

THE GEORGE WASHINGTON UNIVERSITY
SCHOOL OF MEDICINE AND HEALTH SCIENCES

Medicine + Health

SPRING 2016



A Master Key to Breakthroughs:
IMMUNOLOGY

A NOTE FROM ROSS HALL



M.D. '64, who bequeathed \$1 million to establish an endowed scholarship, and a gift from the late Bennet A. Porter Jr., M.D. '53, who donated more than \$921,000 for unrestricted use, which I designated for current-use scholarships for medical students. In January, we also had the good fortune to award \$100,000 scholarships to a pair of medical students pursuing careers in primary care — these gifts were given by two grateful patients. We are celebrating these generous donations, and others that have been given for a wide range of activities, because we are extremely grateful for the support we've received from our friends and alumni. At the same time, it is my hope to expand that support in the weeks, months, and years ahead.

As an alumnus, I designate most of my charitable giving to SMHS to support student scholarships through

As we celebrate the residency match and graduation, I am moved by the potential our graduates have to make a significant and lasting impact on the communities they will go on to serve. We offer our students a world-class education, but it is also important for the GW School of Medicine and Health Sciences (SMHS) to engage you, our alumni community, in order to maintain that stature. You are an essential element in the culture of our school. It is the editorial mission of *Medicine + Health* to keep you abreast of the wonderful things taking place at SMHS and to inspire you to continue to be a part of the excitement.

Whether that inspiration comes in the form of a donation to the scholarships we offer new students, or in the form of motivating you to return to campus for your reunion weekend, we want to move you from being a reader to being an active participant in your SMHS community.

As the dean, I am focused on increasing scholarships for our students because student debt is a critical issue of increasing concern. I am convinced that we must ease the financial pressure our students experience as they pursue their education in the fields of medicine and the health sciences.

This spring, we were grateful to receive several gifts earmarked for student scholarships. Some examples of this generosity include a gift from the late Stanley F. Kulaga Jr.,

the Bryan J. Akman Fund, a need-based fund that I created in my brother's memory, and to the Leonard Akman, M.D. '43, Fund, which supports travel expenses for medical students on the global health track. This year, I also contributed to the Robert I. Keimowitz, M.D., Fund, a need-based scholarship fund created to honor our former dean.

As both the dean and as an alumnus, I truly appreciate the support of each donor. I look forward to enhancing our scholarship funds for our students to help them accomplish their goals of becoming world-class doctors and health sciences professionals.

Warmest regards,

JEFFREY S. AKMAN, M.D. '81, RESD '85

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MAKING THE ROUNDS



Yvette Alexander, D.C. councilmember of Ward 7 and chair of the Committee on Health and Human Services, gets her blood pressure checked at a health screening co-sponsored by the GW Ron and Joy Paul Kidney Center and the National Kidney Foundation on March 12. At the event, Alexander presented a resolution, unanimously approved by the D.C. Council, designating March 2016 as National Kidney Awareness Month.

ON A MISSION: The GW Ron and Joy Paul Kidney Center Aims to Educate D.C. about Kidney Disease

Ron Paul and his wife, Joy, are on a mission: to eradicate kidney disease.

Ron Paul, chair and chief executive officer of Eagle Bancorp and Eagle Bank, was diagnosed with glomerulosclerosis in his late 20s. The disease led to kidney failure and, eventually, the need for two kidney donations. "I didn't have any pre-existing conditions – no diabetes, no high blood pressure, no issues at all other than I found out I had kidney failure," he said.

Now, the Paul family is determined to spread awareness and education about a disease that disproportionately affects those in the Washington, D.C. metropolitan area. There are around 700,000 people, primarily those in the African-American, Hispanic, and Asian communities, with kidney disease in the District. Around 7,000 people are on dialysis, and 1,700 are waiting for a transplant. The demand for kidneys, especially from live donors, far outweighs the supply. Those statistics, however, could change.

On Nov. 5, 2015, the couple launched the GW Ron and Joy Paul Kidney Center, designed to educate the Washington, D.C. community about kidney disease, provide patients with information about treatment options, and promote the paired kidney exchange list.

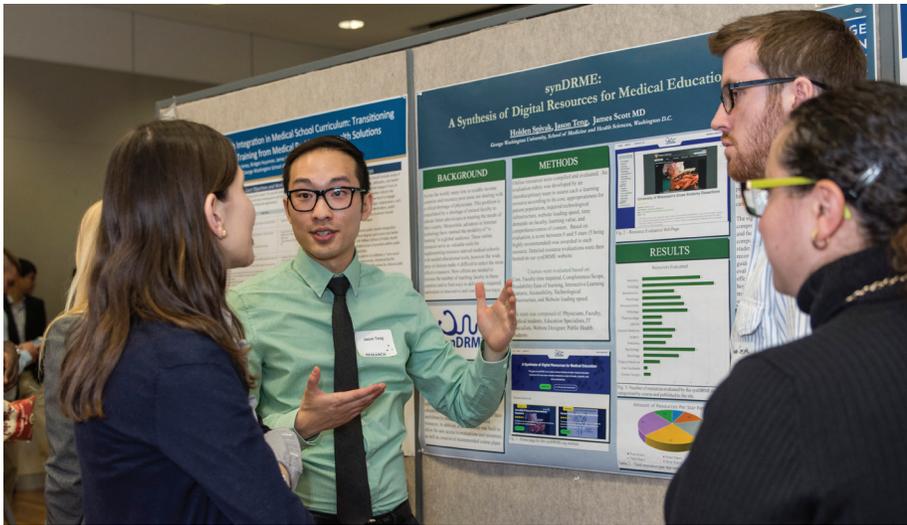
"Our goal is to make our community aware of the causes that lead to kidney disease and all the screening and preventive measures that are available to us to avoid this potential life-changing experience," Ron Paul said. "However, should one be faced with end-stage renal disease, there are alternatives to the difficulties associated with dialysis. The job of the GW Ron and Joy Paul Kidney Center is to be sure that patients, families and friends, and physicians have the necessary information to make those tough decisions."

To that end, the GW Ron and Joy Paul Kidney Center has been hosting free health screenings, first at the community health expo at the Barry Farm Recreation Center, in August 2015. In January 2016, the center, with the GW Transplant Institute, provided screenings at the NBC4 Health and Fitness Expo, and in early March, the center and the National Kidney Foundation co-sponsored a screening event, at Pennsylvania Avenue Baptist Church in Ward 7.

"If each of you in this room reaches out to two people, and gets them to take a simple blood test, a urine test, a blood pressure test, you would be amazed at how much better they'll feel and how much better you'll feel that you potentially helped one of the members of your family," Ron Paul said at the March screening. "It's an incredible thing." ■



Trenin Jones gets his blood pressure taken at the GW Ron and Joy Paul Kidney Center/GW Transplant Institute booth at the NBC4 Health and Fitness Expo on Jan. 9. Jones, a 32-year-old Maryland native who attended the event with his mother, hadn't had his blood pressure checked in a while, but he wanted to gauge where he was. His result was high blood pressure. "It's actually a little surprising," Jones said after the volunteer removed the cuff. "I need to take care of my health; it's a wake-up call."



Health Care Leader to Address M.D. Program Class of 2016



Jonathan B. Perlin, M.D., Ph.D., M.S.H.A., MACP, FACMI, will address M.D. graduates at the GW School of Medicine and Health Sciences

(SMHS) M.D. Diploma Ceremony May 15.

As president for clinical services and chief medical officer of Nashville, Tennessee-based Hospital Corporation of America (HCA), Perlin leads the clinical services at HCA's 167 hospitals and more than 800 outpatient surgical, urgent care, and other practice units. Prior to joining HCA, Perlin served as the under secretary for health in the U.S. Department of Veterans Affairs. He was the senior physician in the federal government and chief executive officer of the Veterans Health Administration.

Perlin's father, Seymour Perlin, M.D., Emeritus Professor of Psychiatry and Behavioral Sciences and director of GW's psychiatry residency training program at SMHS from 1977 to 1993, is the namesake of the Department of Psychiatry and Behavioral Sciences' annual Seymour Perlin, M.D., Lectureship on Suicidology and Life-Threatening Illnesses. Perlin's mother, Ruth, is a member of the George Washington University Museum board and the Textile Museum board, and both Seymour and Ruth are on the Friends of the Luther W. Brady Art Gallery board. ■

Student Innovation at the Heart of Research Days

When James Boddu and Ajlan Al Zaki, second-year medical students at the GW School of Medicine and Health Sciences (SMHS), took over as editors of Fusion, the William H. Beaumont Medical Research Honor Society's student-led publication, they wanted to do "something different" for Research Days, according to Robert Miller, Ph.D., senior associate dean for research, Vivian Gill Distinguished Research Professor, and professor of anatomy and regenerative biology at SMHS.

Miller and the two editors discussed various possibilities for the two-day event, which highlights the research endeavors taking place across GW's 10 schools. The second day, in particular, focuses on research in the health and medical communities and traditionally features two keynote speakers. This year, thanks to Boddu, Al Zaki, and Miller, Research Days tipped toward student ambitions.

