



Message from the Dean



JMS is at the dawn of a new and exciting era. In July, after months of preparation, we begin the next phase of our storied existence as a unit of Rutgers, The State University of New Jersey.

While this impending transition will allow us to build on our greatness, it does not negate the more than 40-year history we share with the University of Medicine and Dentistry of New Jersey. Undoubtedly, our relationship with UMDNJ helped NJMS to grow from a school focused mainly on training physicians to one that's a force in the fields of research and health care. It is for this reason that we devote this special issue of Pulse magazine to celebrating UMDNJ's legacy. And what better way to do that than to highlight one of our most treasured contributions to medicine and science: The alumni of NJMS and the Graduate School of Biomedical Sciences at NJMS?

Throughout the years, we've graduated thousands of physicians and scientists who went on to do remarkable things with their careers and for society. On the pages that follow, you will read about some of those graduates who have defied odds, saved lives and who continue to play a vital role in making a difference in the world.

As the sun sets on UMDNJ, we take pride in a past that's rich with accomplishment as we look to a future that's even brighter than our past.

In health,

Robert L. Johnson, MD, FAAP '72

The Sharon and Joseph L. Muscarelle Endowed Dean UMDNJ–New Jersey Medical School

pulse

Dean

UMDNJ-New Jersey Medical School Robert L. Johnson, MD, FAAP '72

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SPECIAL SECTION: CELEBRATE THE LEGACY OF UMDNJ 17 Our Amazing Alumni

To understand the value of an excellent education, look closely at the lives of graduates, young and old, near and far. Here are 15 brilliant clinicians and awesome scientists. The best word to describe their professional lives is: *Wow.*

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Notable

team-based learning, eBeam, a new technology for classrooms or lectures, has been launched. This interactive tool allows instructors and students to create notes over PowerPoint or web pages that can also be recorded and created into podcasts for later viewing. Christine Gerula, MD, associate professor of medicine, says eBeam brings every subject to life and keeps lesson planning fun.

HIV-AIDS PIONEER



James Oleske, MD'71, MPH, FAAP, François-Xavier Bagnoud professor of pediatrics and the first to recognize that the disease was being

transmitted at birth to babies, received a lifetime achievement award from the American Academy of Pediatrics Committee on Pediatric AIDS.

HISTORY-MAKING WOMAN

At Hudson County's 2013 Women's History Month Ceremony, held in March, Nancy Chiaravalloti, PhD, associate professor of physical medicine and rehabilitation, was recognized for her contributions in the fields of science, technology, engineering and mathematics (STEM). She is director of Traumatic Brain Injury Research and Neuropsychology and Neuroscience Research at the Kessler Foundation.

parasite puzzle

To continue her study of parasites that cause malaria, PURNIMA BHANOT, PhD, assistant professor, microbiology and molecular genetics, got the Discovery Award from the U.S. Department of Defense.

GOOD BYE PAPER WORK

EPIC CPOM (Computerized Provider Order Management), a new medical records system at UH, now allows physicians and other providers to enter medical orders electronically. According to James Gonzalez, MPH, FACHE, UH President and CEO (Interim), CPOM provides greater accuracy and increases the commitment to patient safety. He envisions improved communication because it eliminates the need to read

difficult handwriting and gives multiple providers remote access to medical orders simultaneously.

COMPUTER SAVVY

Joel S. Freundlich, PhD, assistant professor of pharmacology and physiology, and a team at Collaborative Drug Discovery in CA have trained computers to sift through drug libraries picking out compounds likely to beat TB with minimal side effects to humans. Their results are in a recent *Journal of*

in a recent Journal of Chemistry & Biology.

ARE KIDS' SHOTS SAFE?

Pauline Thomas, MD, associate professor



of preventive medicine and community health, was quoted in *The Wall Street Journal, USA*

Today, and The Star-Ledger on her work with an expert committee at the Institute of Medicine, which reported that the current schedule of immunizations for children, recommended by the federal government, is safe.



FRESH IS BEST

Hanaa A. Hamdi, PhD, family medicine, introduced the Healthy Living Initiative on April 27 to follow 640 Newark families and help them eat better, exercise more and grow good health habits. Fresh produce from an urban farm cooperative is high on her long to-do list, thanks to two grants, including \$70,000 from the New Jersey Department of Health and Senior Services.

Compassionate Care... Kimberly
Foreman, RN, patient safety analyst, UH
Quality Improvement Department, and
Beth Malpica, ophthalmic photographer,
Ophthalmology Department, received the
Alan M. Pedersen Humanitarian Award,
commemorating the life of the late Alan
M. Pedersen, a UH employee renowned for
compassion and kindness.

Best Paper...Kimberly Song, MD, won the Earl G. Young Resident Research Prize for best paper by a resident or fellow at the 43rd Annual Meeting of the Western Trauma Association. She is the third NJMS surgical resident to win the prize since its inception in 1991.

Perfect... Amariliz Rivera, MD, assistant professor, pediatrics, got a perfect score on her recent NIH grant.

Section compiled by Maryann Brinley, Iveth Mosquera, and Carole Walker

NJMS News by the Numbers



179

Fourth-year NJMS students are matched with residency programs at Stanford, University of Pennsylvania, Harvard, Columbia, Cornell, Vanderbilt University Hospital and more. Of those, 42 are staying in state.

\$10.8 million

The Kessler Foundation receives external research awards of \$10.8 million in 2012 to fund discoveries aimed at improving quality of life for people with disabilities.





1,613

Number of twitterers following Neil Kothari, MD'00, assistant professor of medicine, who shares links and med information.

>\$1.4 million

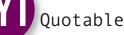
Provided by Susan G. Komen North Jersey Affiliate to the UH Mobile Mammography program and other NJMS breast cancer initiatives since 2005.





\$500,000

Allocated by the New Jersey Health Foundation for funding researchers with promising ideas that may lead to patents or intellectual property in grants ranging from \$10,000 up to \$50,000.



"In the PALM (Patient Activity, Less Medication) room, our slogan is 'Yes, we can!' Our patients are challenging and it takes a team to work with them. Managing medical conditions is not always the challenge...it is the behavioral issues. Whether it's getting a patient to take meds, use the toilet or let us take blood pressure readings, the nursing staff is always collaborating with others on the medical team—the psychiatrists, trauma physicians, nutritionists and everyone—here at University Hospital. It's what we do as nurses."

LAVERN ALLEN, RN, AND CAROL HENRY, CNA

TOP LEFT; LACARLA DONALDSON NEW JERSEY MEDICAL SCHOOL

Special Delivery

During a long stormy night reminiscent of TV's famous *MASH* episodes, a health care team delivered a baby in a state-of-the-art portable hospital set up in a gymnasium. Oh what a night for baby Liam and his parents.

BY MARY ANN LITTELL

s a member of UH's Emergency Medical A Services (EMS) Department for almost 25 years, Wayne Struble has seen his share of human drama. He's aided victims of car accidents, falls, wounds and other traumas. He's attended to heart attacks, diabetic shock and a host of serious illnesses, and helped during floods, storms and other disasters. But operating a mobile field hospital during Superstorm Sandy last October—a hospital that delivered a premature baby at the height of the stormwas definitely one of his most

"It was quite a night," he recalls. "No, we didn't get a large number of patients. But the patients we got really needed us."

memorable experiences.

One of them, Montgomery, NJ, resident Christine Schleppy went into labor at the storm's peak. Her due date was five weeks off but she'd been having mild contractions for days. They grew intense as the day went on. Home with her husband and without power, she called her doctor who said many area hospitals had lost power. Trying not to panic, she was told to dial 9-1-1. That's what ultimately brought her to Wayne



Struble and New Jersey's unique hospital-on-wheels.

Sandy was the type of perfect storm scenario that Struble and his colleagues prepare for every day. He's part of the NJ EMS Task Force, a statewide organization that plans and organizes responses to large-scale disasters and other incidents. The Task Force comprises three regional divisions that are anchored with UMDNJ's Newark campus at

UH-EMS, New Brunswick's Robert

Wood Johnson University
Hospital EMS and south
Jersey's AtlantiCare Health.

Its members represent the full spectrum of EMS throughout the state, including the NJ Department of Health, hospitals, police, and state paramedic and medical transportation associations. They train and drill, some might say obsessively, to minimize their response time. Why? Because practice makes perfect and lives depend on a fast response.

"We knew a giant storm was coming so we began preparing for it several days ahead," says Struble. While of course no one ever hopes for a hurricane, there was some cause for anticipation. A huge storm would require deployment of NJ's new, state-of-

Mobile ERs

The MSED-3 program, a joint venture of the NJ EMS Task Force,
UMDNJ and Hackensack University Medical Center, was grant-funded
through a partnership with the Department of Defense and Homeland Security's
Urban Areas Security Initiative. The mobile ERs are unique high-technology prototypes for advanced emergency medical treatment. Interest in MSEDs peaked following
9/11, when increased federal funding became available for disaster response.

In the aftermath of Hurricane Katrina in August 2005, EMS workers from throughout the U.S. volunteered to help—among them UMDNJ's EMS director, John Grembowiec, and Brian Dolan, director of disaster preparedness at UH. They traveled to Waveland, MI, where they saw first-hand how mobile medical assets could make a huge difference in patient care. A project proposal to acquire Homeland Security and Department of Defense grants to acquire MSEDs supported by the NJ EMS Task Force was successful. It took a few years to design and build the units and get them ready for deployment. The three MSEDs function separately or can also be deployed together and linked up like a giant medical center. The NJ EMS Task Force provides the logistical support for the MSEDs, which are hosted by Hackensack University Medical Center.

A Mother's Worst Nightmare

Expectant mother Christine Schleppy had a feeling this baby, her fourth, might come early. Four days before Superstorm Sandy arrived, she'd gone to the hospital with labor pains. "But they said I wasn't really in labor and sent me home," she says.

When the storm hit, Schleppy phoned her doctor a few times but was advised to sit tight. "It's probably just nerves," her physician said encouragingly. "I was very uncomfortable," she says. "This wasn't my first pregnancy. I knew the signs of labor." Eventually she was advised to call 9-1-1 and to be taken immediately to the hospital in Plainsboro where her physician was now waiting for her.

The ambulance arrived, accompanied by an emergency SUV. The mini-convoy headed out to a main road only to find it was covered with debris. "I was terrified," says Schleppy. "Trees were down everywhere." When the ambulance became stuck in the mud, she was transferred to the SUV, then to another ambulance. But every road they took was blocked by trees and other debris.

"By now my blood pressure was sky-high and I was in tears," she says. The ambulance crew discussed whether to deliver the baby in the Montgomery EMS squad house,

but ruled it out when they found Schleppy was only 34 weeks pregnant. Learning that a mobile hospital had been set up in a nearby church, they headed in that direction.

"We arrived at the church at about 10 pm," she says. "It was enormous. Finally I felt safe. I was so glad to see a physician! Dr. Morchel was wonderful. He took charge, organized the whole team, and told everybody what to do. They did an ultrasound and fortunately the baby's heartbeat was fine. He was born about an hour later—5 pounds, 2 ounces. It was like something out of a movie."



Christine, David, and Liam Schleppy

the-art Mobile Satellite Emergency
Departments (MSEDs)—the hospitals on
wheels that are the pride of UMDNJ and
many other organizations and agencies.
MSED 1 and 2 are comprised of two 43foot tractor trailers that become fully functional 14-bed emergency departments.
MSED 3 was recently added to provide a
trauma operating room suite. While the
MSEDs had a test run at a rock concert,
Superstorm Sandy would be their first real
deployment.

"Remember the TV show *MASH*?" asks Struble. "This unit is just like a *MASH* hospital. It has patient stations, a portable digital X-ray unit, ultrasound equipment, a lab, a pharmacy, beds, showers, bathrooms, toilets, sinks, a kitchen, everything you need—all housed in a 43-foot tractor trailer truck."

During and after Hurricane Irene, residents of Manville and Hillsborough lacked access to hospitals because they were cut off by flood waters. In the days before Sandy hit, the towns asked the EMS Task Force to provide a field hospital for medical emergencies. On October 28, the day before Sandy hit, the unit deployed to St. Mary of the Assumption Byzantine Catholic Church in Hillsborough. The team normally sets up outdoors in trucks and huge tents. But because high winds were predicted, they brought everything into the church's cav-

ernous gymnasium. They established a command post, put up the medical equipment, sectioned off bedrooms for the staff and brought in huge emergency generators to provide power if the electricity failed (and it did). The NJ EMS Task Force team included UMDNJ EMS personnel, a physician, a physician assistant, six nurses, a respiratory therapist and an X-ray technician.

MSED 1 and 2 are comprised of two 43-foot tractor trailers that are set up to become fully functional 14-bed emergency departments.

The next day the storm hit full force, bringing howling wind and torrential rain, but the gym was safe and warm. The church had a well-equipped kitchen and savory aromas filled the air as one team member, a chef, prepared dinner. While the usual fare during a disaster is MREs (Meals Ready to Eat), this team planned ahead, bringing in enough fresh food for two days.

"During dinner we got a call from an ambulance saying they had a woman in labor," says Struble. "We were ready, but they called back and said they'd try to get to a hospital." Shortly before 10 pm, they saw lights flashing in the parking lot. It was the ambulance with the pregnant woman.

The crew told a harrowing story of their struggle to get to a hospital. Enormous trees and downed wires blocked every route they took and the vehicle became mired in mud. At one point they thought they had a clear route to a hospital, but a giant tree impeded their progress. Bringing a second ambulance to the other side of the tree, they hoisted the woman over it and placed her in the second vehicle—only to find that route blocked as well. Eventually, they made their way to the field hospital. The medical team went into action and an hour later a five-pound baby boy was delivered by Hackensack trauma

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A CLOSER LOOK AT SUPERSTORM HEROES



Liver Transplant Drama

In the midst of post-storm chaos, one patient gets a second chance because of remarkable team effort. BY MARYANN BRINLEY

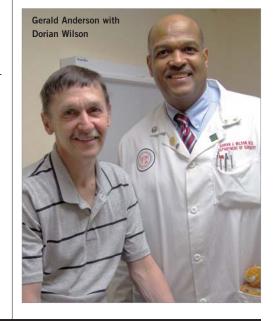
The family of liver transplant patient Gerald Anderson suspects that in Superstorm Sandy there was a "silver lining in that dark cloud." At least that's what his wife, Mary; son, Christian; and sister, Valerie believe. On Thursday, November 1, after a mad-dash week that kept NJMS Professor Baburao Koneru, MD, chief of liver transplant and hepatobiliary surgery at UH, sleeping on his couch one night in the Medical Science Building, Gerald got word to come immediately to the hospital. He had been on the transplant waiting list for nine months because of a tumor in his liver. Their home in South Amboy had been without power for days and Mary was sitting in a line waiting for gas when the call came.

"There was so much to do at home. This was two days after the storm hit. I didn't want to go at first. We had no lights and no electricity and had been sleeping in the basement rec room where it was warmer," Gerald says, laughing now that he honestly considered cleaning his basement before leaving to receive his new liver. "This was about his life," Mary says emphatically. "Thank you, Sandy. I had been nervous, thinking we might get that call during the storm, wondering what I would do."

When her cell phone rang with the news that there was a liver for Gerald, she called aside the policeman keeping the lines of traffic orderly and said, "You aren't going to believe this, but my husband just got the call about his transplant." She wondered whether a police escort to the hospital would be possible but because of the mayhem created by gas shortages, uprooted trees and post-storm upsets, that wasn't going to be possible. "We were an hour late getting to the hospital because of traffic and they kept calling to ask, 'Where are you, Mrs. Anderson?' The last time, we were two minutes away and they told me they were going into surgery and to 'Hurry.'"

Koneru had driven to Morristown Memorial Hospital for the liver retrieval surgery early on Thursday morning while fellow transplant surgeon Dorian Wilson, MD'82, prepped for Gerald's transplant recipient surgery at UH. "Power was up that day," Koneru explains. "And the OR did a great job. We didn't want to miss this opportunity for anything because we were concerned that this patient had a tumor that was going to progress." By 3:30 in the afternoon, Gerald had his new liver and Mary couldn't stop crying and smiling. "It's good to be passionate about your work," says Koneru who admits, "Yes, sometimes I do sleep here in my office."

Seven months after his surgery, Gerald continues to do very well with his recovery right on target. "We are so grateful. The hospital and staff, especially the surgeons, were phenomenal," Mary says.



