to be instrumental in the passage of antitrust reform in the U.S. House of Representatives. She engaged colleagues to write to Congress to improve the Medicare program and "help us keep the lights on" to provide both care for patients and jobs for employees. The effort generated

BY LYND A RUDOLPH



COURTESY OF MARILYN HEINE, MD '82

hundreds of letters that Dr. Heine hand-delivered to legislators' offices, helping to spur House leaders to promote important Medicare reform.

Her interest in policy making started when Dr. Heine was just a teenager. She remembers the day. During a visit with her own congressman, she was disappointed that he seemed uninterested. She got into a conversation with her mother about what it takes to make change happen. "She talked about how you have to be relentless," she recalls. "She made me aware that everything takes time and energy—you have to

be committed to it and keep at it."

Her mother would be proud. Dr. Heine is fearless and dedicated in her pursuit of policies that promote doing the right thing for the patient. Along with Medicare reform and support for emergency medical health insurance coverage, her efforts have included giving members of Congress a physician's-eye view of practice sites and gathering support to resolve a medical liability crisis by inviting a group of senior women to the State Capitol to lobby. Those experiences continue to motivate Dr. Heine and have been irre-

futable proof of the importance of strong patient-physician relationships. "The rapport built between a physician and patient is one of the most meaningful aspects of medicine," she says. When it comes to bringing issues to the attention of lawmakers and policy makers, physicians have a unique perspective. They play a vital role by putting a face on the issues, Dr. Heine says, adding, "You have to keep the issue real. We can do that as physicians—only we can describe what happened to a patient."

Dr. Heine knows that many of her attitudes were shaped when she was a student at Rutgers Robert Wood Johnson Medical School. In her mind, the medical school was far ahead of the curve in educating physicians about the issues associated with the medical profession. Her elective to shadow a physician was particularly influential. "When the physician walked into the room, you could tell he had respect for the patient," Dr. Heine says. "Another program enhanced our ability to communicate with patients," she adds. "I remember a series of sessions that focused on

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Carl P. Giordano, MD '86: Giving Up Was Never an Option

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I know things have changed now, but your workloads will still be similar.”

Those qualities that propelled him to medical school and served him well—hard work, perseverance, and preparation—are the recipes for success that he shared with the Class of 2018. Dr. Giordano also counseled the new physicians to be resilient and creative. As the holder of



COURTESY OF CARL P. GIORDANO, MD '86

U.S. patents and developer of spinal implants, the surgeon advised,

“Don’t stop thinking.”

Incidentally, he did his personal best at the squash tournament. “I have done everything I wanted for 25 years,” he says. “I play squash. I play golf. I have a great family. I work hard. The mentality of people in my generation is: You are not going to give up.” **M**

Jacob Nettleton, MD '14, MPH '14: Sowing the Seeds of Global Health in the 'Warm Heart of Africa'

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he’ll practice rural medicine in the Pacific Northwest—with the flexibility to return to Malawi to continue contributing to the ongoing systems-strengthening efforts.

“Building and strengthening health systems is more than planning on paper. It takes time to develop rela-

tionships and get to a constructive place in those relationships,” says Dr. Nettleton. “Medicine is a process of lifelong learning. I feel dedicated to this project and want to continue pushing it forward. We’re just starting to gain momentum.” **M**

Marilyn Heine, MD '82: A Passion to Practice Medicine and Influence Policy

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wellness, making sure we, as medical students, were avoiding the type of burnout that has characterized so many medical school experiences.”

Dr. Heine stays on top of her leadership skills through other educational avenues, including completing a course at Northwestern University. She also helped procure a grant to study urgent matters for emergency medicine in Pennsylvania.

Why is Dr. Heine so committed to the policy work she does? It really gets down to one thing: the compassionate side of medicine matters greatly. Understanding how patients feel—what they are going through—is critical in any decision-making. She has a favorite phrase that says it all: “Patients don’t care how much you know until they know how much you care,” Dr. Heine says. “Nothing is more important.” **M**

In Memory of Lloyd A. McPherson, MD '76: A Fearless Advocate for Minority Students

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in 1979, shortly before Dr. McPherson began a family practice residency at St. Mary Hospital, in Hoboken. “We were an interracial couple, which was shocking in its time,” says Arlene McPherson. But she loved his family as much as they loved her, and their interracial marriage never stood in their way. The McPhersons raised three sons, and looking back, she believes his happiest moments were spent sitting on the floor playing with his six grandchildren, all boys.