"We decided over a series of discussions that it would be a terrific opportunity [for students] to hear what some of their colleagues have been doing as part of this Research Day," Miller said.

Al Zaki and Boddu created an application process for student researchers to submit proposals to Fusion; the student editorial board then assessed the abstracts and selected three as the winners of the prestigious William Beaumont Research Award. Those three – first-year M.D. program student Siyang "Charlie" Chaili and second-year M.D. program students Nicole A. Doria and Angeline Pham – presented at the March 30 session.

"It's a real privilege to help augment the research presence here at GW," said Chaili. "As students, we really strive to be excellent in every way, to represent GW well."

Students also gave poster presentations on their projects, which varied from basic to translational science, and SMHS awarded the Donald H. Glew Prize to Alexa Lean, a second-year M.D. student.

As Boddu explained, what the students have accomplished, including the three Beaumont winners, is a "great testament and a snapshot to what's being done here at GW." ■

Research Conjunction: New AND Institute Director Expands Autism Research Spectrum by Linking GW Efforts



After a nationwide search, the George Washington University selected Kevin Pelphrey, Ph.D., as the new director of the Autism and Neurodevelopmental Disorders Institute (AND Institute) at GW and as professor of pharmacology and physiology at the GW School of Medicine and Health Sciences.

Pelphrey brings more than 15 years of experience in autism and neuroscience research to the position, most recently having served as the Harris Professor in the Yale Child Study Center, professor of psychology, and founding director of Yale University's Center for Translational Developmental Neuroscience. He holds seven active grants, many funded by the National Institutes of Health (NIH), such as a \$15 million NIH grant from the Autism Centers of Excellence Program to study sex differences in autism spectrum disorders. He specializes in cognitive neuroscience and developmental disorders.

Pelphrey will draw upon that professional expertise and his personal experience as the parent of a child with autism as he connects GW's full research spectrum, including faculty members representing six GW

colleges, with the university's clinical partners, namely, the GW Hospital, Children's National Health System, and the GW Medical Faculty Associates, to provide a one-stop resource for families affected by autism in the Washington, D.C. metropolitan area.

The institute will be based at GW's Virginia Science and Technology Campus in Ashburn, Virginia, where the university is investing more than \$5 million to establish the AND Institute as a leader in autism research and policy. Pelphrey and his team will devote particular attention to adults with autism, a rarely covered age range in the field, as well as research on women with autism, who exhibit signs different from those of men and who are often diagnosed at a later age.

In addition to receiving funding from the university and research grants, Pelphrey will be the first to hold the endowed title of the Carbonell Family Professorship in Autism and Neurodevelopment Disorders, established by a \$2.5 million gift from Nelson Carbonell, chair of the GW Board of Trustees, and his wife, Michele Carbonell, chair of the National Capital Area chapter of Autism Speaks. ■



New Leadership for CRL

Leslie F. Davidson, Ph.D., OT/L, FAOTA, was appointed to serve as the GW School of Medicine and Health Sciences (SMHS) chair of the Department of Clinical Research and Leadership (CRL), April 2016. As the new chair, Davidson leads a department serving as home to more than 60 faculty members and supports the educational pursuits of approximately 600 students – most of whom are distance education students.

Davidson oversees nearly 20 undergraduate and graduate academic programs geared toward professionals working in the health sciences and health care fields. Currently, CRL offers programs in clinical and translational research; clinical research administration; regulatory affairs; clinical management and leadership; emergency medical services; health care quality; health intervention and disaster response; occupational therapy; and translational health sciences. Under Davidson's leadership, the department will continue to integrate research and education to develop improved models for clinical and translational research and the delivery of health care, and it will work to influence policy change.

Davidson joins GW from Shenandoah University, where she served as the director and associate professor of the Division of Occupational Therapy. She also served as an adjunct professor in the SMHS Doctorate of Occupational Therapy program. ■

Students Take on the HIV/AIDS Epidemic

First-year medical students at the GW School of Medicine and Health Sciences (SMHS) had just wrapped up their course work in immunology and pathogenesis when they reached the short break before the end of the semester known as “intersession.” Leaving the classroom behind, the Class of 2019 embarked on a three-day intensive look at the HIV/AIDS epidemic – part of the



clinical public health component of the revised M.D. curriculum – that culminated in a visit to the White House.

“One of the main reasons I came to GW was that integrated clinical public health is in our curriculum,” said Erin Good, a first-year M.D. student at SMHS and intersession group leader. “I think that [intersession] is a great example of something that shows us both the medical side and the integration of policy and public health.”

The program, “How Physicians Can Help Create an AIDS-Free Generation,” kicked off with lectures from renowned leaders in HIV/AIDS, including Anthony Fauci, M.D., director of the National Institute of Allergy and Infectious Diseases at the National Institutes of Health. Students later met face to face with visiting leaders from the front lines of the HIV/AIDS fight in Washington, D.C.; Tennessee; San Francisco; and New York City to address issues specific



to those jurisdictions. On the final afternoon of intersession, the student groups, divided by region, presented their solutions, many of which incorporated the use of social media and novel user apps, to a panel of experts.

Good said that initially, ideas such as expanding needle exchange programs or establishing a web-based peer mentorship platform seemed formidable. “Now, these aren’t lofty,” Good said. “We can actually do these. It’s pretty cool to see that.” ■



2016 Follies and Golden Apple Awards: Taking to the Stage

Students from the GW School of Medicine and Health Sciences (SMHS) performed during Follies, an annual student-produced and student-directed event featuring skits and parodies, such as “Back to the Fourth Year” and “We Have an Exam on Monday and Didn’t Have Time to Think of a Title for Our Follies Skit.” SMHS M.D. program, physician assistant, and physical therapy students also presented the Golden Apple Awards to the faculty members who had made a significant contribution to their education. This year’s recipients were David Diemert, M.D.; Kirsten Brown, Ph.D.; Shant Ayanian, M.D.; Anthony Venbrux, M.D.; David Scalzitti, Ph.D.; Elizabeth Ruckert, DPT; and Jennifer Wall, PA-C. ■

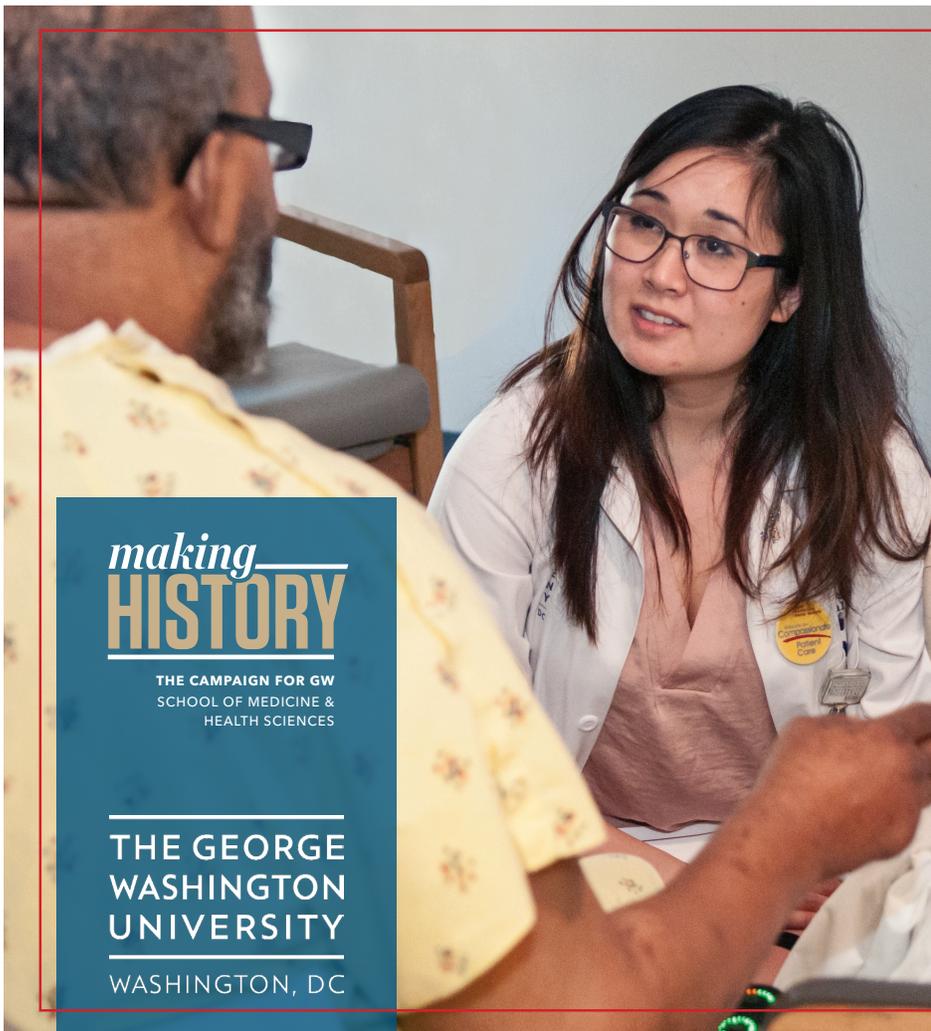


MAKING THE ROUNDS

A Collaborative Effort

Children's National Health System (Children's National) honored GW President Steven Knapp, Ph.D., with its prestigious Chairman's Special Award, which recognizes individuals and organizations for their important associations or shared mission with the hospital.