A CLOSER LOOK AT THEIR STORIES

The Human Touch

To capture the uniqueness of liver transplant patients' lives, Edmund Lee '15, and a team of med students are filming a documentary series, "Their Stories," two- to ten-minute videos exploring the real people behind the illnesses. "We are following patients to let them tell their own stories, to highlight the personal patient. They are not just their illnesses."

Driven by his passion not only for science but also by a curiosity about people, Lee



believes that any illness should be examined as "an inconvenience to everyday life, hobbies, and work," as well as "a stressor rippling out affecting family and friends." Too often, in the busy-ness of med school and life in general, the humanistic side of patient care can get lost.

With funding from the Humanism Center and the Alumni Association, and the enthusiastic support of liver transplant surgeon Dorian Wilson, MD'82, director of the Humanism Center, students Lee and Michael Jung, Akshaar Brahmbhatt, Ryan Chung and William Farver, began filming patient Rosa Colon to show what it is like waiting for a liver transplant. Following her experience in episodic clips of pre-op, post-op and follow-up visits, they also offer health literacy lessons along with her story. "When she tells us that her liver hurts, we can explain why and what is happening in her body. And during her journey, we also witness the caring, humanistic doctors here in Newark." One goal, according to Lee, is to dispel public skepticism that humanism in medicine doesn't exist anymore.

"Humanism is not a dead art," he says.

http://www.youtube.com/user/TheirStoriesHumanism

A CLOSER LOOK AT THE INTERNATIONAL SURGICAL HEALTH INITIATIVE

What Normal Means

Making a dream come true, one surgery at a time, all over the world... with a lot of help from volunteers. BY TIFFANY L. SMITH

Normal is a hospital with doctors, nurses, technicians and staff who provide health care. Normal is having state-of-the-art medical equipment available. Normal is the ability to perform surgery within a reasonable timeframe: weeks for one that is scheduled; hours or minutes for an emergency.

When Ziad Sifri, MD, returns to UH from medical missions with the International Surgical Health Initiative (ISHI)—a humanitarian organization he cofounded in 2009 with UH physician Asha Bale, MD, and photographer Vishnu Hoff—readjusting to being a trauma and critical care surgeon means becoming reacquainted with normal.

In Kabala, Sierra Leone, where Sifri completed a medical mission in November 2012 with ISHI, patients can wait years for the most basic surgery. People live with pain,

disability and some die when services are not available. "This is the unfortunate reality for much of the world. In these countries, normal is not much more than a basic medical history, physical exam and clinical diagnosis. There are no lab orders, no chest Xrays, and no EKGs. There is no medical clearance, no cardiology consult, and there is certainly no diagnostic CT scan. Electricity and oxygen are considered luxuries. Post-op pain is controlled with Tylenol and NSAIDs. ISHI is able to operate safely with limited resources and minimal complications. We have learned to adapt and do more with less. It's a different world we live in," says Sifri, an NJMS associate professor who attended medical school in Canada and speaks English, Arabic and French. "Some patients we treat have never seen a surgeon. Sometimes they walk for days to seek med-



ical attention. It is a humbling and rewarding experience to help these people.

"We live in a very privileged environment. The places we travel to for ISHI have such great need. You appreciate what you have here. It lessens your frustrations, and whenever I return from one of these trips, I realize that what is normal for us is like another world for people who don't have our medical resources. We complain about

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TOP: ANDREW HANENBERG; BOTTOM: VISHNU HOFF

A CLOSER LOOK AT THE INTERNATIONAL SURGICAL HEALTH INITIATIVE

What Normal Means

Continued from page 7

waiting for 20 minutes. These people wait for years to have a surgery. It's hard to adapt to coming back. You have to reset your thinking. And you can feel guilty about the resources we have here."

The World Health Organization estimates that 2 billion people have no access to basic surgical care. Out of the 234 million surgeries performed worldwide, 73.6 percent benefit the world's richest one-third while the world's poorest one-third get only 3.5 percent of those surgeries. "The need is so great that our volunteers feel that what they are doing is just a drop in the bucket, which makes it difficult to leave and come home after a short mission. But to the people we have helped, it is a gift so great that they want to express their gratitude in whatever way they are able," he says. "They give what they can to thank us. Some bring vegetables they've grown. It's truly heartwarming."

In January 2013, ISHI traveled to the Philippines on a mission that marked its tenth trip and the group's third visit there. This last time, they went to Ormoc City in Leyte. "Our volunteers repeatedly say that these missions are extremely gratifying and sometimes life-transforming. They raise funds, write and share their stories, and encourage others to participate," says Sifri. ISHI has completed more than 800 surgeries and treated about 2,000 patients in four countries on three continents.

Cathy Blaskewicz, APN, UH Emergency Department, has volunteered on five missions. "They make me realize how much I have in my life and have provided me with the vehicle to help others with a passion I

ISHI volunteers who went to Kabala, Sierra Leone, last fall include: (left to right, back row) Leah Holt Grange, CRNA, Anastasia Kunac, MD, Ziad Sifri, MD, Vely A. Louis, MD, and Vishnu Hoff, photographer; (front row) Charlie Khoury, photographer/logistics, Zeina Wakim, logistics, Debbie Livingston, artist, David Livingston, MD, Benjamin John Chandler, MD, and Stephanie Buroughs, RN. The team is flanked by some of their African helpers.

FOUNDED IN 2009 BY:

Asha Bale, MD • Ziad Sifri, MD • Vishnu Huff

MEDICAL MISSIONS: 10

2009 Guatemala (Oct)

2010 Haiti (Jan/March/Nov)

2011 Philippines (Feb) • Guatemala (Oct) • Sierra Leone (Dec)

2012 Philippines (Feb) • Sierra Leone (Oct)

2013 Philippines (Jan)

SURGERIES: 804

FUTURE TRIPS: Ghana (Sept 2013) • Sierra Leone (Dec 2013)

ISHI FAST FACTS

thought I lost after 35 years of nursing," she says. Resident surgeons also participate and, according to Leonard Mason, MD, ISHI missions to Haiti after the earthquake and to the Philippines "broadened my horizons by allowing me to work closely with attending physicians."

Preparing for trips is laborious, logistically challenging and requires endless e-mails, telephone calls across time zones, and months of planning. Missions typically last 10 days to two weeks and volunteers work 12-hour days performing nearly 10 surgeries daily. Completing each trip can only be successful because of this intense, selfless team

effort. The group of 70 volunteers—47 affiliated with UH—pay their own expenses, including food and accommodations, and use vacation time. The group even brings its own supplies including monitors, medications, anesthetics and IV fluids.

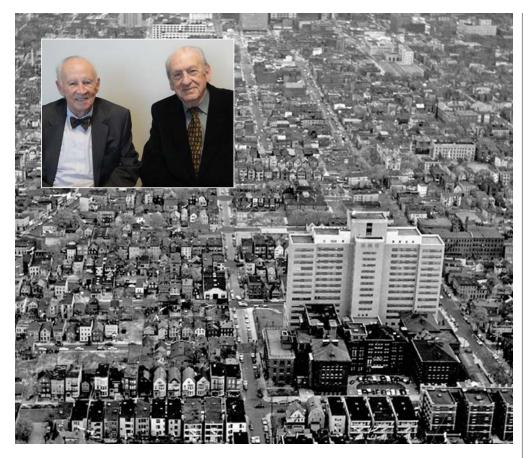
ISHI is completely organized, managed and operated by these unpaid volunteers who are from the medical community as well as journalists and

artists who want to give back to the less fortunate. Since ISHI is a 501(c)(3) non-profit charitable organization in the U.S. and a federally registered charity in Canada, most supplies are donated. In 2012, 99 percent of donations went directly to the surgical missions.

"When I went to medical school, my dream was to use my training to help the neediest," concludes Sifri who completed a general surgery residency at Johns Hopkins University Hospital and a trauma critical care fellowship at UH. "I never imagined that this dream would become an organization. This goes beyond what I imagined."



A CLOSER LOOK AT OUR MEDICAL SCHOOL'S ROOTS



The Good Old Days

Two faculty members with long memories of the early years reminisce about the way we were. **BY TRYON BALDWIN**

Allen Weisse, MD, and Christos Moschos, MD, have been affiliated with UMDNJ–NJMS for a combined 101 years. Over the course of this century, the two have given a great deal to the institution. Moschos donated the statue of Hippocrates that stands in the foyer of the Medical Science Building, and Weisse, the author of eight books on medical history, established the Allen and Laura Weisse, MD'68, annual lecture series on the "History of Medicine."

In anticipation of NJMS becoming one of the seven UMDNJ schools transferred to Rutgers, The State University of New Jersey, on July 1, 2013, *Pulse* magazine asked the

two men—these last surviving members of the original cohort that made up the first NJMS Department of Cardiology—to share their memories. They got together recently in a conference room in the Bergen Building, the former Martland Hospital, to talk about the good old days.

Weisse: New Jersey Medical School started out as the Seton Hall College of Medicine in Jersey City. This was back in the 1950s and it was the first medical school in the state. For years, New Jersey had sent their med students to New York, Boston, all over the country, and it was felt that the state should have its own medical school.

Before there was a Newark campus...
Inset: Allen Weisse, left, and Christos Moschos

There was some dickering about where it would be located and I think Princeton wanted it but the Catholic Church was very keen on having the first school sponsored by the church, so the Archdiocese of Newark established the Seton Hall Medical School in Jersey City.

I came here in 1963. I had finished my training in cardiology and I was looking for a job at an academic institution. I just dropped by to pay my respects to Harper Hellems, who was head of cardiology at the time. We spent an hour or two talking when he said, "Well, here's an application. Anybody from the University of Utah" where I'd done a fellowship, "we'd be very happy to have here."

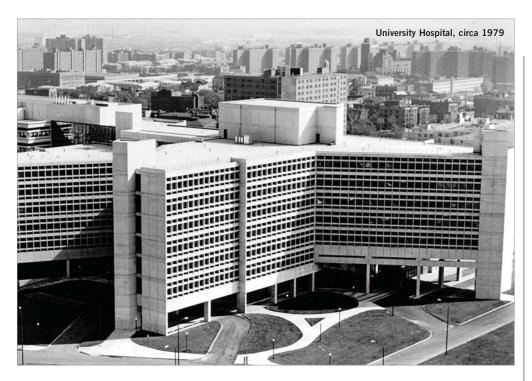
Like many things in life, this happened by accident. I had been considering a job at New York University, and another at Columbia. But when I looked around here, I saw the best place to be.

Moschos: I found a beehive of activity when I got here in 1962. Things were going on continuously, night and day. I could tell right away that this would be an environment to foster research.

I came to this country from Greece after a residency in Vienna, Austria. My first internship was in a small hospital in Baltimore affiliated with Johns Hopkins, and then I was given a fellowship at Boston City Hospital. I had been offered a job at Mt. Sinai and was being recruited to stay in Boston, but then I met Harold Jeghers, the first chairman of Seton Hall Medical College. I knew the fame of this new, young medical school, so when he recruited me, I decided to come.

Weisse: It was a very exciting place to be. Most of our faculty members were supported by grants. This was a time when the government was spending a lot of money on research and we were a real boiling pot of ideas and people doing things. Hellems and

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The Good Old Days

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Tim Regan, who succeeded him as chief of cardiology, were very open. Their attitude toward research was: Whatever you want. Go ahead, we'll do it.

Moschos: Hellems helped me get my first grant from the local cancer society, and after that, I received grants from the National Institutes of Health.

Weisse: Chris here is probably the first person to show that aspirin reduced platelets and could be helpful in coronary thrombosis. He did some of the earliest work on that. I was interested in experimental myocardial infarction and heart disease due to lung disease.

I thought the school was so good that I was always tempted to make up a button—you know, for national meetings—that read, "Beat Harvard." Really, I thought Seton Hall was doing so well that we could stand up against anybody.

Moschos: Yes, we called it the small Harvard, the new small Harvard.

Weisse: Now, it was a Catholic institution, so there was an authoritative, proper cast to everything. Chris and I were just reminiscing about how they actually served formal lunch-

eon in the Jersey City Medical Center, with white linens on the table. We sat around like we were dining at a fancy restaurant.

Moschos: The politicians were very supportive of the school. I thought they were very proud to have it located in Jersey City. It was a first for the state, and the reputation of the young school was quite exemplary.

Weisse: Seriously, though, there were some big developments that occurred early in the school's history that were important. One was the loss of federal training grants. The government turned those off and we lost faculty at that time. It was disheartening. At the same time, the Catholic Church was running out of money and realized that the medical school was an expensive proposition so they sold it to the state in 1965. That saved us because we became state employees.

There was another big development when the medical school was taken over by the state. Thomas Whalen, Mayor of Jersey City then, wanted the state to take over the Jersey City Medical Center, too. But the governor didn't agree and that irked Whalen enough to close all of the patient care facilities available to the medical school. We scrambled. Little by little, we survived. But by 1967 the question was: What's going to happen to this medical school? A committee of deans and

medical educators were determined to build a new school, one that would last for the rest of the century. But where? The Dodge estate in Madison was available and the faculty thought, "Great, a really nice bucolic setting!"

Moschos: Politically, we were being encouraged to relocate to an urban area.

Weisse: So when the Board of Trustees voted, the president announced to us, "I've got good news for you. We're going to Newark." All these beige buildings you see outside here (he stands and points out the window of the 13th floor of the current Bergen Building)—one, two, three, four, five, six—those are all the temporary buildings from back then. Still here.

Moschos: Built to last 20 years. It's been 40 years and they're still there.

Weisse: It turned out to be the right decision. This building used to be Martland Hospital and before that, the Newark City Hospital. We could provide good quality care right here. During the late sixties and seventies, I served in a number of positions. One issue that came up was the number of black students in American medical schools. I was chairman of the medical admissions committee, chief of staff for the hospital, and also president of the faculty. So I was very involved.

Moschos: Al Weisse was extremely forceful. He was always pursuing something. I've known him for 50 years.

Weisse: It wasn't always easy going, but we worked through issues and I'm proud to say that this school has one of the best records of admitting and graduating minority students. Our students always do very well. Wherever we send them...to Harvard, Columbia, anywhere...administrators always say, "Send us more. Your students are hardworking and well-trained." I love the school, really. I was attached to it. I still am.

Moschos: I would say for myself that if I had to do everything over again, I would do it exactly the same...the same environment, the same place, the same people. There's a Chinese saying: May you live in interesting times.

Weisse: We lived in interesting times.

A CLOSER LOOK AT IMMUNITY, INFECTION & INFLAMMATION

Disease Hunters

Scientists are asking, "What if a simple test could detect the world's most contagious diseases? What if the body's own immune system could be harnessed?" BY MARYANN BRINLEY

ore than 200 participants listened to **V** Lleading investigators from around the world who gathered in Newark in March for a symposium to share their findings on how the human immune system controls inflammation and infection. This area of study has expanded dramatically in recent years according to William C. Gause, PhD, NJMS senior associate dean of research.

"It's time to join forces to tackle the development of disease from new perspectives at this intersection of inflammation and infectious disease," Gause explains. The stakes are high: "What if a simple diagnostic test could rapidly detect the world's most contagious diseases? What if the body's own immunological defenses could be harnessed to

Support for the event came from Hoffman-LaRoche, Inc., Valeant Dermatology's Medicis, the NJMS John H. Siegel Lectureship Series and the NJMS Irving Zachary Fund for Medical Education. Gause points out that components of the innate immune response can affect outcomes in a variety of diseases and conditions ranging from pathologic inflammation to metabolic disorders and wound healing.

In January, Gause announced the formation of a new Institute for Infectious and Inflammatory Diseases (I³D)

but praise and raves from those who attended with comments like the one from George Yap, PhD, Department of Medicine: "I was very impressed with the scope of the topics covered and the diversity of the expertise. Ajay Chawla (from the University of California at San Francisco) discussed how the innate immune system is involved in the repair of the injured heart. We also had excellent presentations from Richard Flavell (Yale University) on the role of inflammation in cancer and Laurie

are: David Perlin, PhD, Executive Director of The Public Health Research Institute (PHRI), David Alland, MD, Director of The Center for Emerging Pathogens in the

Division of Infectious Disease and Sally L.

This recent symposium brought nothing

Hodder, MD, vice-chair, research,

Department of Medicine.