Dr. McPherson subspecialized in emergency medicine, where he could use not only his surgical skills but also his training in neurology, pathology, pediatrics, and more. Known simply as “Mac” to his colleagues, Dr. McPherson was serving as emergency room director at the now-closed Bayley Seton Hospital on Staten Island when he received recognition in the *Congressional Record* for resuscitating a 3-year-old girl who had been submerged in freezing water for 30 minutes.

While serving on Native American reservations, he enjoyed using basic diagnostic skills, working in rudimentarily equipped emergency rooms. “And he tried to help the kids make better lives for themselves,” says Arlene McPherson. “He encouraged them to stay in school and use their federal stipends to go to college.

“He was respected and loved by his staff and patients,” she adds, “though people on the reservations often mistrust outsiders. But his patients would wait two weeks for him to come back, just so they could be seen by him.” **M**

C L A S S NOTES

What's New? Your fellow alumni want to know!

Please send your professional and personal news and photos to: **Jillian Prior, MPA**, manager of alumni affairs, at jillian.prior@rwjms.rutgers.edu. In addition to updates we receive from alumni, we use public news information and stories to share in our Class Notes section.

1 9 7 7

Leslie Miller completed a second residency in psychiatry at Beth Israel Medical Center in New York, followed by training in psychoanalysis at what was then the NYU Psychoanalytic Institute. She is currently in private practice in Greenwich Village, N.Y. She and her husband split their time between Manhattan and Blirstown. They have two children and four grandchildren. Dr. Miller is involved in the arts and is currently showing paintings at Gallery 23 in Blirstown and online at Fine Art America. She also published a novel, titled *Discovery*.

1 9 7 9

Michael Miller is a professor of medicine in the division of cardiology at the University of Maryland School of Medicine in Baltimore.

1 9 8 0

Melissa Miller joined Rutgers Robert Wood Johnson Medical School as substitute faculty for the "Patient Centered Medicine" course.

1 9 8 3

David Becker is a frequent contributor to the *Philadelphia Inquirer* and a board-certified cardiologist with Chestnut Hill Temple Cardiology in Flourtown, Pa.

Jeffrey Bruce is the director of the residency program in the Department of Neurosurgery at Columbia University.

Mark Demitrack was appointed senior vice president and chief medical officer at Trevena.

Ann McCullough is in the Department of Laboratory Medicine and Pathology at the Mayo Clinic in Scottsdale, Ariz.

1 9 8 5

David A. Halsey became the president of the American Academy of Orthopaedic Surgeons Board of Directors. He is the chief of the orthopedic surgery division at Martha's Vineyard Hospital and a full professor in the Department of Orthopaedics and Rehabilitation at the University of Vermont College of Medicine in Burlington.

1 9 8 7

Peter J. Pappas works in Brooklyn and specializes in general surgery and vascular surgery. He is affiliated with New York–Presbyterian Westchester Division, the Brooklyn Hospital Center, and Methodist Hospital, one of the Jefferson University Hospitals.

1 9 8 9

Jamie Ullman is a professor in the Department of Neurosurgery at the Zucker School of Medicine at Hofstra/Northwell. She is also director of neurotrauma in the Northwell Health Neuroscience Institute, based at North Shore University Hospital in Manhasset, N.Y.

1 9 9 4

Thomas D. Coyte is a pediatrician at Einstein Holland Pediatrics in Pennsylvania.

Cara Gatto-Weis was welcomed as one of "the Leading Physicians of the World" by the International Association of HealthCare Professionals. Dr. Gatto-Weis is an established anatomic pathologist currently serving as an assistant professor in the Department of Pathology at the University of Toledo College of Medicine and Life Sciences in Ohio. She is also affiliated with the University of Toledo Medical Center.

Rick Leone is chief of cardiothoracic surgery at St. Joseph Medical Center in Bellingham, Wash. He and his wife, Kathy, have two daughters, who are 2 and 4 years old.

Nadia Nalimi Ramdin practices oncology at Geisinger Medical Center in Danville, Pa.

Anish Shah specializes in cataract and refractive surgery at Norwich Ophthalmology Group in Connecticut.

1 9 9 5

Darryl A. Hill is an internal medicine physician and medical director with Laurel Medical Associates and Mobile Med Partners and has been named a 2018 "Top Doctor" in Laurel, Md.

1 9 9 7

Michael J. Englesbe is the Cyrenus G. Darling Sr., MD, and Cyrenus G. Darling Jr., MD, Professor of Surgery at the University of Michigan.

1 9 9 8

Sampson Davis published a new book, *The Stuff: Unlock Your Power to Overcome Challenges, Soar, and Succeed*.

Craig Gronczewski is the chair of the Department of Emergency Medicine at Penn Medicine Princeton Medical Center.

1 9 9 9

Nilesh A. Patel is a nationally recognized and fellowship-trained bariatric surgeon who founded Texas Bariatric Specialists.