Knapp, throughout his tenure at GW, has helped to nurture a collaborative relationship, with an emphasis on hands-on training and shared research goals, between Children's National and the GW School of Medicine and Health Sciences (SMHS). The SMHS Department of Pediatrics, for example, is housed at Children's National, where third- and fourth-year SMHS medical students participate in training programs. Other collaborations include a recent \$6.2 million grant from the National Institutes of Health for a multidisciplinary team of researchers from both SMHS and Children's National to study pediatric dysphagia, a feeding and swallowing disorder typically found in children with neurodevelopmental disorders. ■



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GW Hospital Takes the Lead by Saving Strokes

The George Washington University Hospital (GW Hospital) recently earned accreditation as a Comprehensive Stroke Center from the Joint Commission and American Heart Association/American Stroke Association, making it one of fewer than 100 hospitals nationwide to receive the recognition.

Accreditation as a Comprehensive Stroke Center means that GW Hospital – now part of an elite group of providers focused on complex stroke care – has met the commission’s upgraded standards for disease-specific care. Comprehensive Stroke Centers are recognized as industry leaders and are responsible for setting the national agenda in highly specialized stroke care.

“This designation demonstrates not only the unique expertise of our physicians, but also the exacting collaborative procedures that GW Hospital has developed involving everyone from the transport staff, technologists, nurses, and physicians to the CEO and hospital leadership,” said Henry Kaminski, M.D., chair of the Department of Neurology and Meta Amalia Neumann Professor at the GW School of Medicine and Health Sciences (SMHS).

The Joint Commission instituted a new level of certification in September 2012 to identify the facilities with the resources, staff, and training, such as advanced imaging capabilities and 24/7 availability of specialized treatments, necessary for the care of complex stroke cases. The Commission established a rigorous on-site review process to ensure compliance with the higher standards and requirements. To date, less than 2 percent of U.S. hospitals have achieved certification as Comprehensive Stroke Centers.

“The saying goes, ‘time is brain,’” continued Kaminski. “The longer you wait, the greater the likelihood that you’ll have permanent damage.”

SMHS, GW Hospital, and the GW Medical Faculty Associates created a stroke team, available 24 hours a day, to provide essential treatment from the moment patients arrive, for “what we call ‘door-to-needle’ time,” Kaminski explained.

Kaminski added, Kathleen Burger, D.O., assistant professor of neurology at SMHS, who coordinates the stroke team, “has led an initiative that has experienced phenomenal results, with a door-to-needle time of around 60 minutes,” which puts the hospital in the top tier of centers across the country and makes it the best in the Washington, D.C. metro area. ■

Excellence in Care

The American College of Surgeons (ACS) National Surgical Quality Improvement Program (NSQIP) recognized the GW Hospital as one of 52 institutions in the United States to have achieved meritorious outcomes of surgical patient care. GW Hospital excelled in patient management in specific clinical areas, including mortality, unplanned intubation, cardiac incidents, and renal failure.

The ACS has also designated GW Hospital as a Level I Trauma Center, and the National Association of Epilepsy Centers designated the hospital as a Level 4 Epilepsy Center, the highest possible level. Additionally, GW Hospital has a Level III neonatal intensive care unit. ■



FROM SPECIAL OPERATIONS TO THE GW SCHOOL OF MEDICINE AND HEALTH SCIENCES



Jared Ross, M.B.A. '03, B.S. '01, adjunct instructor of clinical research and leadership, talks transitions between military and civilian protocols and life

BY CAROLINE TRENT-GURBUZ

As a child, Jared Ross, M.B.A. '03, B.S. '01, dreamed of being a Green Beret in the United States Army Special Forces. That dream stayed abstract until 1990, when Ross was a junior at the University of Maryland. The Greenbelt, Maryland, native felt that the start of Operation Desert Shield would lead to a long-lasting conflict — and he wanted to be a part of it. “That’s how it started,” he says. Twenty-six years later, Ross, who retired from the U.S. armed forces on Nov. 1, 2014, has bridged the gap between military and civilian life, and now, as an adjunct instructor of clinical research and leadership at the GW School of Medicine and Health Sciences (SMHS), he’s in a position to help the next generation.

Q: You’ve spent most of your career in the military. How did you make the transition to GW?

A: When I was in the middle of my career in the military, there weren’t many options for four-year degrees being offered by universities with any kind of clout. The ones that were, you had to have the ability to do some kind of in-residence work, and I couldn’t do that at all. However, GW had started this program with some fine collaboration with the Navy that initially was

being offered only to independent duty corpsmen. Then they opened it up to medics who were trained in the Special Forces, both SEALs and Green Berets. I jumped on that because it was all online; it was one of the first really high-quality bachelor’s degrees you could get online. I had not finished my degree, so I was looking for that opportunity to finish.

Toward the end of my military career, I decided that I wanted to increase the amount of civilian education I had before I was going to tackle finding a job outside the military. The first thing I did was go to the general management program at Harvard, which was a fantastic program, but really looked at the business world from a 200,000-foot level, managing global organizations. I felt like I needed to fill in the gaps with some particular skills with regard to finance and accounting, while also looking at a more organic level of operating businesses. So I chose the program here at GW. That’s part of how I ended up as an adjunct faculty member: a long relationship as a student.

On the opposite side of that, one of the things I did for years was instruct tactical combat casualty care (TCCC), or military first responder techniques, and a number of the people involved in that were affiliated with the health sciences and

GW has a strong reputation in the military. George Washington is such a good school, and to be able to [attend the school is such] an opportunity.

Jared Ross, M.B.A. '03, B.S. '01

emergency medicine here at GW. Those two things finally intersected last summer, and I was given the opportunity to come on as adjunct faculty for the program.

Q: Can you tell me more about TCCC?

A: Tactical combat casualty care is actually a military term for a [kind of] protocol. There's a really interesting, long history to how that started. TCCC was one of the positive things that sprang out of the Battle of Mogadishu in 1993, because that was the first time we just had massive amounts of data, in both eyewitness accounts and recorded radio and video transmissions. They were able to — almost minute-by-minute, in certain cases — document what was going on with all these types of injuries on the ground. So we got a really good look at some of the previous advance trauma life support protocols that we were teaching our special operations medics and realized what wasn't working and what would work. Then there's this whole long history to get these bureaucracies to agree upon what was the right thing to do. I was there for the development of all that and watched it progress.

Prior to 9/11, these protocols were adopted; following 9/11 and the conflicts in Afghanistan and Iraq, the need to train people under these practices just exploded, both in the military world and in federal agencies that were putting people out in the combat zone, in harm's way. These really didn't start to cross over into actual civilian emergency medicine until recently, the last few years, and there's still a lot of resistance to adoption because some of the protocols are considered to be far too aggressive to be implemented without a doctor's supervision. There's a lot of argument back and forth about whether we can do the things we're allowed to do as military providers versus civilian providers.

When that was all going on, I had a number of friends who had started businesses and were asking me to teach, so I taught a variety of students, from both the provider side and the non-medical-provider operator side.

Q: Can what the military does translate to how non-military personnel tackle problems?

A: There's a whole lot more that the military does that could be adopted on the civilian side in terms of managing large-scale issues. However, if you step out of the combat zone and look at

everything from an active shooter situation to a natural disaster, a lot of what the military does every day and is resourced to do is very difficult to do on the civilian side, because of the need for coordination between multiple different agencies, and the lack of a clear chain of command, and other issues that go on and on.