Glimcher (Cornell University's new dean) spoke on the ER (endoplasmic reticulum) stress response. I was most excited for our young graduate students who were able to present their work and appreciate the significance of our discipline for the future of biomedicine."

A new Institute for Infectious and Inflammatory Diseases will bring world-class researchers to Newark.

combat disease-causing inflammation without compromising our resistance to disease?"

Sponsored by the NJMS Center for Immunity and Inflammation, 20 lectures by renowned researchers and 48 posters were featured in two days of intense focus and discussion. Topics ranged from a "Genetic Theory of Infectious Diseases" (Jean Laurent Casanova, Rockefeller University) to NJMS's own Luis Ulloa, PhD, and his group who are studying how the parasympathetic nervous system and the vagus nerve can be stimulated using electroacupuncture for therapeutic advantage in many situations including sepsis.

to bring together a group of worldclass dedicated researchers under one roof in Newark to target new approaches to disease detection, treatment, prevention and healing. Partnering with him on this venture





Gifts That Keep On Giving

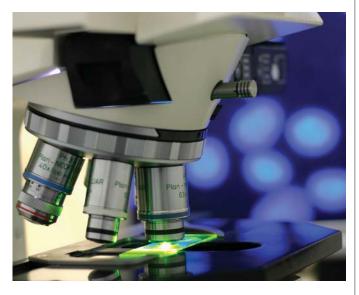
How one special program is helping minority students move forward into the PhD world of science, technology, engineering and mathematics.

BY GENENE W. MORRIS

"In research and education, particularly the sciences, if you look at the representation of minorities, there simply aren't many," says GSBS Assistant Dean Stephen Garrett, PhD, program director of the Sloan Minority PhD Program at the school. The Alfred P. Sloan Foundation has been working to bolster the number of underrepresented minorities earning PhDs in science, technology, engineering and mathematics.

In its 18th year, the Sloan program has supported more than 1,000 students. GSBS at NJMS has partnered with the program for more than 10 years and is one of less than 40 institutions in the nation—and the only one in NJ—to be affiliated. Sloan scholars are given a stipend for travel and

expenses. They are also invited to attend the annual meeting of the Institute on Teaching and Mentoring, which provides networking and professional development opportunities, including career fairs. "Beyond their individual contributions to science, each of these



scientists touches the lives and professional careers of the other students they mentor in ways that are profound and impossible to duplicate," Garrett believes.

Here are just a few of their stories of tenacity, facing down challenges and paying their gifts forward:



HOMER ADAMS

hen Homer Adams III, PhD, was 10, David Robinson of the San Antonio Spurs visited his fifth-grade class at Gates Elementary School in San Antonio, TX, with a challenge: Go to college and receive a \$2,000 scholarship.

"The neighborhood...was notorious for crime and murders," says Adams. To the studious child, Robinson's pledge was a gift from God. "I was raised in the church. I felt like I'd been blessed."

Seven years after that fateful visit, Adams—who was later voted "Most Likely to Succeed" and "Most Intelligent" at Brackenridge High School—was bound for Tuskegee University. Before leaving, he collected an \$8,000 check from the NBA great who had quadrupled that original pledge. Call it fate, coincidence or divine intervention that landed Adams in the only class Robinson chose to sponsor, says Adams, "I was just really thankful."

After earning a Bachelor's from Tuskegee University and a Master's from Washington State University, he came to GSBS, where he worked in the lab of Ian Whitehead, PhD, microbiology and molecular genetics, studying the protein Tiam-1 and its role in how breast cancer cells become metastatic. As a

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"I want to leave an everlasting mark on education," declares **Melissa Baralt, PhD**, who was brought up by immigrant parents from the Dominican Republic.

Sloan scholar, "I presented my work in Hawaii, Italy and England, never imagining I would do and see so much. I had a firstclass experience," says Adams, who earned his PhD in 2010.

As a student at GSBS, Adams also focused on aspiring scientists in Newark. A mentor in SERMS (Summer Experience in Research for Minority Students), Adams helped with science projects and taught kids how to present their work. A trip to Los Angeles for a competition ended happily when "one student won first prize in oral presentation, another won third, and another got first place for poster."

Now back in Texas completing a post-doctoral fellowship at Baylor College of Medicine, "I still keep in contact with them," says Adams. "A lot have gone on to medical school and some want to get PhDs. I told them, 'I didn't get here alone and you won't get where you need to be by yourself. It's important that you give back."

MELISSA BARALT

Months before Bonnie Lustigman, PhD, died in 2007 after a long battle with cancer, she sent her former student, Melissa Baralt, PhD, an e-mail saying how much she believed in her. Baralt, then a doctoral candidate, remembers how this professor and chair of Montclair State University's Department of Biology and Microbiology guided her and fostered the belief that she could be a force in academia.

"I knew she was sick," says Baralt, who earned both a Master's and PhD from MSU jointly with GSBS. "She just said, 'Remember I adore you and think you're going to be great.' She was telling me goodbye. If it weren't for her, I would have never pursued research. She saw something in me that I never did."

Teachers like Lustigman have influenced the kind of educator Baralt aspires to be. "I want to leave an everlasting mark on education," she declares, her every word resonating determination. As Berkeley College's 2012 Faculty of the Year, it appears Baralt, who completed her PhD in May 2009, is on her way to achieving this bodacious goal.

Brought up in Washington Heights in New York City by immigrant parents from the Dominican Republic, Baralt excelled in school. At GSBS, she studied DNA repair mechanisms in the lab of Muriel Lambert, PhD, and was active in student government. Baralt was among the first Sloan scholars at GSBS. Being part of the program allowed her to fit into a place where few people looked like her.

Now a professor in the Math and Science Department at Berkeley College and an adjunct in the Biology Department at MSU, Baralt says, "I'm involved with students, teaching them how to present and how to go on interviews. I hook them up with people who may be doing research of interest to them." For Baralt, it's all about paying forward her good fortune. And she knows that would have made Lustigman proud.





KRISHNA TOBON

B ent on inspiring the next generation of potential PhD candidates, Krishna Tobon, PhD, is starting with her own 3-year-old daughter, Zara-Mia.

"Sometimes I go to the lab on the weekend," Tobon says, recalling a day she brought Zara-Mia along. "We're in my office, having lunch and she asks, 'So, Mommy. How is your day going?' I say, 'I'm having the best day of my life.' Zara-Mia says, 'Yes, Mommy, Mommy doctor; Zara-Mia doctor," Tobon says, teary with pride.

A post-doctoral fellow at Robert Wood Johnson Medical School and Rutgers, Tobon grew up in Englewood and earned her PhD in 2012. While a biology major at William Paterson University, she realized a career in research was within reach. "Dr. Marty Hahn inspired me through his teaching and the research I did in his lab."

During an internship in Colorado, she thought, "Wow, I can be a professor. I can do research. I could think of important health issues in my community and come up with a better understanding of therapies or medications. It was a whole new world."

After college, she worked at Hoffmann–La Roche and then at NJMS as a research teaching specialist for Vanessa Routh, PhD.

A CLOSER LOOK AT OUR SLOAN SCHOLARS

Routh and "the Sloan fellows encouraged me to apply to the (doctoral) program." At GSBS, she won a prestigious PHRMA Foundation Pre-doctoral Award and worked on identifying and characterizing dopamine receptors and their role in cocaine addiction in the lab of Eldo Kuzhikandathil, PhD, pharmacology and physiology. She also mentored students at Newark's Science Park High School.

Now, she splits her time between working in a lab studying sex differences in stress, learning, and neurogenesis, and in a program called INSPIRE, which helps post-docs prepare for teaching and research careers. "I'm learning how to teach; how to become a professor. At the same time, I also reach out to minority populations. I'm living my dream."

TEMITAYO AWOYOMI

A research lab is like a construction zone, says Temitayo Awoyomi, PhD. "We're trying to build something and each person comes with their little piece of brick, or cement or water. Research is a thing of discovery. When you get to work in a lab and you ask a question—if you're lucky—you're the one person in the world who finds that



answer. That's what excites me about science: That initial discovery and sharing it with the world, saying, 'This is what we found and this is my contribution to the big picture.'"

Born in Canada where her father earned his doctorate, Awoyomi moved to Nigeria as a child. At 19, she immigrated to New York to join her mother, a registered nurse, and siblings and to study biology at City University's Lehman College in the Bronx. It was there that she confirmed her passion for research. "I always loved science. The question was, did I want to do medicine or did I want to do research?" At Lehman, Awoyomi became a scholar in an undergraduate program which also supported minority students. She conducted research at Cold Spring Harbor Laboratory on Long Island. "My experience in that lab solidified my decision to go to graduate school."

As a GSBS student, she was thrilled to have a community of Sloan scholars rooting for her. "Knowing there's somebody looking out for you...makes a big difference." In the lab of Patricia Fitzgerald-Bocarsly, PhD, pathology and laboratory medicine, she studied the complex interactions between human plasmacytoid dendritic cells and invading viral pathogens. There, she grew into "an independent thinker. You learn to look at your work and critique yourself even before others do." The end result: "You are the best that you can be."

At GSBS, she served on the Student Senate, the Graduate Student Association (GSA) and volunteered with Big Brothers Big Sisters. Awoyomi, who defended her dissertation in April, hopes the time she spent with younger students helped them to realize, "They can be like me and do what I do, because I'm like them."

OLGA GONZALEZ

F or Olga Gonzalez, the most challenging aspect of being a doctoral student at GSBS was the language barrier. Before moving to NJ in 2009, the Puerto Rico native



In Puerto Rico, all her classes were in Spanish. "I never had a class in English" until becoming a doctoral student at GSBS. "On my first exam, I responded to all the questions in Spanish," says **Olga Gonzalez**, who left barely enough time to translate the answers into English.

attended the University of Puerto Rico, where all her classes were in Spanish. "I never had a class in English. I could understand and read English but I had trouble speaking and writing it," she says, in perfect English now. "So on my first exam, I responded to all the questions in Spanish." Gonzalez translated her responses into English with just 30 minutes left to complete the test. "It was tough," she says, "but I made it."

She credits Assistant Dean Garrett and everyone in the lab of David Lukac, PhD, microbiology and molecular genetics, with helping her break the language barrier. "No one speaks Spanish in my lab. That's why I love it. They push me to speak English and

feel free to correct me. I don't feel offended because that's how I improve." She is writing her thesis on identifying new promoters for gene expression in Kaposi's sarcoma-associated herpes virus (KSHV). "For me, in research you have a new adventure every day. You do an experiment. You get the results. And then you start a new adventure."

This Sloan scholar, whose journey toward a PhD began during a summer GSBS undergraduate program, is assisting first-year GSBS students and summer participants. She also mentors for SMART (Science Medicine And Related Topics), a pre-collegiate enrichment initiative where students are shocked when they learn that she once struggled with English. "They don't believe that I've been here just three years." Gonzalez says, "My goal is to have my own lab, to be a principal investigator and to encourage minorities to pursue PhDs."



JESSIAN MUNOZ-FORTI

This Sloan scholar is a stickler for time, admitting that he is obsessive-compulsive when it comes to managing the hours in his day.

His obsession has allowed Munoz-Forti, an MD/PhD student, to successfully navigate life as a doctoral student at GSBS while serving as treasurer and then president of the GSA; to carry a 17-credit workload in one semester; and to complete the doctoral phase of the MD/PhD program this past spring with a perfect 4.0 average. On track to finish the joint degree in six years, instead of the customary seven or eight, he also finds extra minutes to help others with academics.

These time-management skills come straight from his mother, Jacqueline Forti, DNP. "She is amazing," says the Long Island native. After graduating from nursing school, his mom worked at Northport Veterans Affairs Medical Center. Working full-time, she started her family and earned two master's degrees: one from Stony Brook University; another from New York University. "There's a reason why my siblings are five years apart," he says. "We were all conveniently birthed after finals."

When he was 12, the family moved to Puerto Rico where his mom worked with the San Juan VA and earned a doctorate of nursing practice.

A star pupil, Munoz-Forti attended the University of Puerto Rico studying biology on a full scholarship and spent breaks attending programs like GSBS's Summer Undergraduate Research Program. As a GSBS student, Munoz-Forti worked in the lab of Pranela Rameshwar, PhD, studying the chemo-resistant properties of brain tumors. He won the Dean Morris Schaffer Award in 2012 and the Stanley S. Bergen, Jr., MD, Medal of Excellence in 2013.

As a Sloan scholar, Munoz-Forti is determined to play his part. He worked with interns and has written community service grants for SLAMS (Students Learning About Medicine and Science). Funded by the NJMS Alumni Association, SLAMS runs seminars at area high schools.

After earning his PhD in March, Munoz-Forti is back in medical school and expects to collect his MD in 2015. He sees himself becoming an academician who keeps clinical and lab hours. "My current interest is in pediatric surgery. I want to be on the cutting edge of science."

Special Delivery

Continued from page 5



The hospital on wheels, set up on Long Island after Superstorm Sandy.

physician Herman Morchel, MD'99 (see profile on page 30). The baby needed oxygen and had a few other complications, which were treated by the medical staff. No incubators were on hand, so UH EMTs Dennis Boos and Joe Grassi ingeniously improvised to create one. They took a dishwashing bin, scrubbed it well and filled it with Ziploc bags containing hot water. Wrapping the baby in blankets, they nestled him in the bin on top of the water bags. Once the storm subsided, mother and baby were taken to the hospital. Both did well.

"It was fortunate for this baby that the mother found her way to us," says Morchel. "The delivery might not have gone so well in the back of an ambulance."

The mobile unit left Hillsborough the following day, and over the next month, traveled to other areas, including Union Beach, Jersey City and Brick, where more than 100 people received care. In Long Island, it set up in the parking lot across from Long Beach Medical Center, which sustained such severe flooding that it had completely shut down.

"We helped a lot of people during this storm, and we'll be ready for the next emergency," says Struble.

A CLOSER LOOK AT THE FAMILY PARTNERSHIP NETWORK



Parenting Plus

A new program shows moms and dads how to enjoy their roles.

BY JENNIFER SALVATO DOKTORSKI

It takes a village to raise a child. There's truth and wisdom in that old proverb, and few understand it better than Charles Dixon, coordinator of the new Family Partnership Network and longtime director of the Young Fathers Program, both at NJMS. For more than two decades, Dixon has been working with young parents to help them become better parents, and he knows that partnerships are the key ingredients in making great things happen.

"This concept is not really new. Our mothers and grandparents used this model when baking a cake," Dixon says, referring to the familiar experience of borrowing butter, sugar, or spices from a neighbor. "This can be called partnering in the purist sense...using neighboring resources to complete the task at hand."

Parenting can be like that too. Sometimes

fathers and mothers need to bring others into the mix. That's where the new program, begun last fall as an outgrowth of the Young Fathers, comes in. Instead of cake ingredients, facilitators share expertise.

"I enjoy being a parent and I want other parents to feel that same way," says Kumari Davis, one presenter. Often, she'll begin a workshop by asking who in the room enjoys parenting. "People don't raise their hands."

Everyone involved wants to change that. The seven-week course on the Newark campus, made possible by more than 10 funding partners, offers classes that include: Discipline, Life Balance & Bullying, Conflict Resolution, Effective Parenting, Positive Self-Image, Stress Management, and Budgeting/First-time Home Buying. The course concludes with a graduation where participants are awarded certificates.

Davis explains that the workshop setting gives the 15 to 20 parents who attend weekly classes an opportunity to open up and be honest about their struggles and challenges instead of worrying about being blamed, or ashamed. Once parents start sharing, she says, they often find many others are experiencing the same thing.

"I haven't heard many things that have completely floored me," says Davis, a social

worker, educator, mom, and author of *Real Talk: Ten Parenting Strategies to Raise Confident Successful Children.* She has been working with families since 1994.

Each program facilitator has an area of expertise. Khalif Al-Hadi is a career coach. Emmanuel Ruranga, a clinician supervisor in the NJMS Division of Young Adult and Adolescent Medicine, helps with conflict resolution, stress management, and understanding children developmentally. Shakema Pankey does the self-image training.

"This program is comprehensive in nature, so it addresses the social, emotional, economic, and spiritual needs of families," Dixon says. Parents' questions run the gamut from "How do I deal with a four-year-old who's not listening to me?" to "How do I get my boyfriend to open up?"