2 0 0 0

Minerva Covarrubias is a pulmonologist at Parkridge Health System, Chattanooga, Tenn.

Mahalia Desruisseaux is an associate professor of medicine and microbial pathogenesis at Yale School of Medicine.

2 0 0 2

Aaron Grotas specializes in minimally invasive and reconstructive urological procedures, performs gender reassignment surgery, and provides postoperative management of urinary complications of reassignment surgery at the Mount Sinai Center for Transgender Medicine and Surgery. He is also a clinical assistant professor of urology at the Icahn School of Medicine at Mount Sinai, in New York.

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C L A S S NOTES

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2002

Anthony Mackaronis was welcomed by the International Association of HealthCare Professionals as one of “the Leading Physicians of the World.” He is an obstetrician/gynecologist at Delaware County Memorial Hospital in Drexel Hill, Pa.

Anthony Mazzarelli was named co-president of Cooper University Health Care. In the almost two decades he has been at Cooper, he has served as medical director of emergency medicine, vice president of strategic planning, senior vice president of operations, chief medical officer, and most recently, chief physician executive and senior executive vice president.

John J. Wang practices behavioral health and is affiliated with St. Joseph’s Medical Center.

2003

Hector L. Lopez is a partner at the Center for Applied Health Sciences, in Stow, Ohio, and founding partner of Supplement Safety Solutions. He is also founder and managing director of an intellectual property discovery, incubation, development, and tech transfer company. Dr. Lopez is a product developer and consultant to professional athletes from the National Football League, National Basketball Association, Union of European Football Associations, and Major League Baseball.

2004

Komal Pandya is a board-certified dermatologist who practices at GlamDerm—Gramercy Laser and Medical Dermatology in New York.

2005

Molly Cohen-Osher was appointed assistant dean of medical education for instructional design and development at Boston University School of Medicine.

Karen Fritchie was selected as a recipient of the 2018 Pathology Teacher of the Year Award from the Mayo Fellows’ Association. Dr. Fritchie is a consultant in the division of anatomic pathology and a surgical pathology fellowship director. She also serves as co-chair of the Oncology Laboratory Disease-Oriented Group

and is a member of the Bone and Soft Tissue and Surgical Pathology Fellowship Competency Committees. Dr. Fritchie is also an associate professor of laboratory medicine and pathology at the Mayo Clinic College of Medicine and Science.

2006

Mark Burshteyn is the director of interventional oncology at White Plains Hospital in New York.

2007

Cyrus Golsaz is a radiologist at Holy Name Medical Center in Teaneck.

2008

Antonia Chen is an orthopedic arthroplasty surgeon at Brigham and Women’s Hospital at Harvard Medical School. She is also the director of research, orthopedic arthroplasty services, and recently finished her presidency of the Musculoskeletal Infection Society.

2009

Chad Krueger, a board-certified orthopedic surgeon, has joined the Harrington Physician Services orthopedic office in Massachusetts.

2010

Andrew S. Luciano joined the Family Medicine Residency Program at the Western Michigan Homer Stryker MD School of Medicine as an associate professor of family medicine and surgical obstetrics.

2011

Igor Sorokin is an assistant professor at the University of Texas Southwestern Medical Center in Dallas.

2012

Kevin Anton completed fellowship training at Thomas Jefferson University and started a faculty position in vascular and interventional radiology at the University of North Carolina Medical Center.

Ogechi Dike is an assistant professor at the University of Texas Southwestern Medical Center.

Priya Kalyam joined Key-Whitman Eye Center, specializing in cosmetic and reconstructive oculofacial plastic surgery in Dallas.

Shazia Siddique is a gastroenterology fellow at the University of Pennsylvania Medical School. She is also health policy researcher at the Leonard Davis Institute of Health Economics at the University of Pennsylvania.

2013

Madeline Sterling is a T32 Agency for Healthcare Research and Quality fellow at Weill Cornell Medical Center in New York.

2015

Vidya Puthenpura married Vijay Yanamadala on April 7 at the Grove in Cedar Grove. Dr. Puthenpura is a resident in the Department of Pediatrics at Robert Wood Johnson Medical School.

2016

Justin Dubin is a urology resident at the University of Miami.

2018

Vastal Bhatt started his internship year at the University of Pennsylvania in internal medicine. He believes his training at Robert Wood Johnson Medical School helped him easily transition into residency. **M**



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RWJBarnabas Health and Rutgers University launch the state's largest academic health system

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At the center of all of this are the patients who will benefit from increased access to a world-class academic health system, clinical innovation, groundbreaking research and newly developed centers of excellence, as well as more providers that families need to manage their health and wellness.