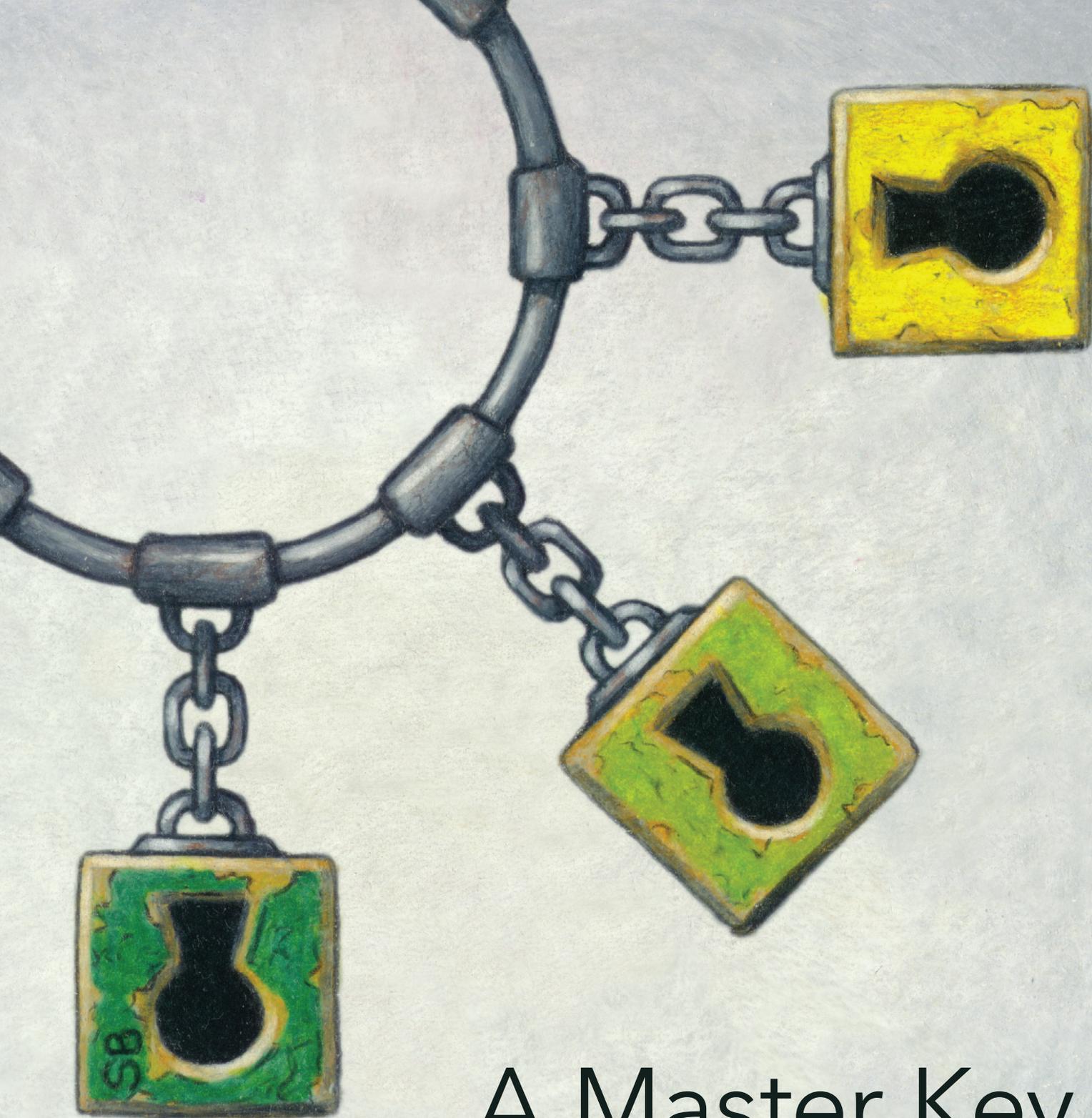
Oftentimes, the worst things happen in the places least prepared to deal with them — for example, the earthquake in Haiti. Tons and tons of support was standing ready, but there was no easy way to actually get it to the point where it was most needed because of the lack of internal infrastructure, what was even left of it. Add to that a dysfunctional civilian authority in place there, leaving billions of dollars of resources sitting on ships and in shipyards, unable to reach the people who most needed it. The military played a big role there. In looking at what we do, I think there's also some room for growth on the civilian side for managing these situations as well.

Q: You're teaching courses in both the Clinical Management and Leadership Program and the Health Sciences Laboratory Technology Certificate Program, which is through the Military Affiliated Programs; do you think GW helps to act as a gateway for those re-entering civilian life after a career in the military?

A: GW has a strong reputation in the military. George Washington is such a good school, and to be able to [attend the school is such] an opportunity. In the past, the types of institutions drawing a lot of military were ones without ... the kind of academic rigor you see from the higher-tier universities. GW, more than anyplace else I'm aware of, has really opened up to the community, and it's more user-friendly; there's a strong Veterans Affairs office here, and the reputation is growing. ■

GW SMHS has had a long-standing relationship with the United States Navy and the United States Army, offering contract degree programs in a variety of health sciences fields to active-duty service members, such as the Certificate in Health Sciences Laboratory Technology, which is offered through an interservice contract with the Medical Education and Training Campus at Fort Sam Houston.

The Military Affiliated Programs include several online degree completion programs for active-duty and retired services members. The Associate in Science (A.S.) degree in health sciences laboratory technology allows for the development of skills ideal for educational and military advancement. The Clinical Health Sciences, Health Intervention and Disaster Response, and Emergency Medical Services Management Programs are bachelor's degree completion pathways ideal for soldiers, sailors, and airmen coming from the special forces and medical occupations.



A Master Key
to Breakthroughs

IMMUNOLOGY



Immunology Links Research Priorities to Increase Efficiency, Collaboration, and Scientific Discovery

BY STEVE GOLDSTEIN

Earlier this year, when news headlines were dominated by the spread of Zika, a mosquito-borne disease caused by a virus from the genus *Flavivirus*, to South America, research scientists at GW took more than a passing notice. Interest deepened as the virus was linked to microcephaly, a congenital defect that leaves babies with undersized heads and varying degrees of nerve damage, and to Guillain-Barré syndrome (GBS), an uncommon sickness of the nervous system in which a person's own immune system damages the nerve cells, causing muscle weakness and, sometimes, paralysis.

Here was a case study epitomizing the importance of immunology as a research priority; a link between disciplines; and a strategy by which to increase efficiency, collaboration, and, ideally, scientific breakthroughs. "This was a really, really good example of why we are doing this," says Robert Miller, Ph.D., senior associate dean for research and Vivian Gill Distinguished Research Professor at GW's School of Medicine and Health Sciences (SMHS).

"This" is a watershed moment in the institutional history of SMHS. Three pillars constitute the structure of a new research initiative: cancer, under Eduardo Sotomayor, M.D., professor of medicine and director of the GW Cancer Center; infectious disease, under Douglas Nixon, M.D., Ph.D.; and neuroscience, under GW Institute for Neuroscience (GWIN)

director Anthony LaMantia, Ph.D., professor of pharmacology and physiology at SMHS. The structure was conceived under the SMHS Strategic Plan, which set a goal of augmenting the school's research portfolio and elevating its prominence through enhanced quality and impact. To accomplish this goal, the plan identified three strategies: First, advancing translation of research and increasing interdisciplinary collaboration in key areas of strength; second, accelerating growth in emerging areas of research excellence; and finally, enhancing infrastructure and exploring new sources of support to advance innovation and discovery.

Miller, newly hired from Case Western Reserve University, sat in on some of the strategic planning sessions, and after assuming oversight of the research portfolio, set about finding a way to network the pillars to prevent them from becoming silos. "As I got absorbed in the school, it became quite clear that immunology was a linkage among the three disciplines that could give us some interdisciplinary leverage," says Miller, adding that numerous scientists were working on applications of immunology. "The more it percolated, the more it seemed sensible to me that instead of building three different, separate pillars, [we could] make an interdisciplinary network."

Nixon, chair of the Department of Microbiology, Immunology, and Tropical Medicine (MITM) and the Walter G. Ross Professor of Basic Science Research, described by



The SMHS research initiative is not unique, Miller adds, but it is rare. Many institutions will have interactions within a discipline, such as a cancer center, but they tend to be self-contained. Says Miller, “I don’t know of many institutions that have created this kind of umbrella over their research environment.”

colleagues as a “creative extrovert” and an ideal partner for a collaborative environment, was enthusiastic about the plan. “I think immunology is central to many disease processes and is interesting from [the standpoints of] both the mechanisms of disease and the solutions to disease,” he says. “You have to look at the amazing new data in the cancer trial field ... for instance, adding antibodies against checkpoint inhibitors has changed outcomes for patients with metastatic melanoma. In addition, T cell therapies — the kind that our colleague Catherine Bollard works on at Children’s National [Health System] — are now coming into the clinic.”

One example of the synergies Miller is hoping for was on display at the 2016 GWIN Symposium in April. Titled “The Neuro-Immune Interface,” the symposium discussions focused on autoimmune diseases, such as multiple sclerosis (MS). “This tied in nicely with immunology as the linker,” Miller notes. “Questions such as: Why do you get microcephaly after a viral infection? Why do you get Guillain-Barré?”

Other examples of how immunology connects research areas include:

- **Boosting the immune system to fight latent HIV:** Though antiretroviral therapy can reduce active HIV to undetectable levels in the blood, it cannot reach dormant HIV hidden in cells, which may reactivate and replicate. Brad Jones, Ph.D., assistant professor of MITM, is working on a drug designed to boost the patient’s cytotoxic T cells to kill the cells infected with the reactivated virus.
- **Tracking how parasitic infections may cause cancer:** MITM researchers have identified a possible biomarker for parasite-induced cancer. The study is being funded with grants from the National Cancer Institute at the National Institutes of Health.
- **Microbial oncology:** It is well established that some bacteria are more damaging to tumors than they are to healthy human cells. These microbes hold great promise for cancer treatment, as researched in Nixon’s lab. They kill cells in a way that can potentially synergize with radiotherapy or chemotherapy, and they can recruit the patient’s own immune system to fight back. Excitingly, these microbes can also be enhanced by being “armed” with genes that sensitize the cancer to prodrugs — compounds that become highly effective anti-cancer drugs when activated in the tumor.
- **Myelin-destroying diseases such as MS:** Miller is co-author of research that found that a combination of drugs may be able to repair the brain by restoring the myelin sheath, the protective coating around nerve fibers in the central nervous system, which is a primary target of the immune attack in MS.