It's no surprise that strong bonds develop. During one workshop, Ruranga recalls one woman who revealed how she witnessed the shooting death of her boyfriend and could not let go of her pain. "It's amazing how the group supported her," he says.

Response to the program has been overwhelmingly positive. From hurricanes to snowstorms, Dixon says that whenever there's a hint of bad weather, participants call to make sure the class has not been cancelled. Ruranga adds that graduates have become the biggest advocates, recommending the class to others.

At the end of each session, "These parents feel inspired, motivated, loved, valued, elevated, informed, equipped, strong, and empowered," Dixon explains. "When they walk out, I know they will accomplish anything their hearts desire. We, as a community, have done our job."

This series is made possible by funding and support from PNC Bank, IHOP on Bergen Street in Newark, K-Mart of West Orange, Newark's theaters, North Porch, Tomeka's Beauty, Change Hair Salon, the WIC Program, School of Health Related Professions, the Physical Therapy Department, School of Nursing, New Jersey Dental School, and UMDNJ's Government Relations. In other words, a village.

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OUR AMAZING ALUMNI

UNDI THE LEGACY

To understand the value of an excellent education, look no further than the lives of an institution's graduates. Young and old, near and far, the 6,813 NJMS and 1,479 GSBS at NJMS alumni have gone on to become brilliant clinicians and awesome scientists. The descriptive word for their achievements is: *Wow.*

ONE OF MY FAVORITE QUOTES on the subject of change is: Continuity gives us roots; change gives us branches, letting us stretch and grow and reach new heights. The New Jersey Medical School is certainly well rooted in the neighborhoods it serves, the research community it leads, and the reputation for educational excellence it enjoys. But change is imminent for all of UMDNJ, and as UMDNJ–NJMS becomes Rutgers New Jersey Medical School, it is poised to capitalize on expanded opportunities, even as it preserves a commitment to the same core principles that have guided operations for more than 50 years.

Major happenings this year confirmed NJMS's standing as a premier medical school with an outstanding faculty. Just a few examples. A \$3.5 million grant from the U.S. Health Resources and Services Administration was awarded to Dr. Maria Soto-Greene for the Hispanic Center of Excellence. Thirty-five faculty physicians were named top doctors in the New York metropolitan area by Castle Connolly Medical's annual guidebook. Dr. Jim Oleske received a lifetime achievement award from the American Academy of Pediatrics Committee on Pediatric AIDS. Dr. David Alland developed a rapid tuberculosis test endorsed for worldwide use by the World Health Organization. Dr. Sergei Kotenko of the biochemistry department was given the New Jersey Inventor's Hall of Fame Patent of the Year Award in the biomedical category for his discovery of powerful antivirals.

The amazing alumni of New Jersey Medical School and the Graduate School of Biomedical Sciences at NJMS—more than 8,000 strong—will continue to reinforce this proud tradition in all that they contribute to their communities, their patients and to the body of scientific knowledge. And with great pride, I thank Dean Johnson and the faculty, staff and students for their many accomplishments. We must all keep our eyes on the horizon as we embrace change. This issue of *Pulse* is designed to do just that.

— Denise V. Rodgers, MD, FAAFP • President (Interim) of UMDNJ

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OUR AMAZING ALUMNI

MARK BAGARAZZI

HIS BRAVE NEW VORLD OF VACCINES

Once upon a time, he worked on weapons and defense systems for submarines as an electrical engineer. After re-inventing his career, this physician-scientist now spends his days creating new vaccines and treatments for disease. **BY GREGORY BEAN**

EARLY IN THEIR CAREERS, many young men and women need to make course adjustments. For Mark Bagarazzi, MD'90, that course correction set him sailing into an entirely new hemisphere. Bagarazzi, the chief medical officer at Inovio Pharmaceuticals outside Philadelphia, earned his MD with honors from NJMS in May 1990, but his route to that degree, and an impressive career developing next-generation vaccines and treatments for several diseases, was no straight line.

From 1982 to 1986, Bagarazzi, now 52, was a young, single man with a good job in the defense industry. Born in Palisades Park, the fourth of five children, his father died when he was a senior in high school. Bagarazzi spent his freshman year at Rutgers and then transferred to NJIT with no clear goal in mind. "I was a kid obviously, and I had an aptitude for math and science, but I didn't think much more deeply than that," he says. "I thought that electrical engineering would be a nice career, and I was interested in making sure I could find work after college."

He graduated from NJIT in May 1982, and immediately went to work as an associate engineer with Sperry Systems Management, a national defense contractor, working with inertial navigation systems on Trident submarines. He stayed there until 1984, when he signed on as an associate member of the technical staff at ITT Avionics, another national defense contractor, working with support systems engineering. It was good, exciting work—he spent a lot of time, including one memorable New Year's Eve, aboard submarines as part of his job—but there was still something missing.

"All I remember from childhood was that my father would get sick,



go back to work, get sick again. There wasn't a lot you could do in the '70s," he says, noting that his father suffered several heart attacks and a stroke before he died. "Influenced by some of the people I'd been talking to, and the helplessness of watching my father die, I made the decision to pursue medical school."

Lacking some necessary credits in biology and chemistry, Bagarazzi took night classes at Ramapo College before sitting for the MCATs and being accepted into medical school at NJMS, where he began as a 26-year-old in 1986. His experiences, particularly with children infected with HIV/AIDS, were seminal.

"In my fourth year, I got to work with Dr. Jim Oleske, director of

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the pediatric HIV/AIDS program, who was a pioneer in the field. The virus had only been discovered in '86. Everything was very new. Newark didn't have an international reputation for medicine, but the one area of the school that was getting attention was the AIDS epidemic, which was rampant in Newark at the time," he recalls. "Whether you were doing internal medicine or pediatrics, oftentimes half of your pediatric patients on the wards had AIDS. It was an emotional experience. Things have changed in 25 years, but at the time many people who had AIDS got it through IV drug use, but babies were innocent and getting AIDS through no fault of their own."

Bagarazzi earned his MD in May 1990, and in 1991—along with Oleske, Ed Connor, MD, and others—he coauthored an article that appeared in *JAMA* describing the natural history of *Pneumocystis carinii (jiroveci)* pneumonia in children with AIDS.

"That was my first taste of research, and I really enjoyed it because up to that point there hadn't been a good review of what the disease looks like in babies," he says. "I appreciate the great hands-on experience that UMDNJ offers its students. We were living at one of the epicenters of this new HIV epidemic. Some looked at this as a disadvantage, since HIV and AIDS could dominate a student's clinical experience, but I was motivated by the opportunity to learn more about the disease and live through history. My experience with Dr. Oleske and Dr. Connor definitely started me on a path toward a career in research."

After graduation, Bagarazzi served as a pediatric resident at St. Christopher's Hospital in Philadelphia from 1990 to 1993, and as a pediatric immunology fellow the next year. After completing a fellowship in pediatric infectious diseases at the Children's Hospital of Philadelphia (CHOP) under Paul Offit, MD, he became assistant director of the pediatric HIV/AIDS program in 1997, and director in 2000, serving for a year. It was at CHOP that he met and then did AIDS research with David Weiner, MD, and Joseph Kim, MD, who later went on to

found the company that would become Inovio.

"Once I was on the faculty in the pediatric HIV/AIDS program, I had funding to do basic research, but when my boss and mentor retired suddenly, I became director, and an administrator very early in my career. I didn't really have a taste for that," he admits. "I was approached with a couple of industry jobs, and one of them was Merck Research Laboratories, which had a stellar research reputation, and would give me an opportunity to work on new vaccines."

He was the associate director, Worldwide Regulatory Affairs–Vaccines/Biologics at Merck Research Laboratories from 2001 to 2004. "I worked on their rotavirus vaccine." His former boss, Paul

Offit, is a co-inventor. Every winter, there were always lots of kids in the hospital with rotavirus, and we would see a lot of morbidity from it. I spent five years on that vaccine (RotaTeq[®]), and getting it approved by FDA and globally was a great experience."

Of all his work, he is most proud of his role in that process. "There are only about 15 diseases for which there are effective vaccines, and I played a contributory role in getting one of those 15 out there for use," he says. "It was very rewarding. The vaccine was approved in 2006, my child (Sofia) was born in 2008, and I have pictures of her getting her rotavirus vaccine."

Bagarazzi became Director of Worldwide Regulatory Affairs at Merck in 2004, and remained there until 2009 where he played a key research role in the development and trials of several vaccines, including an HIV/AIDS vaccine that failed, and the shingles vaccine, ZOSTAVAX®, which was approved and is in general use today.

He became Inovio's chief medical officer and senior vice president for Global Clinical Development in 2010. The hands-on leader of a research team of 12, he is working on various Phase 1 and Phase 2 clinical trials for several next-generation vaccines and treatments that use genetically manipulated DNA, a pathogen (e.g. virus, bacteria, parasite) or a tumor antigen (e.g. PSA) either to treat or prevent disease.

As Bagarazzi explains, "When we know the genetic code of the pathogen or tumor antigen, we can manipulate it in a way that we think maximizes its chances of working to treat or prevent the disease. Once the manipulated material is injected, it becomes a target for the body's own immune system (particularly the T-cells) to fight or prevent the disease." This differs significantly from more traditional vaccines which use dead or attenuated strains of the virus to primarily create an antibody response.

Among other projects, his team is focusing on a human papillomavirus (HPV) vaccine/treatment, that is not preventive but can be given to someone who has been exposed or already showing signs of precancerous disease; a universal influenza vaccine effective against all strains of the flu, known and unknown; a malaria vaccine, partially funded by the Gates Foundation; an HIV vaccine, funded by a \$25 million federal contract to speed development; and vaccines designed to improve survival for several different cancers. The trial and approval timelines for the various vaccines vary, and as Bagarazzi says, "There are many hurdles to go," but he is optimistic about their eventual success and approval, especially the vaccine for HPV. Beyond that, he says the possibilities for DNA vaccines and treatments are broad.

Bagarazzi believes that when he left his engineering career and entered the field of medicine, he made the choice for the "opportunity to make a difference in individual lives." By any measure, it seems that he has. He lives with his wife, Deirdre, and 4-year-old daughter, Sofia, in Gulph Mills, PA, a suburb of Philadelphia, but has strong ties to New Jersey. They own a home on the Jersey shore, and spend as much time there as possible. Superstorm Sandy did not damage their home, but many of their neighbors were not so lucky. He and his family look forward to taking part in the rebuilding process.

PAUL BOLANOWSKI

PUTTING PATIENTS FIRST

After 44 years, this big-spirited surgeon is still going strong, performing surgeries and answering middle-of-the-night calls.

BY EVE JACOBS

WHEN PAUL BOLANOWSKI, MD'65, strode proudly to the podium on the evening of April 13th to receive the Charles L. Brown award at the annual reunion, the outpouring of enthusiasm was phenomenal. "An excellent physician, wonderful person, never afraid to speak out and do what is right, dedicated to his patients and students, a good man, supportive to all, a big spirit" were some of the comments from his fellow NJMS alumni and faculty.

Power and humility go hand-in-hand in this man's "big spirit." He recalls his modest roots just two generations back in Poland. A grand-father whose wife and daughter died in the flu epidemic of 1918 worked as a carpenter for the Elizabeth Board of Education after immigrating to the U.S. and managed to pass on to the next generations his deep-seated belief in the value of education.

Bolanowski's father learned the education-lesson well, rising to the top of his high school class, winning a full scholarship to Rutgers University, graduating from Harvard Medical School, and establishing what became a thriving medical practice in Elizabeth. Despite "rarely seeing my father," and his mother's warnings about the too-long hours demanded by the medical profession, the young Bolanowski chose to follow closely in his father's footsteps.

A graduate of Seton Hall Prep and Holy Cross College in Worcester, MA, Bolanowski, associate professor, surgery, entered NJMS in 1961. Why did he choose NJMS? "I got in and I liked living at home," he answers simply. He holds the distinction of being the first NJMS alumnus to go to Yale University as a resident in surgery, but after two years, he left to serve in the army, first at Fort Knox where he trained long-range reconnaissance patrols in anatomy so that they could care for themselves if wounded, followed by a one-year stint in Vietnam, where he was part of the Wound Data and Effectiveness Munitions Team.

In order to staff up the armed services' medical branch in the 1960s, the government established a doctors' draft, called the Berry Plan, offering two options to physicians: Join the service of their choice and get full residency training in a specialty of their own choosing, or take their chances with the selective service draft. He chose option one. The young surgery resident already had a wife and two children at the time he was deployed overseas.

A sports photographer in high school and college, he honed his photography skills in Vietnam, "capturing some shots while hanging out of the door of a chopper."

When Bolanowski came back to the U.S., it was to NJMS that he returned, not Yale. "I was recruited back to Newark by Eric Lazaro,"



he tells. "I knew of his reputation as a great surgeon and he carried on a campaign to get me back here. He is the reason that I'm a surgeon." As a medical student, Bolanowski had a part-time job doing renal transplants for Lazaro's research in the animal lab, evidently demonstrating a flair for surgical work. He also credits William E. Neville, MD, a pioneer in the field of cardiothoracic surgery and professor of surgery and director of cardiothoracic surgery from 1971 to 1989, and Benjamin Rush, MD, (See "In Memoriam," page 43), distinguished professor of surgery and chair of the Department of Surgery at NJMS and UH from 1969 to 1995, with his exceptional training.

In his 44 years at the Newark medical school, Bolanowski has witnessed and participated in many changes, both positive and negative,

In his 44 years at the Newark medical school, Bolanowski has witnessed and participated in many changes, both positive and negative, at UMDNJ and also in the larger arena of medical care and teaching. "When I first came here, there was no pulmonary department to speak of," he remembers. "Our pulmonary patients were individuals with inoperable lung cancer."

at UMDNJ and also in the larger arena of medical care and teaching. "When I first came here, there was no pulmonary department to speak of," he remembers. "Our pulmonary patients were individuals with inoperable lung cancer."

Not so today. With internationally recognized leaders in pulmonary medicine - among them Lee Reichman, MD, who organized the first pulmonary department at NJMS, and Reynard McDonald, MD, who partnered with him to establish a world-renowned TB Center—the Newark campus has been transformed over the years into a worldwide model for tuberculosis care. "We taught each other and learned from each other. We worked well together," he says.

On the "down" side, the surgeon decries a change in values that he has witnessed over the years. "When I started out in medicine, the human being was the prime concern of everyone in health care. We would always do what was best for the patient," he explains. "Now, the almighty dollar comes first. That bothers the hell out of me."

Bolanowski is also concerned about the limits placed on the amount of time that residents can work. "When we were being trained, medicine was 24 hours a day, 7 days a week, 365 days a year. That's what was expected and physicians did it," he states. "Now the residents' time is strictly regulated and the concept of continuous care is disrupted."

"Economic factors driving the health care system have resulted in the formation of group practices with subsequent impact on continuity of care," the surgeon continues. This is another issue that he contends has had major repercussions for patients.

Among his specialties are chest wall reconstructions resulting from trauma and tumors, tracheal reconstruction, thymectomy (removal of the thymus to treat myasthenia gravis), and tuberculosis surgery. "There are only five or six of us left in the U.S. doing TB surgery on a regular basis," he states.

"Recently, we got a call about a young lady from Connecticut who came to this country from the Ukraine. She was working as an au pair, developed pneumonia, was treated but did not get better. A second doctor correctly diagnosed multi-drug resistant TB, which had destroyed the left upper lobe of her lung, and she had some areas on the lower lobe, too," he relates.

Bolanowski stepped up to the plate, even working new technology into his patient care plan. "I first interviewed the young woman on Skype. I wanted to eyeball her general condition before moving ahead on her care," he explains. He also Skyped with her parents in the Ukraine post-operatively, using a translator, to explain the surgery, which included removal of the upper lobe and small portions of the lower lobe of the affected lung. The disease was arrested and the young woman was released from the hospital one week after surgery.

With more than four decades of surgeries behind him, Bolanowski is still passionate about his work, bringing his "big spirit" to ensure the well-being of his patients—and anyone else who happens in his path in the course of an average day.

HUMAIRA CHAUDHRY

SHE ALWAYS ASKS, "WHY?"

This gifted, young radiologist followed the career steps of her two sisters to NJMS. Since then, there has always been one word, a question, that powers her decisions as a physician-researcher and now when she is interviewing applicants to the medical school.