There was another, more practical reason for the network: workspace limitations at GW. As Miller notes, building network-based research programs would result in combinations that would save space. “So because we are relatively young in research, and somewhat space limited, and because we had hired people who were interactive and enthusiastic about collaborating, [working closely together] made a lot of sense,” Miller explains.

The SMHS research initiative is not unique, Miller adds, but it is rare. Many institutions will have interactions within a discipline, such as a cancer center, but they tend to be self-contained. Says Miller, “I don’t know of many institutions that have created this kind of umbrella over their research environment.”

Nixon notes that a research institution has to be a certain size to create the critical mass for this fusion to produce good results. One of the good things about the timing of this enterprise, he says, “is that we’re getting linked up when the program is at an adolescent stage, rather than fully mature,

with all the enthusiasm of adolescence.”

Not everyone shared the enthusiasm at first. Miller acknowledges that there was some initial pushback to the new strategy, concerns that the investments would create haves and have-nots. Assurances had to come from the top that researchers with no connection to immunology would still benefit. “I think of the network as kind of a big, loose, central core that gives the others a larger community to play in — a kind of trickle-out science,” says Miller.

One eager adherent is Bollard, M.D., professor of pediatrics and of MITM, and director of the Program for Cell Enhancement and Technologies for Immunotherapy at Children’s National, whose program is fully translational and “would bridge all three pillars.” Through her academic affiliation with GW, she works in close collaboration with researchers in cancer and MITM. “With Doug [Nixon], what we’re looking at is sequencing patients’ own HIV virus and developing cell-based therapies that specifically target their individual virus,” says Bollard. “What we’d like to do with the cancer center is the same thing, sequencing the genetic code of their tumors and then generating a cell therapeutic just for that patient so it recognizes just his or her tumor and the unique proteins the tumor recognizes. There’s overlap between cancer and infection — especially HIV — so we can use the tools we’ve developed for both. I think it’s a very complementary and synergistic program, and having these pillars would really facilitate that collaboration.”

Victoria Shanmugam, M.B.B.S., MRCP, associate professor of medicine and director of the Division of Rheumatology, says one of the main reasons she came to GW in 2014 was that the school embraced the importance of immunology as part of its vision to transform health care education and expand research to improve lives. “Rheumatology as a specialty really brings immunology to the bedside,” she says. “As science has evolved and we have a better understanding of the molecular pathways driving the immune system, we have been able to harness this in the treatment of both immune diseases and certain cancers. There are a number of autoimmune diseases that are associated with malignancies, and many of the drugs harnessed to treat malignancy are also now used in rheumatologic diseases. This also affords our students a much better understanding of immune pathways than was possible when I was in medical school. Now these pathways are not just concepts; they are actually targets that we use for treatment.”

Shanmugam adds that GW is a great place to be right now. “The cancer center is growing, there are scientists here working on cutting-edge diagnostics and treatments for infectious diseases, and the immunology of neurologic disease is a growing field with significant overlap into the rheumatologic arena. I am thrilled to be a part of it.”

In order to implement the new organization, a research strategy group, which includes the leadership of the three disciplines as well as the leaders of the bioinformatics program and the health policy programs, holds a monthly meeting. The goal is to facilitate communication to increase collaboration. The research director’s office is responsible for increasing awareness “of what everyone else is doing,” as Miller puts it.

What are the outcomes, or metrics, that will indicate whether the new research strategy is a success? Miller suggests three goals he hopes to achieve. “If this is successful, our research portfolio should grow, so that the number of investigators with funded research activities should increase. Second, the number of multi-investigator program projects — inter-principal investigator (PI) programs — also should increase through networking. And ultimately, the goal is that GW will become recognized as a world center for this networked program and for implementing a relatively groundbreaking way of putting together various research programs as well as a place where the best science gets done.”

Nixon seconds this, defining as goals “better communication among scientists, engaging junior scientists in cross-disciplinary work, helping people find pilot funding and apply for larger grants, and getting people excited about cancer and immunology.” Miller adds that there’s already been a “bump” in the number of multi-PI projects, particularly in cancer immunotherapy and the role of the immune system in the development of the nervous system. ■





ADOPTING AN ORPHANED ILLNESS

BY STEVE GOLDSTEIN

On the cover page of the immunology textbook Victoria Shanmugam used in medical school was a quotation that resonated with the young Londoner: “Immunology is the invention of the devil, who is making it up as he goes along because he is not too clear about this stuff either.”

Years later, Shanmugam, M.B.B.S., MRCP, associate professor of medicine and director of the Division of Rheumatology at GW’s School of Medicine and Health Sciences (SMHS), fully understands that the devil is in the discovery. As a rheumatologist, she finds her expertise crosses many disciplines. When she needed control subjects for a study of the immunology of wound healing (see sidebar), a surgeon colleague suggested some patients with hidradenitis suppurativa (HS) — a chronic inflammatory disease of the apocrine sweat glands. Shanmugam pursued patients with HS, believing they would have more normal wound healing, which turned out not to be the case. In the spirit of accidental discovery, she says, “we now have a cohort of patients ... and a spectacular opportunity to study HS.”

HS is a relatively unstudied disease, a medical “orphan,” yet its impact on work and society belies its low research status. It affects between 1 and 4 percent of the U.S. population — the equivalent of the residents of Los Angeles and New York City combined. That is more than the number of people suffering from rheumatoid arthritis (RA), and yet no one is throwing

money its way. In the past seven years, Shanmugam says, HS has received just \$270,000 in federal funding, compared to the millions of dollars spent each year supporting RA research.

HS is a terrible disease. It is characterized by clusters of abscesses or subcutaneous boil-like “infections” (oftentimes free of actual bacteria) that most commonly affect apocrine sweat gland-bearing areas, such as the armpits, ear canal, and eyelids. The disease causes chronic inflammation with open wounds in the armpits, groin, breasts, inner thighs, and buttocks. HS outbreaks are painful in tender areas and may persist for years with interspersed periods of inflammation, often culminating in sudden drainage of pus. This process often forms open wounds that will not heal and frequently leads to significant scarring. Incision and drainage procedures may provide symptomatic relief. HS flare-ups may be triggered by emotional stress, sweating, hormonal changes, and humidity, and the condition is exacerbated by friction from clothing. Smoking and obesity are thought to be contributing factors. Bacterial infections and cellulitis (deep tissue inflammation) are other common complications of HS.

Depression and physical pain frequently accompany HS and can be difficult to manage. Sufferers are often malodorous. HS can go undiagnosed for years because patients’ embarrassment can cause them to delay seeking treatment. The disease is not contagious. There are

BUGGED BY CHRONIC WOUNDS

Why do some wounds fail to heal? Why do some wounds heal faster than others? How can we accelerate the process of wound repair?

Victoria Shanmugam's lab at the GW School of Medicine and Health Sciences (SMHS) has developed a rapid method of detecting bacteria in wounds, which could result in more effective and efficient treatment and lower health care costs. Shanmugam, M.B.B.S., MRCP, associate professor of medicine and director of the Division of Rheumatology at SMHS, heads the National Institutes of Health-funded WE-HEAL study, a longitudinal investigation of the interplay between the host immune response and the wound bed microbiome in patients with chronic wounds. The study has three major components: 1) using molecular analysis of the tissue from wounds to investigate the immune response in wound healing; 2) working with the J. Craig Venter Institute to profile the microbiome of these wounds; and 3) investigating symptoms associated with these chronic wounds.

"The project developed out of an interest in people who had immune issues and problems with healing wounds," says Shanmugam. "I started studying the bacteria that live in wounds, and it's become clear that there are some patients, for unknown reasons, who chronically are colonized with bacteria within the wound.

"I'm looking to see if there are factors in the host immune system that predict clinical outcomes – who is going to heal and who is not," she continues. "One of the factors we're looking at is the bugs that live in the microbiome, so this involves sampling the microbiome and sequencing the genetics of the bacteria living in the wound."

By chance, Shanmugam stresses, they found that the bacteria *Pseudomonas*, commonly found in infected chronic wounds, produces a chemical, pyocyanin, that is electrically active. The team developed an inexpensive, inch-long disposable electrochemical sensor that can immediately detect the presence of the chemical and, thus, the bacteria.

"Right now there's no method for bedside testing for infection," Shanmugam says. "Being able to detect *Pseudomonas* and other organisms at the time of the clinic visit will greatly enhance our ability to deliver timely patient care."

Pseudomonas was the fourth most common organism found in the microbiome profiles of chronic wounds explored in the WE-HEAL study. "We compared profiles from our wound samples with data from the human microbiome project (in which totally normal subjects had their skin microbiome profiled), and *Pseudomonas* was extremely rare in normal skin," says Shanmugam.

Her team also wondered if they could show differences between the patients whose pain was more aggressively treated using opioid analgesics and those who received lower doses or no opioids at all. When the data was analyzed, they realized an original hypothesis was wrong. The patients who received higher doses of opioids had slower rates of healing. "This is really interesting because it suggests that perhaps we are impairing wound healing in these patients by trying to give them opioid analgesics," says Shanmugam. "Now my team is starting to look into this to see if we can understand the mechanisms by which these medications may be contributing to delayed healing."

Shanmugam has applied for funding for the next step – using molecular methods to screen wound fluid for other molecules that might predict either the microbiome profile or the clinical outcome. "We have found a unique bacterial profile that seems to be predictive of poor outcome in patients in the WE-HEAL study," she explains. "If we can find a way to detect this combination of bacteria using similar quorum-sensing molecules, then there's a chance of developing a bedside tool to help clinical decision making."

indications that it is hereditary among certain ethnic groups and that it is autoimmune in nature. In the United States, it disproportionately affects young African-American women. Onset is most common in the late teens and early 20s.

"As you can imagine, this disease significantly impacts quality of life," Shanmugam says. "Folks with this disease find it difficult to hold down a job; their disease flares can impact personal relationships; and the lesions themselves are incredibly painful." Due to the fact that it falls between medical specialties, Shanmugam continues, studies have shown that patients with HS have higher utilization of the emergency room and other high-cost medical services than patients with other

inflammatory skin disorders. "On many levels there is an unmet need to better understand the drivers of this disease," she explains.

In Washington, D.C., a majority African-American community, Shanmugam has found no shortage of cases to examine. "We recently established a clinic dedicated to the care of patients with HS, and there are multiple specialties at GW interested in treating these patients, including dermatology, urology, plastic surgery, general surgery, and infectious diseases. Our goal is to help these patients get more focused and coordinated care from a team of doctors with expertise in HS management," she says. "Clinically, now I harness some of the immune treatments used to treat diseases such as rheumatoid

arthritis to treat HS with some success, but through our laboratory, we are also working on understanding at a molecular level the pathways that drive HS.”

Her team has been testing the host immune response in tissue samples from HS patients. Then they are profiling the bacteria contained in the samples from the infected site. Thus far, they have determined that patients who have been treated with immune suppression drugs have less active disease. “With HS patients who have had surgery, if you treat them post-op with immuno-suppressants — tumor necrosis factor inhibitors such as Humira and Remicade — they have a lower risk of recurrence, and if [HS] does return, it is less severe than in those who are not treated with immuno-suppressants,” says Shanmugam. “Once you get this under control, it’s amazing how positively it affects their quality of life.”

Shanmugam, who graduated from the same London medical school as Douglas Nixon, M.D., Ph.D., chair of the Department of Microbiology, Immunology, and Tropical Medicine and Walter G. Ross Professor of Basic Science Research at SMHS, says: “One of the great things about being a physician scientist is that by making observations at the bedside, you can really focus on what factors seem to be clinically important, and this is one of the missions of our laboratory — we are really focused on translating observations

from the bedside to understand them at a molecular level so that we can accelerate research in immune diseases.”

As for the quotation in her immunology text, Shanmugam says, “I use the quote in a talk I give to the medical students. It’s from a journalist named Janice Hopkins Tanne, who had written a piece for the British Medical Journal where she interviewed doctors about their least favorite parts of medical school. I loop it in to a discussion about the Tasmanian devil, because they were at risk of becoming extinct due to one of the few forms of transmissible cancer. The animals are susceptible because they have been so inbred, they do not have enough genetic diversity in their immune system to recognize self and non-self. It makes a good hook to help the students realize how important the immune system is, why genetic diversity is important, and what can happen when things go wrong.

“There was a time, during medical school, when I agreed with that quote,” she continues. “But seeing rheumatology in the clinic totally changed my understanding of immunology — suddenly all these pathways that seemed so unintelligible became real, and I could see how modulating them impacted my patients. Immunology is defining the future of medicine, and it is great to be a part of a strong team helping to grow immunology at GW.” ■

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MATCH DAY

The Perfect Fit

BY CAROLINE TRENT-GURBUZ
ILLUSTRATION BY JOHN TOMAC



At 11:45 a.m. on Friday, March 18, Paul Kline, M.D. '16, stood patiently with his wife, Mercedes, and their daughter, Coral, boxed into a row in Ross 101 on GW's Foggy Bottom campus. The seats around them had pull-up desks balancing plastic flutes of champagne, and the movements of the undulating crowd — a blend of students, family members, and friends — caused ripples in the bubbling liquid.

"I'm excited," Kline said, his voice muffled against the dull roar of conversation. "I'm excited for my friends. There are a lot of people trying to match in very competitive programs."

Kline and his classmates kept watch on the time, waiting for the clock to strike noon. As the countdown began, Kline grasped a handful of letters; some were missives of support and love from family and friends, but one letter spelled out his future. When the hour and minute hands met at 12, Kline — along with fourth-year medical students across the country — opened his sealed envelope to find where he would complete his residency program.

This coordinated event, a logistical feat, is known as "Match Day."

The Foundation

At the GW School of Medicine and Health Sciences (SMHS), the first three years of medical school are an immersion in all things academic and clinical. During the fourth year, however, students build on that strong curricular foundation and focus their attention on the next level in their careers: residency training.

The process is linear, logical, and — at times — highly emotional. First, students examine institutions, weighing the pros and cons of residency programs, geographical locations, and personal preferences, an undertaking that can defy an ambitious student's normally systematic approach.

"I view my role [as the internal medicine residency program director] as helping a student to brainstorm out loud about what she or he is really looking for in a training program,



and providing encouragement that it is OK — and appropriate — to prioritize whatever is most important," explains Jillian Catalanotti, M.D., M.P.H., associate professor of medicine at SMHS. "Sometimes a student just needs a trusted advisor to say it's OK to rank a program highly to live near someone you love, because most medical students have been told the opposite all their lives."

Sasha Shackelford, M.D. '16, for example, narrowed her search to the East Coast. "I'm trying to move north; my boyfriend is moving to New York, so it's going to be really great to be near him, hopefully," she said on the day of the match. She was looking to match in pediatrics at either Yale University or one of two New York-based programs.

Once students have chosen their programs, they complete a rigorous application process. Residency directors, also looking for the best fit, review the applications and invite their preferred applicants for an interview. Students crisscross the country, meeting face-to-face with residency program personnel, and both parties — student and program — create a ranked list of their top choices. That's when the algorithm takes over.



By The Numbers

The National Resident Matching Program (NRMP), established in 1952 as a way to organize the residency application process, uses a blind system to ensure that medical students and residency programs receive their top choices, or as close to their top choices as possible.

“[NRMP] is an organization that solely exists to make sure that the process is fair and consistent from state to state,” explains Richard Simons, M.D., senior associate dean for M.D. programs and professor of medicine at SMHS.

Once the students and programs have submitted their rankings, NRMP uses a mathematical algorithm to place applicants. The process, NRMP says, is applicant-proposing, meaning student preferences initiate program placement.

If, for instance, “Student A” has identified “Program A” as a top choice, the algorithm would place “Student A” with “Program A.” “Student B” could likewise be placed with his or her top choice, “Program B,” and so on. If, say, “Student C” also ranked “Program A” as a top choice, and “Program A” ranked “Student C” as its top choice — and had only one position available — “Student C” would take the spot of “Student A.” “Student A” could then be matched with his or her second choice. The matches are considered “tentative” until the algorithm has run through the entire database. The algorithm also works with couples, who can present pairs of ranks to match into a combination of programs, according to NRMP.

Although the algorithm process is straightforward, it can be a difficult concept for medical students to explain to family and friends outside of the profession.

“The whole idea that a computer matches you with where you’re going to be for four years, and where you’re likely spending the rest of your life, just statistically speaking, that’s very hard to understand,” says Nancy Gaba, M.D. ’93, RESD ’97, Oscar I. and Mildred S. Dodek and Joan B. and Oscar I. Dodek Jr. Professor and Chair of the Department of Obstetrics and Gynecology at SMHS.

For Mary Ottolini, M.D., M.P.H., professor of pediatrics at SMHS, watching her daughter, Katherine, M.D. ’12, experience Match Day was both exciting and gratifying; she could precisely understand the significance of her daughter’s match. “[Match Day] is one of those intangible events where you have to be in medicine, or closely associated with somebody in medicine, to really appreciate its magnitude,” she says. “It’s kind of like being initiated into a special club that’s nationwide.”

The Meaning

GW SMHS has had a consistently high match rate, which many attribute to both the quality of the M.D. program and the caliber of students.