BY LISA JACOBS

FOR HUMAIRA CHAUDHRY, MD'05, assistant professor, radiology, medicine is about the quest for knowledge. The question, "Why?" motivated her decision to pursue radiology and her subsequent sub-specialization in abdominal imaging. It also led her to examine the demographics of the radiology workforce as a researcher. Today, as a member of the NJMS admissions committee, she asks "Why?" to evaluate whether applicants have the right skills and motivations to succeed within a rapidly changing medical landscape.

Chaudhry chose medicine to combine interests in teaching and science. She wanted to be a physician since childhood, and followed the path of her two older sisters, Saira and Fakhra, to NJMS. Originally, she thought her greatest fulfillment would come from forging close interpersonal relationships with patients so she intended to pursue primary care.

What Chaudhry did not suspect as a third-year medical student was the crucial role imaging plays for all physicians, including primary care providers, in making diagnoses and choosing treatments on a daily basis. "On my pediatrics rotation, the most interesting part of the day was reviewing x-rays because oftentimes what eluded the physicians on the physical exam became apparent on the imaging study."

As she proceeded through clinical rotations, she realized she had vastly underestimated the value of radiology. "Imaging plays a crucial

role in diagnosis and treatment of most patients we see today. I believe that most physicians across all specialties would agree that they could not adequately take care of their patients without it." She credits Stephen Baker, MD, chair of radiology, for fostering her interest and mentoring her through medical school.

Her enthusiasm for radiology was contagious and one that she shared with her older sister, Fakhra Chaudhry, MD'03, who is now a radiologist in private practice in Charlotte, NC.

As Chaudhry became more serious about pursuing radiology, she examined the field in a broader sense, contributing research to two projects which examined the demographic inequalities in the radiology workforce. She asked: Why are there more men than women in radiology? Why are so few Indian radiologists in top positions at academic institutions even though Indians are the biggest minority group in radiology in America? The research helped identify some factors contributing to each pattern, but ultimately, Chaudhry says, "We still don't know why." It will take more time and data.

"Medicine is about **diagnostic dilemmas**, and as a radiologist, you get to be the puzzle-master," says Humaira Chaudhry.





As a resident in diagnostic radiology at Mount Sinai, she found many subspecialties "fascinating" but was most interested in abdominal imaging because she believed it to be the field where diagnoses yielded by radiology had the biggest impact on patient care. "Abdominal imaging allows me to help patients in both acute and chronic settings. Oftentimes, the imaging study will lead to treatment and an eventual cure." She pursued a fellowship in abdominal imaging at Duke University Medical Center.

"Medicine is about diagnostic dilemmas, and as a radiologist, you get to be the puzzle-master," Chaudhry says, explaining the rewards of the intellectual aspects of her position. The intellectual challenges inherent in yielding diagnoses via imaging and corroboration with peers were key aspects that attracted her to radiology and she views teaching and learning as integral parts of that experience. She never considered private practice because the intellectual atmosphere of a university is so important to her.

Chaudhry joined the faculty in 2011. In addition to being close to home, she recognized NJMS as a unique environment to gain and dis-

seminate knowledge by contributing to the care of underserved populations. "Because we are the top provider of charity care in New Jersey, I get to see varying pathology from all over the world. The patients we are serving don't otherwise have access to health care and that's rewarding."

As an assistant professor in radiology, she leads the resident abdominal imaging journal club and prepares residents for the gastroenterology section of their oral boards. To give back and maintain contact with the medical school community, Chaudhry also joined the admissions committee in 2012 and interviews applicants. "I screen for certain key qualities: the ability to communicate effectively and to demonstrate compassion, and the willingness to give back to the people around you and the community." These qualities, she believes, will become increasingly important as access to healthcare is expanded.

Chaudhry lives with her husband, Danish Qadri, DMD, a dentist in private practice and a New Jersey Dental School alum, and their 3-year-old daughter, Leila, in Warren. They are expecting their second child in June.

andrew hanenberg new jersey medical school $\, 2 \,$

PAUL DUNMAN

SEARCHING FOR NEW ANTIBIOTICS

This distinguished investigator got his big break when he ran out of money the first year of graduate school. Now, he's on the verge of developing the next generation of antibiotics to fight nasty, drug-resistant infections. **BY TRYON BALDWIN**

"THE LAST SIX MONTHS at UMDNJ were my favorite," says Paul Dunman, PhD, GSBS'99. "Not because I was finishing up, but because by that time I had reached a level where I could walk into my mentor's office and actually propose new experiments that he hadn't considered. We'd reached the point where our work was more like a dialogue."

Dunman, who grew up in Smyrna, DE, the son of a psychologist and a computer technician, didn't always plan on a career in the sciences. In fact, it wasn't until his final semester at Delaware Valley College that the idea occurred to him. "At the very last moment, right before I graduated with my biology degree, I decided, 'Hey, I think I want to try a PhD.' I applied to UMDNJ"—with no other experience except that undergraduate degree—"and they gave me a shot."

GSBS brought Dunman in as a non-matriculated student on the condition that if he did well the first year he would be admitted as a matriculated student which brought with it a stipend, or living allowance. "I understood that decision," Dunman says. "But about



midway through that year I ran out of my savings and thought I was going to have to leave the program. When I told the department what I was up against, they were fantastic. They gave me a chance and made me a matriculated student."

Dunman rotated through a couple of laboratories during that first year. "They were very diverse," he says. "One studied RNA degradation, for instance; another studied bacteriophages. I finally settled on Dr. Zafri Humayun's lab, where the focus was DNA replication and mutagenesis. Dr. Humayun was an outstanding scientist, and I really liked the way he mentored students. Not that the other people didn't do a good job-I just felt a strong personal connection with him."

In Professor Humayun's lab in the Department of Microbiology and Molecular Genetics, now located at the NJMS-Public Health Research Institute, Dunman researched bacterial DNA replication. "If you know how bacteria replicate their DNA," he explains, "then you can develop antibiotics that target that process." He's quick to add, though, that even after he'd joined Humayun's lab, the rest of the GSBS faculty still kept an eye on him. "That was one of the best things about UMDNJ, the faculty just kind of take you into the family. They would help you out with experimental suggestions if you were trying to develop a new technique, or pick you up and dust you off if an experiment didn't work."

After receiving his PhD in 1999, Dunman was awarded a post-doc at Wyeth Pharmaceuticals in their antibiotic drug discovery program. A year and a half later he joined the company as a research scientist, in "basically a faculty position." During this time, the department Dunman was part of developed a new antibiotic, Tigecycline, which can be used to treat drug-resistant bacterial infections, such as *Staphylococcus aureus* and *Acinetobacter baumannii*.

After leaving Wyeth, Dunman started an academic research lab at the University of Nebraska, where he focused on developing antibiotics that would inhibit bacterial RNA degradation. In 2010, he joined the faculty at the University of Rochester Medical Center.

"My entire career is a direct correlation to the work I did at

UMDNJ," he says. "I've known since then that I wanted to develop antibiotics. Bacteria are constantly becoming more and more resistant, and current antibiotics are losing their foothold as a way to treat bacterial infections. I think it's one of our major health care concerns today. The bottom line is that the Infectious Diseases Society of America has identified six bacteria that

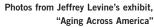
"Bacteria are constantly becoming more and more resistant, and current antibiotics are losing their foothold as a way to treat bacterial infections. I think it's one of our major health care concerns today. The bottom line is that the Infectious Diseases Society of America has identified six bacteria that are arguably the most problematic clinicians face, and the goal of our research is to develop chemicals to kill those organisms," says Dunman.

are arguably the most problematic clinicians face, and the goal of our research is to develop chemicals to kill those organisms. We've got molecules now that are very potent against *Staph. aureus*, or MRSA."

And what might be the estimated time of arrival or ETA for their use in humans? "To be honest with you, that depends on funding. Certainly, I hope that within 10 years we'll be where we need to be for clinical trials."

Dunman dedicates his career to his wife, Christine, and their two daughters, Emma and Morgan. "They've been very understanding and supportive." He still works actively with faculty at UMDNJ. "Currently, I'm collaborating with Dr. Nancy Connell. She's an internationally recognized leader in tuberculosis research, and she was on my thesis committee. Together with researchers at the University of Rochester, my lab recently developed a novel approach to identify compounds that have antimicrobial activity toward *Mycobacterium tuberculosis*. Our joint project involves my lab sending compounds to her lab for formal testing as a first pass toward determining whether they could be used for therapeutic intervention of tuberculosis infections.

"My point," he continues, "is that it's not like you go to graduate school and then never talk to these people again. We've maintained really good relationships, which I think is pretty unique."







CHANGING THE PICTURE OF AGING

Meet a geriatrician who does so much more than care for the frail, sick elderly. His brilliant photography is altering the way medicine and the public view the fastest growing segment of the population.

BY JILL SPOTZ

IF YOU ASK geriatrician and artist Jeffrey Levine, MD'81, for his secret to growing old happy and healthy, this physician points to genetics, lifestyle, mental attitude and luck. And while experts in longevity debate which of these four factors may be most important, Levine has documented his own findings through a camera lens. What his photographs reveal are not what you would imagine of a typical senior.

Take Julius "JT" Freeman for example. Levine photographed JT, who is in his mid-80s, in a hangar at JFK Airport. During World War II, JT was with the Tuskegee Airmen, the first African-American pilots to serve overseas in the Army Air Corp. "This guy is busy," says

Levine. "JT attends meetings, volunteers, speaks at area organizations. He is active, healthy and having a ball. Research shows that social networks are very important in facilitating healthy aging. JT's affiliation with his veterans' organization has led to his success."

What drives Levine to research, photograph and care for elders like JT is his desire to draw attention to this population segment. Seniors are the fastest growing sector in the world, with more than 40.6 million in the U.S. in 2010. By 2050, those over 65 will comprise approximately 20 percent of the American population. These statistics concern Levine who knows first-hand that the current health care system is not prepared to care for this group. "Seniors are one of the largest consumers of health care services. Yet they face an inadequately prepared number of professionally trained geriatricians to handle their complex medical needs."

Levine decided to pursue a career in geriatrics more than 30 years ago for the same reason that he is now a proponent for the elderly. "In my second year of residency at UMDNJ, I was asked health-related questions about my 100-year-old grandmother and 80-year-old uncle with Alzheimer's disease," Levine explains. "I realized that I had been through six years of medical training and knew little about aging. It struck me as fertile ground to pursue." Levine found the closest geriatric fellowship in the area at the time at Mount Sinai Medical Center in New York, where he "made the time to pick up a camera."

With a used Nikon from a local camera store, he began capturing images of patients while working in a nursing home. "I was interested in aging and trying to create a visual encyclopedia from a medical standpoint, showing arthritic hands, skin issues, deformities and general frailty," says Levine. "One day I realized that the frail and sick were not really representative of the overall aging population. So I took my camera outside of the hospital and nursing home setting and the results were eye opening. I changed my focus entirely to healthy aging."

Philanthropic organizations noticed Levine's work which led to

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funding for a two-year, traveling exhibit and educational program titled "Aging Across America" in conjunction with the Global Alliance for Arts & Health and a generous grant from the MetLife Foundation. The exhibit will be featured at six health care facilities and medical schools across the country. Levine accompanies each show with a lecture on healthy aging to promote interest among medical students and caregivers, and to add his perspective on the combination of art and medicine. "Part of the solution to improved care for seniors is a matter of medical student exposure," he explains. "Many medical schools include geriatrics in the curriculum but not until the fourth year after decisions have already been made, thereby eliminating geriatrics completely as a career path." A second important piece of the puzzle is that medical students are often not exposed to healthy aging. "Bringing a student to an unconscious patient is certainly not an exciting reason to

Levine explains that there are only 7,000 geriatricians in the U.S. Not only does this small group of physicians care for a rising number of patients but they also serve as role models for future physicians. This lack of available role models and mentors to shape the career

pursue a career in geriatrics," explains Levine. "However, sending med-

ical students to active senior centers and programs provides a com-

pletely different experience for them."

paths of medical students also contributes to the scarcity of geriatric specialists.

Cultivating dual career paths keeps Levine busy. One week he can be found caring for patients in his faculty practice at Beth Israel Medical Center-Petrie Division in Manhattan where he has an appointment with Albert Einstein College of Medicine as an assistant clinical professor of medicine. Another week can find Levine in his globe-trekking photographer role. Recently, he photographed elderly retirees in Quartzite, AZ. His extensive photo library includes pictures of seniors from Bolivia, Russia, India, Japan and unlikely spots across the U.S. including an infamous weeklong Sturgis, SD, motorcycle rally attended by a half million annually. "Seniors are the most diverse group culturally and physically," he explains. "One 90-year-old can be a marathon runner while another has severe dementia." This diversity is what Levine finds so fascinating. What's more, his thought-provoking photographs of healthy seniors and expert care for those who are frail or sick allow him to see the big picture: that all cultures should consider it a privilege and an honor to be old.

Meanwhile, his photographs have been featured on more than 75 covers including *The Gerontologist, Annals of Internal Medicine* and *Journal of the American Medical Directors Association.*



TIA C. MANNING

SMARTER THAN YOUR AVERAGE DOC

From the age of three, this community-committed pediatrician has remained focused on just how much of a difference she can make.

BY LISA JACOBS

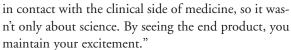
IN 1996, TIA C. MANNING, MD'07, visited NJMS as a high school junior to attend the Science, Medicine, and Related Topics (SMART) program, and never left. Her NJMS enrichment activities continued every year throughout college and later she completed medical school and residency at NJMS before joining the faculty in 2011 as an assistant professor of pediatrics and the assistant director of the Office for Diversity and Community Engagement (ODCE). Her story came full circle in 2012 when she became the director of that very same SMART program.

Inspired by the compassion and dedication of her own pediatrician, Manning first told her mother of her intention to become a physician at age three. She never wavered in that conviction. "Every time I studied for something challenging, I questioned it, but I really couldn't imagine doing anything else," she explains.

Manning believes that her involvement in community service has been a factor that motivated her decision to pursue medicine and helped her maintain that commitment in the face of the rigors of medical school and the demands of her current dual clinical roles as a pediatric emergency room physician and a pediatric hospitalist.

As a college student, a program known as the Students for Medicine and Dentistry (SMDP) offered her exposure to clinical medicine and bench research as well as academic reinforcement of basic science materials and mentorship. "I maintained close contact with NJMS and attended programs for academic enrichment every summer," she recalls. "It absolutely helped academically and kept me





was down, there was always someone with an open door to go to for support when I needed that, or to kick me in the pants when I needed that. That sense of emotional support spreads to the students who become similarly supportive of each other. You learn to get through together."

As a medical student, Manning served on the boards of three student organizations dedicated to expanding access to care to underserved populations and decreasing educational disparities. "Whenever I got bogged

down or frustrated, I would go to an organization's event and think, 'This is why I'm doing this. This is what I want to do.' It allowed me to remember that I couldn't see myself doing anything else and that was why I was studying so hard."

Throughout her residency in pediatrics and subsequent service as administrative chief resident, Manning stayed involved with the Office for Diversity and Community Engagement (ODCE) and served as a clinical preceptor for their undergraduate programs. As she hit the job market, the "perfect storm" of opportunities occurred, allowing her to piece together a job with many components where she combines clinical duties as a pediatric hospitalist and pediatric emergency room physician with administrative and academic duties related to medical student education, the SMART program, the undergraduate pipeline programs and other ODCE initiatives.

This combination of roles "just feels right," and the variety lets her pursue many interests while building a variety of skills. "Inpatient care allows me to maintain my general pediatric skills and to think about patients broadly," she explains. Emergency room work forces her to think fast and act quickly in an environment where she is never sure what kind of cases will come through the door next. It also provides her with an opportunity to educate patients and to teach them preventive medicine, factors she believes will help reduce health care disparities.

The SMART program—which runs winter and summer sessions and will enroll more than 200 students this year—gives Manning a chance to focus on the community. "My goal is to professionalize students and help them build life skills," she says. The SMART program takes students from underserved backgrounds and gets them interested in health-related professions, supporting them as they pursue higher education. "My dream for the program is to see a majority of these students complete their higher educations. I'd like to see them enter allied health fields where they can maintain community interests and help others. It's a process. It will take work, but I'm willing to put in the work and there are a lot of people at NJMS who support it."