“I think [the high match rate] is a combination of our talented and hard-working students, the faculty that we have, and the resources we have to invest in our students’ education,” says Simons. “It takes a lot to educate a medical student; it takes faculty, it takes medical resources, it takes hospitals, it takes basic scientists, it takes clinicians, it takes a good student affairs office, lots of staff. Like it takes a village to raise a child, it takes a lot to produce a medical student.”

SMHS students historically match at a variety of prestigious institutions, including Brigham & Women’s Hospital, GW clinical partner Children’s National Health System, and The Johns Hopkins University. In 2016, they matched in more than 30 specialties, with internal medicine and pediatrics leading the list. Several students each year also continue their training at GW, like Gaba, who matched with four classmates in the OB/GYN residency program in the late ’90s.

The Celebration

Although the process has remained constant since 1952, the celebration of Match Day has continued to evolve.

“There’s more pomp and circumstance now than when I was a medical student,” recalls Simons. “We were in a room, and we opened up our envelopes, and there wasn’t a lot of hoopla. There were no families, and it was just sort of matter-of-fact. Now, it’s, I think, what it should be; it’s a celebration.”

Jeffrey S. Akman, M.D. ’81, RESD ’85, vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS, echoes Simons’ observation: “Match Day is much more festive and has become a family event compared to when I was a student.”

This year, when students ripped open their envelopes, the joy was palpable. Some shed tears, others jumped up and down, and Kline was struck silent. He looked down at his letter, where his match was typed in blocky print: Excelsa Health Latrobe Hospital in southwestern Pennsylvania. It was where he had completed an associate internship, and it felt like a perfect fit. “I know I’ll get a good education, and I think it’s just a great environment to be in,” he said.

Kline matched in family medicine, which, he explained, is a combination of pediatrics, internal medicine, and OB/GYN. The draw is the opportunity to care for generations: “I love the continuity of it.”

Kline earlier worked as an electrical engineer before pursuing his dream of medicine; the field, he said, appeals to both brain and heart, and there’s a good balance between the two. His goal, he added, was to open a clinic with Mercedes, a nurse. “What we want to do ultimately is open a clinic in a very rural area where there are no doctors and make it sliding scale, or if people can’t pay, that’s fine,” he said. “We just want to help.” ■

"[Match Day] is one of those life events that marks a transition point in your life, where you feel like you're going from being a forever student to actually being an adult and getting your first job — even though it's, in reality, nobody's first job. I think the way the match works — playing the odds in terms of where you're going to end up — is actually, to me, more exciting because it's an adventure, and you don't know exactly how it's going to turn out."

—Mary Ottolini, M.D., M.P.H., professor of pediatrics at SMHS



"It was an exciting time; my wife, Amy, was there with me. I remember all my classmates supported each other. Match Day was a culmination of all our training, beginning with gross anatomy continuing on to the next chapter in our lives. Everyone was extremely happy; it was an emotional time that we were able to share together. It was a special day in my life I will always remember."

—Evan Cohn, M.D. '92, a radiologist in Dallas, Texas



"It was more agonizing to make the list [of where I wanted to go] than it was to open the envelope. I felt like the other places on my list were good choices, but I really wanted to be here [at GW]. I was excited about that ... Now, I go [to Match Day] every year, and I cry every year. That overwhelming sense of excitement and emotion — whether it's positive or negative — it makes me cry. I [always] tell myself I'm not going to, but then I do."

—Nancy Gaba, M.D. '93, RESD '97, Oscar I. and Mildred S. Dodek and Joan B. and Oscar I. Dodek Jr. Professor and Chairman of the Department of Obstetrics and Gynecology at SMHS



MEDICINE BEYOND THE HORIZON



BY STEVE GOLDSTEIN

Kris Lehnhardt was lying on the living room floor of his Toronto home, watching TV with his mother, when the original Star Trek TV show came on. He stared, enraptured, a small boy trying to comprehend life exploring the universe. A few years later, his second grade class huddled around a television as a NASA space shuttle launched into orbit. Tears streamed down his cheeks. The tension, the adventure ...

You don't have to be a rocket scientist to figure out this trajectory.

Kris Lehnhardt, M.D., never let go of his dream to boldly go where no one has gone before. An aspiring astronaut, he is an assistant professor of emergency medicine and medical director of EMeRG (George Washington University

Emergency Medical Response Group), and he teaches a popular course on campus, aerospace medicine. In addition to being an expert in space medicine and the discipline known as extreme environmental medicine, Lehnhardt is a certified pilot, an advanced open water SCUBA diver, a reservist in the Royal Canadian Air Force, and an avid traveler. He also served as the flight surgeon for the Mars Desert Research Station until 2015.

In short, "Dr. Space" has done everything possible to make himself a superior candidate for that special group of people who yearn to sit atop a gigantic Roman candle and be hurled into zero gravity. Everything — even changing his nationality, sort of. "I have a green card and I will be applying for dual citizenship as soon as possible," he says. Lehnhardt was one of 5,500 applicants to the Canadian Space Agency in

2008 and qualified for the final 200. Candidates selected: two. Conclusion: Improve your odds. So Lehnhardt moved to the United States “because I thought my aerospace medicine skills would be key,” he says. Washington, D.C. is where space policy is born, and GW was receptive to encouraging space medicine. “All of what I do is potential steps toward my ultimate goal of becoming an astronaut,” he explains.

Lehnhardt’s wife, Emma, who works on strategic budget planning at NASA (where else?) says her husband is “very realistic” about his chances of reaching space. “I never find myself needing to provide checks and balances,” she says. “He knows it’s hard, not just to qualify, but there’s serendipity involved.” Scott Pace, Ph.D., a seasoned veteran of NASA and the White House who now directs the Space Policy Institute at GW’s Elliott School of International Affairs, consulted with Lehnhardt on his space medicine course, which provides a scholastic link for his own students. “On a space nerd scale, Kris is above average, but he’s pretty grounded,” Pace says. “If you run into somebody who really, really has to be an astronaut, people who are that obsessive are probably not the ones you want to place in a small metal canister and send into space!”

Part of Lehnhardt’s pathway to the stars is spent in Ross Hall’s room 104, where students gather to explore the effects of space travel on the human body. EHS 6227, Introduction to Human Health in Space, is open to med students, as well as GW graduate and undergraduate students. Class rosters run the gamut from medical residents to criminal justice majors and many future biomedical engineers. Lauren Ryan of East Greenwich, Rhode Island, who is pursuing a Ph.D. in bioastronautics and has already interned at NASA’s radiation labs through the National Space Biomedical Research Institute, was one of the first to take the course. “I learned a lot about spaceflight’s effect on the human body and how we can possibly counteract these effects,” she says. “I hope to work in this field one day, coming up with new medical technologies for human spaceflight.”

Then there was Zack Hester of Marion, South Carolina, a graduate student in International Science and Technology Policy at the Elliott School, who is interested in a career in space policy. “A foundational knowledge of the medical effects of spaceflight on the human body is important, as NASA plans to embark on new long-duration human spaceflight missions and commercial companies start to offer flights for tourism over the next decade,” he explains. That’s exactly what Lehnhardt hopes to impart to his students. “I want to outline the effects of space flight on human physiology and the medical issues that arise during space travel,” he tells them.

Space travel of any duration is tough on human anatomy: Muscles atrophy, zero gravity induces vertigo, eye problems can result from changes in intracranial pressure, bones become



more brittle, and organs tend to shift in the body. Oh, and what about your mind: What is the effect on the human psyche when you can no longer see Earth or feel its pull?

“Aerospace medicine is a critical support function” for the space program, says Rich Williams, M.D., NASA’s chief medical officer, who advised Lehnhardt on his syllabus and who serves as a guest lecturer. Other extreme environments raise similar medical issues, Williams explains, but space medicine differs owing to two important exposure factors — “microgravity and the level of radiation exposure. Over the past 50 years of human spaceflight, space medicine has emerged to care for the astronaut and mitigate the effects and risks of spaceflight,” says Williams.

In addition to his work as the medical director of EMeRG, Lehnhardt directs the Fellowship in Extreme Environmental Medicine, which offers emergency medicine physicians one year of training in wilderness, disaster, and other extreme medical environments.

Nearing 40, Lehnhardt has stayed focused on his goal of going into space but declares “as long as I’m doing things along the way that I enjoy, I worry less about the goal.”

Can a dreamer be a realist, too? Lehnhardt estimates he has “a few more years” of eligibility before his age becomes an insurmountable hurdle to joining the “right stuff” crew. Space medicine experts have no such limitations, however, and for Kris Lehnhardt, that may be just the ticket. ■



ENTREPRENEURIAL MEDICINE: Uchechi Iweala, M.D., Building on a Foundation of Big Ideas

BY CAROLINE TRENT-GURBUZ

This is a true story, begins Uchechi Iweala, M.D., a second-year resident in orthopedic surgery at the GW School of Medicine and Health Sciences. “I started reading the *Wall Street Journal* when I was a junior in high school as part of an economics class that I’d joined in the summer,” he says. “My dad’s a doctor, my mom’s an economist, so I was always on the fence [about my future career]. Then, lo and behold, there’s an article ... that just seemed to click a lightbulb in me.”