When it was time to choose a medical school, Manning says, "I was looking for somewhere that felt like home. Somewhere where I would be supported. Somewhere that groomed physicians who went out into the world and cared for patients and their communities. I wanted somewhere with a focus on community service," she says. And though other medical schools were on her list, "Where I felt most at home was NJMS.

"Medical school is tough," she recalls, "but when I



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HERMAN MORCHEL

THE LONG &WINDING ROAD TO AN MD

A hero in Superstorm Sandy, this emergency medicine doctor let nothing stop his dream of becoming a physician, not even cancer. BY MARY ANN LITTELL LOOK THROUGH THE NJMS '99 yearbook at the studious faces gazing back at you, and focus on medical student Herman Morchel. The caption under his picture could offer any number of descriptors: intelligent, hard-working, innovative. And yes, it could also read: oldest in the class.

"I'm not absolutely positive, but I think I was," says Herman Morchel, MD'99. "Somebody has to be."

Morchel, a board-certified emergency medicine physician at Hackensack University Medical Center, took a circuitous route on the path to becoming a physician. He spent the first 20 years of his career at Nutley tech company ITT Industries (now called ITT Exelis), where he rose steadily through the ranks, designing, developing and producing advanced technology electronics for the government and military. He traveled extensively, authored and presented studies and papers, and designed computer systems long before they came into common use. Along the way, he received two U.S. patents. Then, at the age of 43, he changed direction to pursue his dream of becoming a physician.

Morchel describes his engineering job as "fulfilling and rewarding from Day 1." A striver with a love of learning, he graduated *magna cum laude* from NJIT (then called Newark College of Engineering)

and later earned a Master's in electrical engineering at night from Stevens Institute of Technology. A divorce in the early 1980s left him with time on his hands. "I'd always been interested in medicine, so I decided to volunteer on weekends with the Nutley Rescue Squad," he says. "I was surprised at how much I enjoyed it." The experience spurred a desire to learn more about medicine, "so I took a few courses, and in 1985 I became a certified Emergency Medical Technician."

A few years later, Morchel took the next step up the ladder, training as a paramedic. He received certification in 1988. This led to a per diem job at Hackensack University Medical Center. He did not stop there, next enrolling in an RN program. Studying weekends and nights, he received an associate's degree in 1991.

"So now, I'm an EMT, a paramedic and an RN. What's next?" he asks. "I did some soul-searching. I'm an engineer with a rewarding career—but now I've discovered medicine. I love this work. Do I go to the next level: medical school? If I don't, I'd always be questioning myself."

By now he'd remarried. Over the next few years he and his wife Gail, a nurse at Hackensack, discussed the prospect of his potential career change. Morchel ultimately decided to go forward and took pre-med classes and then the MCATs. He applied to medical school. When he was accepted at NJMS, he left his engineering job on good terms and enrolled.

As a first-year medical student, Morchel was occasionally mistaken for someone's father. "That took some getting used to," he admits. "But I blended in pretty well. I've always looked younger than my age." With the encouragement of Dean of Students Joan Liman, he and a few classmates formed Collateral Circulation, an organization for non-traditional students and their families. There were quite a few, including a personal trainer, a writer for a fashion magazine, and a dentist who wanted to be a physician. "In medicine, 'collateral circulation' refers to additional blood vessels which provide support," says Morchel. "I believe her thinking was that the families provided critically important support to the student and that by meeting we could help each other."

In his fourth year, Morchel was almost derailed, but not by his studies. He was diagnosed with cancer and had to undergo chemotherapy. "I rotated through the VA Hospital in Orange while my hair was falling out," he recalls. Morchel kept going and graduated with his class while continuing his treatment. But it was hard. "After all the work I'd put in, my future as a physician seemed uncertain. With my health issues, it wasn't the right time to begin a rigorous residency, so I returned to my old job at ITT. They gladly welcomed me back."

Morchel finished his chemotherapy and eventually made a full recovery, though it took a few years. He still hoped to finish his medical training. "It was now four years post-graduation and I didn't have a clue how to obtain a residency," he says. He reached out to a former

NJMS professor: Michael Jaker, MD, associate professor of medicine and president of the UH medical staff. "I worship this man," he says only half-jokingly. "He told me, 'Don't worry, I'll figure this out.' Without his help, I never would've gotten back into medicine." Jaker did research, made some calls, arranged for refresher training, and wrote Morchel letters of reference. He landed an emergency medicine residency at Newark-Beth Israel Medical Center.

Morchel began work at Hackensack in 2007 and enjoys being in the ER. "As an employee, I go in and do my job. I don't have to worry about running an office or billing people." He also holds appointments as a clinical assistant professor at NJMS and adjunct clinical professor of biomedical engineering at Stevens Institute of Technology. When he's not working, he and his wife continue the 20-plus-year renovation of their 'older' Nutley home. They do everything themselves, including plumbing, sheet-rocking and electrical work.

In his fourth year, Morchel was almost derailed, but not by his studies. He was diagnosed with cancer and had to undergo chemotherapy.

"I rotated through the VA Hospital in Orange while my hair was falling out," he recalls.

"When we don't know how to do something, we figure it out," he says modestly. He also does all the repair work on his cars. "It's fun," he adds.

Morchel is associated with the NJ EMS Task Force, a statewide organization that plans and organizes responses to large-scale disasters and other incidents. "Because of my engineering background I'm quite involved with both the medical and technical aspects of disaster response vehicles, called MSEDs (Mobile Satellite Emergency Departments)," says Morchel. "They are unique, high-technology prototypes developed with federal government funding." The MSEDs are a joint venture of the State of New Jersey EMS Task Force, UMDNJ and Hackensack University Medical Center (see page 4).

As part of the team that was deployed for Superstorm Sandy—and the only physician on board—Morchel made international news in October when he delivered a baby during the height of the storm. "It was certainly a delivery under unusual conditions," he says. "I've had experience delivering babies in the ER. But there, you have the security of knowing the OB doctors are upstairs."

The baby was premature and might not have had as good an outcome if he was born in the back of an ambulance," he says. "But he's doing fine now. The mom sends us photos. I love that part of my job."

JEFFREY SCHILLER

OPERATING FROM A GLOBAL PERSPECTIVE

A world of expertise separates this eye specialist from the rest of the pack. From fashioning new eyelids out of "spare parts" to traveling the globe saving poor patients from blindness, he is a surgeon who treasures changing lives. **BY EVE JACOBS**

SEEING THE WORLD is still high on Jeffrey Schiller's list of life's bonbons. You would think that after an entire year spent traveling to faraway places, his desire to roam might have waned a bit. Not so. Ten countries in one year—among them Senegal, Burkina Faso, Turkey, China, India, Bangladesh, Thailand, Singapore, and Pakistan—made up his itinerary in those 12 months post-residency. But sightseeing, however enticing, always took a back seat to the steady stream of daily work-demands aboard ORBIS International's "Flying Hospital."

This specially designed and converted DC-10 aircraft is a mobile ophthalmic surgery training center, staffed by highly skilled eye specialists. Flying to far-flung communities primarily in the developing world, ORBIS's airborne medical center, complete with fully equipped operating rooms, lands at each predetermined locale for about three weeks and provides a site for the hands-on teaching of the most up-to-date procedures and knowledge to local doctors and other eye care personnel. In so doing, the Flying Hospital changes the lives of many patients with serious eye conditions, which would otherwise

go untreated, frequently causing total or near-total blindness. "We serve as teachers," Schiller explains.

Eighty percent of the 285 million people worldwide who are visually impaired—246 million with low vision and 39 million who are blind-have conditions that are treatable, or even sometimes avoidable, such as cataracts, glaucoma, and trachoma. Others have tumors, drooping upper eyelids, or fractures to the bones surrounding the eye, caused by trauma, which require sophisticated reconstructive surgery. It was on the surgical side that Schiller worked. "We saw the patients beforehand and made sure they were appropriate for surgery. I was one of several fellows. ORBIS flew in very experienced surgeons to perform, and teach, the actual procedures," he explains.

Schiller, NJMS class of '79, completed his residency in general ophthalmology at the highly respected Institute of Ophthalmologic and Visual Sciences at NJMS, and also a fellowship in oculoplastic surgery in Paris and New York. He describes his superspecialty as "half reconstruction, or fixing faces," which includes repairing droopy eyelids, fashioning new eyelids out of skin following cancer surgery, and rebuilding damaged areas surrounding the eye caused by trauma. "The other half is cosmetic or making people look better," he says. He expresses great pride in his work, and satisfaction in helping his patients regain function and also feel confident when looking at their own faces in the mirror.





His super-specialty includes repairing droopy eyelids, fashioning new eyelids out of skin following cancer surgery, and rebuilding damaged areas surrounding the eye caused by trauma.

Although this highly accomplished surgeon continues to feel the strong pull of worldwide travel, often now as an invited speaker at conferences, he most often sets his sights closer to home, where he has

established active practices in New York and New Jersey. High on his current "bragging rights" list is a brand new procedure of his own invention, which was featured on the cover of the widely read Journal of Plastic and Reconstructive Surgery in April 2012.

The new procedure addresses an ageold problem of creating a seamless surface—from cheek to eye—when surgically repairing damage to the lower eyelid and cheek due to aging. Although prior procedures have been fairly suc-





cessful in addressing this problem, Schiller devised an approach, which has since been used by eye surgeons globally, to do a "mid-face lift," which lifts the cheek, repairs the eyelid, and creates a continuum between the lower eyelid and cheek, assuring the desired result. "It was an honor," he says happily, "to have your own operation featured in a peer reviewed journal."

"And people are ecstatic with the results," he continues. "They are so grateful. It changes their lives."

He also has particular expertise in fashioning eyelids "out of spare parts. It's hard, tricky," he says. "The eyelids have to open and close, look good and look symmetric. That's challenging."

Schiller speaks six languages—English, of course, French, Spanish, Portuguese, Italian and Thai—and when he's not operating or seeing patients, he still loves to travel, talk with people in their native languages and take photos of the people and places he visits. And then he likes to return home, where he "fixes things and patients are happy."

SARAY STANCIC

WINNING THE S S BATTLE

Hippocrates, the father of medicine, who died in 431 B.C. said, "Let food be thy medicine," but it took years for one doctor, an infectious disease specialist, to follow his advice. When she did, something very extraordinary happened. **BY MARYANN BRINLEY**

IN OCTOBER 1995, Saray Stancic, MD'93, was a third-year medical resident on call at Beth Israel Medical Center. The night had been brutally busy. She was exhausted by 2 am and fell into bed in the on-call room. At age 28, Stancic had a career that was about to take off. She had just accepted the job of chief resident for the next year, and while she was focusing on infectious disease, she was considering a gastrointestinal fellowship for after graduation. "I had also just met the man I would eventually marry. I was in love."

The fatigue was overwhelming. "I passed out and my pager went off," she recalls. When she tried to get up, this young, seemingly-healthy doctor was unable to feel anything below her belly button. "It was the strangest thing. I had been a very active person." She called her best friend, who was chief resident. Transferred immediately to UH, she was in excruciating pain then, trying to lie still in an MRI machine for two hours of detailed scanning and "completely in denial. I consider myself a good clinician but the brain is so funny. I had no idea what was going on." Then she heard a physician nearby tell someone to quickly bring in the students and residents because they were looking at a classic case of multiple sclerosis (MS).

"I remember being in bed later, amazed at the fact that I was not a physician there but a patient, an MS patient. It couldn't be real. This was not the way my life was supposed to be." Stancic found herself on multiple medications designed to stop any further flare-ups. MS is a complex, chronic neurological disorder of the central nervous system, generally thought to be inflammatory and autoimmune-based in which the myelin sheathing covering nerve cells breaks down. So many

factors could be involved: The immune response, genetic predisposition and environmental aspects are suspected. Episodes come and go. "The thing about MS is that you can be fine today and not tomorrow." So the goal of most MS drug regimens is to prevent the return of the kind of dire symptoms Stancic had experienced that first time.

"I went right back to work," she says, but the side effects of all the medications were overwhelming...from the steroids which made her "fat, depressed, angry, resentful, scared...yes they come with so many psychiatric manifestations" to the nightly injections of Betaseron which would wake her up at 2 or 3 am with severe flu-like symptoms, and she won't soon forget the hyperactive bladder. She was determined to finish her training, although she did give up that dream of a GI fellowship because it would have entailed doing too many physically demanding procedures. Dragging herself through long clinical days, she was once given a prescription of Provigil by a neurologist to increase her energy. That was a mistake too. "I was doing rounds in the hospital and got tachycardic, with my heart racing as if I were having a heart attack." She ended up in her own ER.

An infectious disease specialist, Stancic was Chief of Infectious Diseases at the Hudson Valley VA and has been an attending physi-



cian at the James J. Peters Medical Center, Bronx Veterans Affairs. She also worked for seven years for Roche Pharmaceuticals in research and development on drugs for hepatitis C, a disease she saw often in her veteran patients. She looks back on those early years of her MS diagnosis and shakes her head, admitting, "It was terrible." Her husband,

Searching for answers, she stumbled upon an article with "blueberries" and "multiple sclerosis" in the title. While the scientist side of her brain wanted to dismiss the piece as flimsy, the desperate patient in her started researching more about diet.

Ralph Pellecchia, MD, an Ob-Gyn in Jersey City—whom she met during his NJMS residency—stood by her from the beginning. A mother of two children, Nicholas and Emily, she says, "Anyone else would have walked away. We had only been dating three months. But Ralph helped me through it all."

Stancic eventually reached a point when the side effects of medications—chills, fevers, pains, injection site reactions, and of course, fatigue—became unbearable. "Maybe I have some genetic predisposition but I don't do drugs well." An alarming reaction to a steroid injection once caused months of vomiting and weight loss from undiagnosed steroid-induced hepatitis, which required two liver biopsies and weeks of hospitalization.

Searching for answers to her situation, she stumbled upon an article with the words "blueberries" and "multiple sclerosis" in the title. And while the scientist side of her brain wanted to dismiss the piece as flimsy, the desperate patient in her started reading and researching more about diet. At a Whole Foods Market, she remembers buying blueberries, rinsing them right there in the store's ladies' room and eating them in her car. "Could these berries help me?" she wondered. She also began digging deeper into the role of diet and MS, a passion that has taken center stage in her practice of medicine.

"I quickly learned that this unassuming berry is amazingly rich in micronutrients called phytonutrients, particularly anthocyanin, a flavonoid that not only gives the berry its bluish hue but has been linked to improved brain activity in the setting of neurogenerative disease," she explains. But it's not just blueberries. Stancic believes that there is "mounting evidence that a diet rich in colorful fruits and vegetables and their rich stores of phytonutrients play a role in preventing chronic illness, particularly cardiovascular disease and quite possibly malignancies." She adds legumes, nuts, seeds and whole grains to her list of must-haves for well-being now. Recent studies about the impact of diet on disease back up her investigations. One of the most rigorous studies made news headlines last February heralding the benefits of a Mediterranean diet with olive oil, nuts, beans, fish, fruits, and vegetables which showed a 30 percent reduced risk of heart

attacks, strokes and death from heart disease.

A month after she delivered her daughter in 2003, Stancic decided to come off her traditional MS medications. "I haven't been disease-free but I feel stronger and more energized. I manage any pain or numbness using other therapies. I used to pop pills like candy." She recognizes and pays attention to the triggers that might set off an episode—stress, heat, not eating right and not exercising. "Making sure that you are doing something that you love is also important."

In 2009, at her brother's suggestion, she also began running in the nature preserve across the street from her home and eventually worked herself up to completing the New Jersey marathon in May 2010. "It was 90 degrees that day, which is like kryptonite for someone with MS. But I finished. I used to use a cane and could hardly feel my feet from the neuropathy. I would fall all the time. Little by little, I ran further and further."

Stancic believes that any disease state should be managed not just with traditional medicine but also with complementary approaches. Yet, she is cautious. "I'm not suggesting for a moment that food ought to substitute for conventional medical care." In her practice, she refuses to "just give drugs." At the Hudson Valley VA, she was known for insisting her patients take daily walks with her at lunch. She saw patients who had hepatitis but also diabetes, hypertension and depression. "You have to address every part of your health and not just when something bad has happened."

Born in Cuba and raised until third grade in the Ironbound section of Newark, Stancic graduated from Rutgers-Newark before attending NJMS. "Newark runs through my blood. I was married in the Cathedral." Fluent in Spanish, she'd like to return to her roots to practice in a community experiencing "explosive amounts of cardiovascular disease. I don't think people know how to eat properly or how every decision you make plays out later. Sugar, salt, fat…we are poisoned and addicted to these foods."

Stancic recalls getting ready to study for exams when she was in med school by buying 12 packs of diet Coke. "I would lock myself in for a weekend with nothing else but chips, drinking and eating garbage for days." Now, she wonders how much better she might have done if she had been eating healthy and studying with a clearer head, one free of junk food.

What she has learned the hard way is that there are millions of chemicals within a blueberry all working together like a symphony. You can't take one little micronutrient out of a fruit or vegetable and put it into prescription pill form, hoping for a cure for MS or any other disease. This has been illustrated clearly in several clinical trials. "There is something about the whole food. And I just know undoubtedly that altering my lifestyle to consume whole nutritive foods has been my personal salvation."

It's been more than 17 years since her diagnosis with MS. At least one doctor predicted she would be in a wheelchair by now, but she says, "Here I stand, still living with multiple sclerosis, in control of myself, my disease, and my future."

B.J. WAGNER

FALL IN LOVE WITH YOUR WITH YOUR

The very first official post-doc looks back on a 40-year career filled with happy memories. **BY MARYANN BRINLEY**

"I REMEMBER THE FIRST TIME I drove down South Orange Avenue for an interview. The building we are in now wasn't here," recalls B. J. Wagner, PhD, GSBS associate dean and NJMS professor, biochemistry and molecular biology. That was in 1973 and she is still smiling after all these years. In spite of never-ending days in her 70-hour work week; nearly retiring after three decades of intense, productive, National Institutes of Health-funded research in her own lab; and the joys, trials and tribulations of teaching while keeping track of 500 graduate students, she lights up and says without a doubt, "I love my work. Every student who gets a degree from the graduate school has to talk to me, if only once."

In her corner office of the Medical Science Building with a view that includes the Statue of Liberty, Wagner looks back, "I was the very first post-doc to officially hold that title at the medical school." A microbiology PhD graduate from Cornell University, she arrived for work in the lab of Joseph Fu, PhD, who quickly realized that there was no formal classification for a post-doctoral position at what was then the College of Medicine and Dentistry of New Jersey. He asked her to be patient while he worked out the details. "So I started on April Fool's Day and worked for six months without getting paid," she says, laughing about how this admission might appear in today's business world and get her into trouble in feminist circles. "I was a product of the sixties and I was doing research. I didn't care about the money then and later trusted the school to be fair."

Modest to a fault, Wagner credits the mentoring of other female faculty for jump-starting her successful research career in the NJMS Institute for Ophthalmology and Visual Sciences, once called the Eye Institute. "I had been working on the eye and not really thinking of what I was going to do next." One of the women in the same research area who attended the same meetings said, "It's time for you to write your own grant." So she did: "Proteolytic Enzymes and Cataractogenesis" which was funded by the NIH on January 1, 1978 with the kind of federal support that just kept coming year after year. She makes it sound easy. "I kept that same grant, same title for 28 years."

Her calm explanation for never once losing in the big game stakes of NIH funding is so understated that only a full-on reading of her 19 page CV can put this little statement into the real context of a lifetime of hard work and superb success. Page after page of honors and accolades, Distinguished Career Awards, Exceptional Merit Awards, publications in major scientific journals, chair positions on numerous committees, memberships in professional societies, lectures, courses organized and taught, students from all over the world mentored and launched into successful careers...are all there in black and white to illustrate the real B.J. Wagner.

For many years, her research focused on an enzyme called the proteosome, which is located in every cell, not just in the eye. If cells are out of balance, in cancer for instance, this enzyme is more sensitive. "In a laboratory situation, we demonstrated that inhibiting proteosome prevents the growth of cells left behind after cataract surgery. This could be important," she explains, "especially in children where invariably there are cells still there after cataract surgery which can cause complications."

Having always thought of herself as a basic researcher, it took an MD-PhD student to send her lab into more clinically-focused directions. "I used to think, 'I don't do clinical research." She had also been resistant to including any students, preferring post-docs. "A colleague talked me into putting students on grants and look what happened: They are so great. One of them changed the entire direction of my lab." By the time she closed the door on her research in 2007, "We were doing work that was still basic but more relevant to patients, very satisfying, and possibly useful in the future."

Wagner, who has always used her first initials not to hide her gender but because she preferred them to Betty Jean, was on her way into retirement in 2007 when she got a call from the graduate school, which needed someone to share administrative responsibilities. "It turns out that I love this. I get to do what I've always wanted to do: Give people advice. This is the best part of the job. To see a problem and think: I know how to solve that problem." The proud mother of one son, age 36, she remembers trying to give him advice when he was younger and how he would resist her suggestions as a typical boy. "Now, in my job, students ask for my opinion all the time. I give it and can see them thinking through a problem and saying, 'Oh yeah, I can do that.' This is the best. I think of all of them as my adult children."

One of Wagner's responsibilities is to conduct exit interviews for





every graduating GSBS-Newark student. "I ask them: 'What were the problems? Big ones? Little ones?' We want to know." Her joy comes from the fact that problems are scarce and that almost every student sings the praises of the professors who come from both the medical as well as the dental school. "These students get such exceptional training," she explains. "I'm not doing research any more but I am on students' research committees which I really enjoy."

She teaches in both the medical as well as the graduate school and is the course coordinator for the popular "Genes and Molecules in Medicine" taught by 30 different professors. Unlike medical school courses, this is not limited to a specific number of graduate students. She's also a facilitator in the NJMS physician's core course on doctoring skills where she covers everything from how to conduct a medical interview to how to break bad news to a patient.

The other day, Wagner was running a program about the graduate school for new faculty members. Her plan was to explain how the

school is organized and how they might contribute or benefit when she looked out at the sea of new, younger faces and became emotional. "Really, from my heart," she told them, "I remember starting here as a faculty member and it has been a wonderful experience. You will be happy here. I've been here for my entire career and I know for a fact that there is every opportunity for a great career right here."

Behind her the skyline of Newark and New York City are in the distance and she volunteers the binoculars she always shares with students waiting to be interviewed. She will never forget the summer of 1976 when the MSB was brand new. Pregnant at the time, she spent so many hot days trooping past the construction on the way to the library across the street to do research. Her son was born in July. "I realized recently that I still see this building the way I did back then." Like the handsome husband you fall in love with and still see in the same light in spite of age, the wear and tear of age are colored by happy memories.

ANDREW HANENBERG NEW JERSEY MEDICAL SCHOOL

BRENDA NATAL

DREAMS COME FULL CIRCLE

How a TV journalist's scholarship offer changed a little girl's life. Now the new director of the simulation program, she has big plans for changing health care education. **BY MARY ANN LITTELL**

"I WAS AN EIGHTH GRADER in East Harlem when Geraldo Rivera came into my life," says Brenda Natal, MD'07. Yes, she's referring to the famous journalist and television talk show host. He spoke to her class at Rafael Cordero Middle School, promising the students that if they wanted to attend college he would pay all expenses. "I had never even heard of this man!" she exclaims. "And here he was, making a promise that would change my life."

Rivera was involved in an 'Adopt a School' program for inner-city schools and had started a foundation dedicated to equal opportunity education. Being a native of East Harlem, he returned to his old neighborhood to 'pay it forward.' "He said he'd mentor us, get us tutoring, whatever we needed to succeed," Natal says. And succeed she did. Natal went to college and medical school, all on Rivera's tab. She returned to the Newark Campus in October 2012 to become part of the Department of Emergency Medicine and director of the simulation program at NJMS.

The dual appointments keep this mother of two quite busy. She puts in six to seven 12-hour shifts in the Emergency Department each month. The rest of the time, she's working hard to develop a state-of-the-art simulation program at NJMS. "Right now I'm very involved in both teaching and health care," she says. When asked what she likes best, she says, "I feel myself heading a bit more in the education direction, but I'll never give up my patient care."

Natal was one of a handful of students who took Rivera up on his offer of a college education. "I can only guess why there were so few," says Natal. "Some had to go to work; others may not have understood the value of what he was offering." But she did. She started off at

Hunter College with a plan of becoming a nurse. When she learned there was a three-year waiting list to get into the nursing program, she transferred to Long Island University.

Natal became an LPN after her first year of nursing school and immediately went to work at St. Vincent's Hospital in New York City while continuing her BSN studies. She worked part-time in outpatient oncology. "When I got my bachelor's degree in nursing in 1998, St. Vincent's hired me full-time," she says. "By now, I was thinking about going further—to medical school."

When asked if she was an outstanding student, she laughs. "That's

not exactly how I'd describe myself. I'd say I was an above average student with some outstanding skills in certain areas. I did well academically, but when I had the chance to work with patients, that's where I excelled."

Natal worked as a nurse for 10 years, taking two years of undergraduate pre-med courses and preparing for the MCATs and doing some graduate work. She was accepted at NJMS in her seventh year of nursing. She had just married Carlos Meletiche, MD, an emergency medicine physician at New York City's Metropolitan Hospital. They met in her last year of nursing school, when she took an elective at Metropolitan, a busy community hospital in her old neighborhood, East Harlem.

"He was second in charge there and I was a nursing student," she says, but adds that they didn't date until later. "It wasn't love at first sight. In fact, initially I didn't really like him," she laughs, "but he quickly won me over." The two haven't always seen eye-to-eye about their chosen field. "Although we have different ways of doing things, I've learned a lot from him. He's truly an amazing doctor and a great mentor."

They were married just before Natal was to start at NJMS. Before the wedding she called to say she would miss her first two days of orientation because she'd be on her honeymoon. Somehow the message didn't get to the right person. "I returned home to tons of messages from the school on my answering machine. My mother was frantic. I was so afraid I might lose my spot." A meeting with George Heinrich, MD, associate dean of admissions, smoothed things over. "I told him, 'This is NOT an indication of a lack of interest.' He still teases me about it."

Though Rivera's commitment to Natal officially ended the day she got her BSN, he paid for her medical school education as well. "I didn't expect that to happen," she says. "He doesn't get enough recognition for his philanthropy." Her son, now 7, was born during her third year of medical school. Geraldo Rivera attended Natal's graduation from medical school. In thanks, she



and her husband created a \$2,000 annual scholarship at NJMS in the television star's name.

Following her graduation, Natal did an emergency medicine residency and completed a Master's in Public Health at King's County/SUNY Downstate. Her second child, a daughter, was born during her second year of residency. Natal became interested in simulation as a resident. "I'd been exposed to it as a nursing student. Even on a very low-tech level it had real value as an educational tool." Once her residency was completed she hoped to stay on at Kings County as a simulation fellow. They didn't have a fellowship program so she designed



one herself. Currently, Natal is a fellow in the 2012-2013 class of the Clinical Quality Fellowship Program (CQFP), sponsored by the Greater New York Hospital Association (GNYHA) and the United Hospital Fund (UHF). In this fellowship, she is learning key skills needed to lead quality improvement and patient safety initiatives. She believes this fellowship is a natural compliment to her medical simulation training.

Simulation, a new trend in medical education, is a teaching process that substitutes real patient encounters with artificial models, live actors, or virtual reality. "There are simulators that look and respond like humans," states the physician. "They can be programmed to breathe and have a heartbeat, or not. Then you have what they refer to as task-trainers. These are typically used for specialized procedural training: for example, the TraumaMan System, a torso model, used to teach important procedures in trauma care." The use of simulation can be as simple as using an orange to practice giving an injection, or as complex as learning intubation on a high-tech manikin or teaching teamwork and communication to an interdisciplinary group.

Natal explains that simulation is an effective teaching model for all health care students, not just those learning to be physicians. It aligns with a different approach to health care education—one that is integrative, cooperative and comprehensive. Some examples of this already exist elsewhere, like systems-based education. She says, "For example, in this model, when students learn about the heart, they're learning about it as a system, the cardiovascular system: the anatomy, physiology, pathology and pharmacology, among others." In her opinion, "This is a more effective model for medical education and one that lends itself to the true integration of simulation as a teaching tool.

"I support systems-based learning," she says. "Some here agree with it, some don't. We are exploring this and other ways of changing the curriculum." Leading the effort is the office of education, headed by NJMS Vice Dean Maria Soto-Greene, MD.

"My goal is to build a program here to facilitate instruction using all aspects of simulation," she says. Currently two rooms in the ADMC (Administrative Complex) on the Newark campus are being redesigned for a manikin-based simulation program. Others are being used as procedure training rooms, using task trainers. She is looking to expand the program and move it closer to the students, possibly to the Medical Science Building.

She envisions a sim center that is accessible and truly comprehensive, and one where medical students, residents, practicing physicians and other health care providers can train individually, and as part of a team. "Establishing this program will require a considerable investment," she says, adding that she's currently writing a project proposal and plans to apply for funding.

"It will take a lot of work here to launch a simulation program, but it's well worth it," she says. "Pilots must take simulation training before flying an airplane. You wouldn't want to fly with a pilot who did not have that simulation experience. Similarly, you'd want your physician to have that same quality of training."

ANDREW HANENBERG NEW JERSEY MEDICAL SCHOOL

FATEMAH MAMDANI = DAN MATASSA AMANDA GANZA = COLLIN CREANGE

WHAT IS EMPATHY? WHY CARE?

Since 2004, the Humanism Center has been training physicians to ask and answer these questions. **BY EVE JACOBS**

A YOUNG WOMAN with lymphoma who speaks no English—and understands just a little—lies alone in a bed in a busy urban hospital. As doctors, nurses, residents, interns, students, staff, therapists and other workers move purposefully past her door, sometimes stopping in for a moment, the patient's anxiety and confusion rise. Despite family visits, she feels alone and scared.

Into this room walks another young woman. She introduces herself as a third-year medical student, but quickly realizes that they have no language in common. The student speaks only a few words of Spanish; the patient speaks only Spanish. Despite this barrier, the student

DAN MATASSA was not your "ordinary" 16-year-old. His strongest memories of that time of life involve the insides of an ambulance with sirens screaming through trafficked streets. "Being a volunteer EMT and caring for people drove me to medicine," he says. NJMS was at the top of his list—the fit between the humanism program and his commitment to community volunteer work was perfect. As a humanism scholar, he participated in "All E.A.R.S."—a program that matches medical student-visitors with patients who are terminally ill, lonely, and facing long hospitalizations. Matassa calls the experience "eye-opening." Internal medicine "felt right" to him. The opportunity to develop long-term relationships with patients and their families, treat multiple conditions at one time, thereby impacting a patient's overall outlook, and teach patients all appeal to him. Inspired by Lisa Dever, MD, He would like to develop expertise in TB and immigrant health.



carves out an hour from her frantic schedule—every morning for a month—to sit with the patient, hold her hand and keep her company. (This is not among the many requirements imposed by the demanding third-year curriculum.) Despite their inability to converse, the student knows that the woman feels better because of the visits; they have connected and even communicated in nonverbal ways. On the last day of her month-long rotation in internal medicine, the medical student is rewarded with a big hug from the patient, who also takes out her cell phone to show pictures of her baby. This experience, says the student, was among the most memorable of medical school.

There is no doubt that the relationship between doctor and patient—based on trust, communication and an emotional connection—has eroded in our technical, fast-paced, cost-driven health care world. When the humanistic elements of medicine diminish, both sides lose. Not only do patients feel "dehumanized" but doctors feel cheated of a primary motivation for entering the profession.

That's where the humanism in medicine program comes in: to re-introduce "patient-centered care," rather than case- or disease-centered care, to new physicians. In 2004, the Healthcare Foundation Center for Humanism and Medicine at NJMS was founded with a \$3.2 million gift from the Healthcare Foundation of New Jersey.

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Funding was set aside to provide "humanism scholars" from every class starting in 2008 a four-year scholarship for 60 percent of tuition. Dorian Wilson, MD'82, director of the center, and George Heinrich, MD'72, associate dean, Admissions and Special Programs, hand-pick the scholars, looking for special qualities, among them a history of community service, empathy, and leadership skills.

Fatemah Mamdani, MD'13 is the student who devoted many hours to helping the UH patient feel less isolated. Following graduation, she will begin a residency in anesthesiology, a specialty she hopes to infuse with more humanistic qualities. After earning a degree in chemistry from Bryn Mawr, she was headed into a research career. After a year in a lab at Weill-Cornell Medical Center, Mamdani entered a PhD program in pharmacology and molecular sciences at Johns Hopkins, but found lab life unfulfilling. "I missed having a direct impact on people," she states, so she left the program with a Master's.

Her subsequent venture, a Master's of Public Health at Johns Hopkins, was "life-changing," Mamdani says. She met students from around the world and started thinking about the unmet health needs of people. "I decided medical school would bring together all of my interests."

The humanism program drew Mamdani to NJMS: "It was the only medical school in this region that even mentioned humanism," she explains. "The program asks questions such as, 'How can we care for people better?' and 'What is empathy?'" These were the same questions she was wrestling with at the time.

Being chosen as a humanism scholar does not just mean a tuition break. Membership is a two-way street: scholars are expected to complete their own projects and to infuse humanism into all they do.

AMANDA GANZA unofficially began her medical career at age 18 when she self-diagnosed a pulmonary embolism not long after being told she had a medical condition called Factor V Leiden. "That made me passionate about medicine," she says. "I researched my condition and recognized what was going on. Patients need to be well-educated." When applying to medical schools, NJMS drew her like a magnet: "I wanted a lot of patient interaction and to serve the underserved." As a participant in the All E.A.R.S. program, she has powerful memories of spending an hour or two each day with a terminally ill 45year-old patient and also forming a close bond with his mother. Ganza's unanticipated love of the operating room and her satisfaction from talking with patients are leading her into OB/GYN. Her research proposal with OB/GYN faculty member Lisa Pompeo, MD, looks at the effect of OB/GYN residents' domestic violence experiences on caring for women who are going through the same. Among her best NJMS memories are: serving on the NJMS student council; singing with UMDNJ's Vocal Chords; and being the all-around coordinator for a performance of the Vagina Monologues at the medical school on February 13. She's excited about "matching" at St. Luke's-Roosevelt in New York City.

COLLIN CREANGE is an avid reader, athlete and cook with book choices ranging from economics to science fiction to military history. You might find him exploring the outdoors or tending a garden behind his apartment where he cultivates ingredients for salsa. He's a humanism scholar because he feels strongly about community service. Two years post-Katrina, he spent a memorable spring break helping in New Orleans. His two primary role models at NJMS—Eric Lazar, MD, pediatric surgeon at Morristown Memorial, and Dorian Wilson, MD'82—have shown him how to combine a demanding career with "a life" outside medicine. There is a stereotype of surgeons as not compassionate, which he feels is wrong: "Just meet Drs. Lazar and Wilson." Into his busy schedule, he fit historical research with surgeon Kenneth Swan, MD, which he hopes to publish soon. Creange teamedup with Chantal Brazeau, MD, interim chair of family medicine, to start "reflection sessions" in the student volunteer clinic. "Third- and fourth-year students lead student discussions on various topics." It was also his idea to have first-year students write letters to themselves about their expectations and then read those letters four years later, which was adopted for this year's incoming class. He matched into NYU's general surgery residency.

Mamdani participated in a health literacy fellowship in New York City Mayor Michael Bloomberg's office, designed to help medical students communicate better with patients. She taught English and health literacy to immigrants, helping them navigate supermarkets, distinguish healthy foods and comprehend food labels.

Later she participated in PINACLE (Partnership in Newark Advocating Community Leaders' Empowerment). Being "research-oriented," she assessed how effective the medical-student group was in teaching community leaders how to teach community residents about their health. These projects were in addition to her anesthesia research with Sheldon Goldstein, MD, on a more effective way to assess patient bleeding in the operating room.

She never imagined spending her professional life in the operating room, but Mamdani chose anesthesiology because "it's a specialty that allows the physician to really be there for patients at a vulnerable time. The interaction time is short but intense." She would also like to work global health into her future.

Being comfortable with patients rather than a "grind for grades" is a huge positive that has come out of her humanism experiences. "One of my patients," she recalls, "had liver failure. He did not speak English. I first thought he had caused his own problem by drinking too much. I later found out he had no family here; his wife and kids lived far away and he worked long hours as a waiter. I came to understand that his excessive drinking was probably a result of extreme lone-liness. That was the back-story.

"That is the biggest lesson I learned in medical school: Don't ever assume and don't judge."



ROBIN S. SCHROEDER, MD'86
ALUMNI ASSOCIATION PRESIDENT

Dear Fellow Alumni,

As you can see from the list at right, we have already had a wonderful response to the Take a Seat Campaign, launched by the Alumni Association to help fund renovations to the two most heavily utilized academic spaces on campus, Alumni Lecture Halls One and Two. On behalf of the Alumni Board, thank you to all who have already participated.

But there's a lot more to do, and we hope that even more of you will join in this important effort. When complete, both lecture halls will feature a host of powerful improvements, from ergonomic seats, improved desk space and individualized power, to far-improved audio/visual capacities, larger presentation screens and high-definition projection. If you haven't donated to Take a Seat, I hope you will today.

And remember, any gift of \$1,000 will be recognized on a customized plaque that will hang outside the lecture halls. Instead of a single seat, you may wish to make a gift that covers more than one. Or you may be interested in underwriting a specific item such as

Reunion fun: Members of the Class of '63 flanked by George Heinrich, MD'72, left side, and on the right, Joseph V. DiTrolio, MD'79 and Dean Robert L. Johnson, MD'72.

a new podium, or a second projector for split-screen displays. Whatever you choose to do, you will be making a direct and tangible difference in the educational experience of our students, now and for years to come.

If you've been to campus recently, you know that renovations on Lecture Hall One are complete, and students are enjoying the new space. If you haven't been to campus, I do invite you to visit—you can see our progress with your very own eyes! The Alumni office is always open and happy to do an impromptu tour, and I know you'll enjoy it.



Center: AliAsad Arastu, MD'03 and Jaime Geisel, MD'03. Above: Dianne Mink, Alumni Director, and Christine D'Aguillo '14.

Why Not Take a Seat?

To Take a Seat yourself, go to njms.umdnj.edu/alumni and click on Take a Seat at the left.

Beth Alger, MD'64
William J. Annitto, MD'74
Suzanne H. Atkin, MD'79
Scott B. Baron, MD'79
Alex Y. Bekker, MD'91
Paul J. Bolanowski, MD'65
William K. Boss, MD'75
Ira Brassloff, MD'94
Fred Buechel, MD'72
Daniel J. Casper, MD'83
Richard C. Cavanaugh, MD'63

Brad J. Cohen, MD'86

Penelope J. Cohen, MD'86 R. John Cooper, PhD Frank A. Cordasco, MD'85 Antoinette Costa-Zaeh, MD'82 Anthony L. Cucuzzellack, MD'62 Kathleen M. Cuddihy, MD'96 Michael A. Curi, MD'98

Thomas D. Dayspring, MD'72 Joseph V. DiTrolio, MD'79 Steven A. Dumbroff, MD'89

David D. Daniels, MD'95

Hugh E. Evans, MD
Alexander Gnoy, MD'94
Alvin H. Goldberg, MD'76
Geordie P. Grant, MD'78
Karin Gunther, MD'06

Patrick J. Hall, MD'86 George F. Heinrich, MD'72 Richard W. Huss, MD'71

Frederick M. Jacobs, MD Robert L. Johnson, MD'72

Donald Karp
Elizabeth Ketterlinus

Marc Klapholz, MD

Gerald S. Levey, MD'61 Peter G. Lohwin, MD'82

Mark E. Maletsky, MD'81 Anthony M. Maroldo, MD'02 James F. Mayhew, MD'69

Cynthia G. McChesney
Rohit Modak, MD'02

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Susan H. Morrison, MD'81

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Barbara A. Nahas, MD'81 Brenda L. Natal, MD'07

Marie E. Nevin, MD'86

NJMS Class of 2013

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Harriette Waltner

Dorian I Wilson MD'82

Richard H. Wong, MD'79

Donors as of April 15, 2013

CLASS NOTES

1960'S

Daniel Cowell, MD'60 retired from clinical practice on January 21, 2013.

Leo M. Pisculli, MD'60 and his wife Delia celebrated their 50th wedding anniversary on August 25, 2012.

John J. Killion, MD'62 is semiretired and working as a pediatric consultant.

Vincent Oriente, MD'66 lives parttime in Hawaii writing movies and documentaries, and recently released Justice is Blind.

Joseph M. DeGross, MD'67 is semiretired and volunteers as a nephrology consultant at a free clinic in Knoxville, TN. He had two books published in 2012: a novel titled Undertow, and a short story collection, The Alibi and Other Stories.

James Broselow, MD'69 received the Lifetime Achievement Award from the Institute for Safe Medication Practices at the Institute's Annual Cheers Award ceremony on December 4, 2012, in Las Vegas, NV. He is known for the development of the Broselow Tape, a color-coded system used for pediatric patients in critical situations.

1970'S

Richard W. Huss, MD'71 is retired and enjoying this time, looking after his elder in-laws who live with him and his wife Karen who works for the National Institute of Nursing Research. He also enjoys jogging, reading and church activities.

Steven Ross, MD'72, the grandfather of two, has a daughter who is graduating from a nephrology fellowship.

Aron Swerdlin, MD'72 proudly announced that his daughter Amy gave

September 21, 2012

Alan Javel, MD'74 shared news that his softball team won a gold medal at the Huntsman World Senior Games in St. George, UT.

MA, CPH was elected President of the American Public Health Association in November 2011.

In Memoriam...

The Alumni Association and the NJMS community extend deepest sympathies to the families and friends of:

Benjamin F. Rush, Jr., MD, founding chair of surgery at NJMS and Distinguished Professor of Surgery, died in February. Born in Hawaii, a graduate of the University of California-Berkeley and Yale Medical School, he left a lasting impression on everyone and made many contributions to his field, especially in trauma, injury and surgical oncology. Though officially retired in 1996, Rush was active as an educator, researcher and leader until days before his death. For additional information about this brilliant, gentle physician and mentor, go to http://libraries.umdnj.edu/History of Medicine/Rush.html

Tanya Mitra, 24-year-old, second-year NJMS student, died suddenly at home on November 3, 2012. Tufts University, where she did her undergraduate studies, described her as "motivated by her passion for life and her dedication to serving others, which inspired her to pursue medicine as her vocation." She is survived by her parents, Amit and Snigha, and her sister, Trishna.

M. Richard Konigsberger, MD, professor emeritus, Department of Neurology and Neurosicences, died on February 17, 2013. He had a long and distinguished career in pediatric neurology spanning 30 years at NJMS. Born in 1933, he graduated from Stanford University, completed medical school at the University of Chicago and then continued training at Columbia University. A ceremony celebrating his life was held in March.

Maria Dargan-Dunham, a valued member of the Department of Pediatrics for 15 years, died on September 6, 2012.

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Visit http://njms.umdnj.edu/, click on Alumni and Alumni Association and then Online Dues Payment to pay your dues online.

The Lifetime Membership is being offered to our alumni as a means to perpetuate the goals of the Alumni Association and enable its members to sustain their support in a more meaningful way. All categories of membership will afford you the opportunity to keep connected with us. You will continue to receive all membership benefits, including NJMS Pulse magazine, information about upcoming events and reunions, and library privileges.

Alumni Association of NJMS, 185 South Orange Avenue, MSB-B504, Newark, NJ 07101-1709. Photos are welcome. You can also send your news via e-mail to: njmsalum@umdnj.edu or fax us at (973) 972-2251.

2000'S

stem cells.

Lowell E. Gurey, MD'06, who practices with the Summit Medical Group at their Berkeley Heights, NJ, office, specializes in ENT and has expertise in diagnosing and treating cancers of the head and neck.

Gerard Malanga, MD'87 has started

a new practice in Cedar Knolls, using

Anthony J. Scillia, MD'07 is doing a fellowship in orthopaedic sports medicine with Dr. James Andrews in Birmingham, AL.

Sylvia Washington, MD'07 and husband Marcus Washington welcomed their third child, Stephanie Lynn on September 11, 2012.

Yuri Jadotte, MD'10 was featured in the Spring/Summer issue of UMDNJ, the University magazine.

birth to Ethan Sol Frankel on

Adewale Troutman, MD'79, MPH,

1980'S

Pat Mercado, MD'80 was recently promoted to full professor in dermatology at the University of Alabama at Birmingham.

Marilyn C. Agin, MD'86 reports that her son Julian, age 24, began medical school in fall 2012 in Beersheva, Israel at the Ben Gurion University Medical School of International Health, a Columbia Medical School program.

Mark Your Calendar

June 12, 2013 • Alumni Association Annual Meeting 6:30 pm • Gellene Room • MSB - 515

August 8, 2013 • White Coat Ceremony 4 pm • Plaza

For information or reservations for these events, contact Dianne Mink at (973) 972-6864 or minkda@umdnj.edu



KEITH BRATCHER NEW JERSEY MEDICAL SCHOOL

FOCUS ON PHILANTHROPY



To Honor Fred Behrens

The name of a leader in NJMS trauma education and orthopaedics lives on via a new endowed chair. BY MARY ANN LITTELL

wiss philanthropist Dr. h.c.mult. Hansjoerg Wyss has given a \$2 million endowment donation to honor the late Fred F. Behrens, MD, who was the chair of the NJMS Department of Orthopaedic Surgery until his death in 2005. Through its matching program, the New Jersey Health Foundation will provide a 20-percent match, \$400,000, to the gift. In addition, an anonymous donor gave an additional \$100,000 gift, bringing the total endowment to \$2.5 million. The funds will be used to establish the Fred F. Behrens, MD, Endowed Chair in Orthopaedic Trauma Education at NJMS, and the holder of the chair will become the Behrens Professor. Mark C. Reilly, MD, associate professor in orthopaedics, has been appointed this first Behrens Chair by Joseph Benevenia, MD,

chair of the Department of Orthopaedics, in conjunction with Dean Robert Johnson, MD. Reilly is developing the inaugural educational symposium in trauma surgery to be held in Spring 2014.

Fred Behrens founded the Department of Orthopaedics at NJMS in 1992. A special interest of his was trauma care, and he was an active participant in the AO Foundation, an organization dedicated to promoting excellence in the surgical management of trauma and musculoskeletal disorders which was founded in Switzerland in 1958. As the principal architect of the orthopaedic resident education program, Behrens was the driving force in ensuring that the residents were familiar with AO techniques and they each successfully completed an AO basic principles course during their residency

training. AO stands for *Arbeitsgemeins-chaft* fur Osteosynthesefragen, which is German for the Association for the Study of Internal Fixation.

"Fred Behrens was integral in shaping the education and careers of more than 100 residents and fellows who matriculated through the department since 1992," says Dean Robert L. Johnson.

71 Years and Counting

small group of business and professional men of Italian descent gathered in the basement of Columbus Hospital in Newark in 1941 and the scholarship money their Columbian Foundation raises annually is still making NJMS students breathe sighs of financial relief. This year, five students—Christie Buonpane, Eric John Burnett, Laura Greco, Leia Rispoli and Laura Rotando—were the beneficiaries. This all-volunteer, nonprofit organization is dedicated to improving the cultural, educational, economic and social welfare of all New Jersey citizens but scholarships for needy students are always high on their to-do list. The 71st awards were presented at a banquet at Birchwood Manor. — MARYANN BRINLEY



Pictured, from left to right: Benjamin M. DelVento, Sr., Esq., Columbian Foundation; Frank Christiano, Columbian Foundation; a Seton Hall student; Laura Rotundo, NJMS; Leia Rispoli, NJMS; Laura Greco, NJMS; a Seton Hall student; Eric Burnett, NJMS; Andrew R. Vassallo, Columbian Foundation; and Pasquale F. Giannetta, Esq., Columbian Foundation. Not pictured: Christie Buonpane, NJMS.



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The Student Council is proud to support the lecture hall renovation project by naming a seat. As your future fellow alumni, we hope we can count on you to make your gift as well.

RAY MALAPERO '13 PRESIDENT, STUDENT COUNCIL - NJMS

Thanks to all who have already taken a seat.

To join us, make a gift to the **Take A Seat Fund** at njms.umdnj.edu/alumni and click on **Take A Seat Fund**.



Gifts of \$1,000 or more will be memorialized on a recognition plaque outside the lecture halls. To underwrite a specific item, contact Cynthia McChesney, Director of Development, at 973-679-4686 or cmcchesney@njhf.org.













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