The story, which detailed the private equity buyout of a hospital corporation, called to Iweala’s dueling interests: business and medicine. “My [challenge] has been how best to marry those two aspects because, in some ways, they are very different,” Iweala says, “but I do think the synergies between the two can be very powerful.”

Those synergies have played out through his career — earning an M.D. and M.B.A. from Harvard University; serving his residency at GW; co-founding a new surgical center in his ancestral home of Nigeria; creating a novel app that revolutionizes electronic medical records (EMR) systems — and in his family. His parents and grandparents, all of whom are highly accomplished, whether in economics, medicine, or education, are a source of inspiration, Iweala says. His father, following the Nigerian Civil War, completed a residency in neurosurgery in England; his mother attended Harvard at age 19 and earned her Ph.D. in regional economic development from MIT.

“My parents [were the way] my siblings and I were inspired to work hard and try to do big things,” Iweala says. “I think we’re ultimately motivated by a passion to learn and a passion to make a difference.”

Iweala is now making his mark. With his father at his side, Iweala is leading the effort to improve health care delivery — specifically with surgical intervention and care — for Nigeria and West Africa through the development of their own modern health care facility, The Capital Health Surgical Center. The center is one of his father’s dreams, and it’s been one of Iweala’s as well since that junior year in high school. “[My dad] has been there, on the ground, building connections with doctors he knows of his generation who are also Nigerian and keen on coming back and doing something big for the country,” he says. “We’re all motivated by this; this is a genuine passion.” So far, only the recent glut in the oil market has been able to slow the project’s progress.

SignOut, a mobile app, also grew from Iweala’s entrepreneurial and altruistic spirit. The EMR system, as currently designed, he believes, is incompatible with modern technology usage, especially in emerging markets, given the world trend toward a dependence on mobile phones. “What I’ve decided is, while I’m here [at GW getting a foundation in medicine], to see how I can build an EMR that is totally divorced from any sort of desktop legacy,” Iweala says. “We’re in preliminary talks with a local Washington, D.C. hospital to actually use SignOut as a pilot IT solution for new surgical initiatives to help reduce lengths of stay [and] infection rates in surgical patients in orthopedics.”

The goal is to improve patient outcomes, Iweala says, but ultimately, his work could have a much greater impact. “I’m very excited,” he says of his ventures. “It’s motivating.” ■

In January 2010, a devastating 7.0 magnitude earthquake, centered near the town of Léogâne, struck Haiti. An estimated 3 million people were affected by the catastrophic event. Nearly 2,000 miles away in Massachusetts, Kevin Lombardi, who was active in the engineering field-services industry at the time, saw news coverage of the devastation and felt compelled to do something. “It was a call to action for me,” says Lombardi, who soon after hopped on a plane and volunteered his skills to help the Haitians rebuild.

“One of my jobs was to teach locals how to use concrete properly,” he says. “It was my understanding that people simply weren’t constructing these houses correctly. On the contrary, after a lot of frustration teaching them, I was informed by the locals that while they knew how much cement to put in the concrete, they simply couldn’t afford to *buy* the cement.”

Through this and other interactions with Haitians, Lombardi realized that throughout the international response to the earthquake, local voices weren’t being heard and local needs weren’t being met, and that this was especially true for residents’ medical needs. “That’s the reason I wanted to become a physician, to focus on service and to challenge the dynamics that create global health inequity,” he says. Intrigued by what he saw in Haiti, Lombardi spent the next year studying how the earthquake affected women’s health. That’s also when he met Marie, whom he describes as the definition of resilience.

“She never knew her father, and her mother died of an illness when she was very young. She knew vividly what it was like to go hungry, to see family ravaged by disease, and to see the little stability that she had shattered with a single shake of the ground. Marie also showed me that it was Haitian people who had the answers to their problems, not us,” he says. Marie helped Lombardi spot the real challenges facing the Haitian population and served as his translator. The couple married in 2011 and have a 4-year-old daughter.

Lombardi, a first-year medical student at the GW School of Medicine and Health Sciences (SMHS), launched YourStory International, a nonprofit organization dedicated to challenging the traditional models of international aid by empowering communities to create their own sustainable social and economic change. Established in 2013, the organization focuses on public health and economic and community development. Lombardi’s work is anchored in Léogâne and Pont Morel, Haiti, where there is little to no



HEALING HANDS IN HAITI

BY LAURA OTTO

access to high-quality primary health care. “The goal is to bring forth a new way of creating development where local perspectives are prioritized, local leadership is empowered, and development is holistic,” says Lombardi, who earned his bachelor’s degree in anthropology and history from the University of Massachusetts.

GW, he explains, was the obvious choice for medical school. “It’s an institution that is molding physicians who want to change the field, like me. It has a reputation for taking global health seriously, as well as being innovative in terms of its curriculum,” he says.

YourStory’s most recent initiative was the creation of the Pont Morel Primary and Emergency Care System. Local practitioners will provide free primary and emergency care for 5,000 people who previously had little access to medical facilities. “We promise every resident one visit with a physician annually,” Lombardi says. “Everyone gets medical records, free medications, and targeted public health education.”

Lombardi is grateful for the support of Lawrence “Bopper” Deyton, M.D. ’85, M.S.P.H., senior associate dean for clinical public health and professor of medicine at SMHS. “I took Dr. Deyton’s idea of giving students a multiday challenge and having them propose ideas to solve a clinical public health problem and used it to train our Haitian nursing students. I tasked them with creating an innovative public health curriculum.”

He adds, “It’s about investing in people where they are, not making them go to a clinic six miles away. It’s a privilege to put on my white coat and have one-on-one contact with the people I serve on a daily basis.” To learn more or to support Kevin Lombardi’s work in Haiti, visit weareyourstory.org. ■

FACULTY NEWS

Shock + Law: Good Samaritans and AEDs

Sudden cardiac arrest (SCA), when the heart unexpectedly stops beating, can strike anywhere, anytime. While those with a history of heart disease – such as a previous heart attack, coronary artery disease, or arrhythmia – are most at risk, anyone, even healthy adults or young athletes, can experience SCA. According to a 2015 Institute of Medicine Report, each year almost 400,000 men, women, and children will experience an out-of-hospital sudden cardiac event, with survival rates averaging less than 6 percent.

Those figures are why for the past five years Jonathan Reiner, M.D., professor of medicine at GW's School of Medicine and Health Sciences, and director of the GW Hospital's Cardiac Catheterization Lab, has been working to put Automated External Defibrillators (AEDs) in the hands of good Samaritans willing to make a difference.

The bill, HR 4152 - the Cardiac Arrest Survival Act of 2015, is co-sponsored by Pete Olson (R-Texas) and Gerry Connolly (D-Virginia), and is currently making its way through the House Energy and Commerce Committee and the Subcommittee on Health. According to Reiner, the bill has received widespread support, but things on Capitol Hill are never as straightforward as they seem. This is the third time the bill has been introduced.

An AED is a computer, explains Reiner, who specializes in interventional cardiology, cardiac catheterization, and heart attack treatment.



It is designed to detect a faulty heart beat and deliver an electric shock to try to restore a normal heart rhythm. Once you place the device's patches on a patient's chest, the computer analyzes the heart rhythm. It will not discharge a jolt if it determines the heart is not within a "shockable rhythm."

"It's essentially a fool-proof device," he says. "The only way to make a mistake is by not trying to use a defibrillator on somebody who is having a cardiac arrest.

"The clock is ticking," adds Reiner. "If

you resuscitate somebody with a defibrillator shock within one minute of their cardiac arrest, just 60 seconds, the data show that almost everyone survives." If the time between cardiac arrest and defibrillation passes the 10-minute mark, however, the effort is basically futile. Within those 10 minutes, says Reiner, "survival rates go from virtually everyone to almost nobody."

In June 2009, Reiner and the GW Heart and Vascular Institute launched ReStart DC in an effort to make defibrillators more available across the city. Ultimately, they distributed 150 defibrillators. When ReStart DC began

looking beyond the District's boundaries, however, they discovered a problem. The laws involving the use of AEDs were vastly different.

In early 2000, the American Heart Association lobbied for laws governing liability protections for businesses and organizations who wanted to initiate an AED program. They were successful. The unintended consequences of that achievement, however, made it something of a hollow victory. Instead of life-saving defibrillators available within a minute or two of anyone in need, the country ended up with a patchwork of laws, each state with its own unique requirements and nuances. That ambiguity meant businesses operating across multiple states often decide it is easier to avoid the risk of liability and not offer the life-saving devices.

"All the bill says is that regardless of what a state's regulations are, as long as you have a working defibrillator in your place of business, you are protected; and if you are a rescuer, as long as you are using the device with good intent to try to save someone's life, you are also protected." The bill, he says, "doesn't cost the government anything and it doesn't obligate businesses to do anything they don't want to do already, but it has the effect of saving thousands of lives." ■

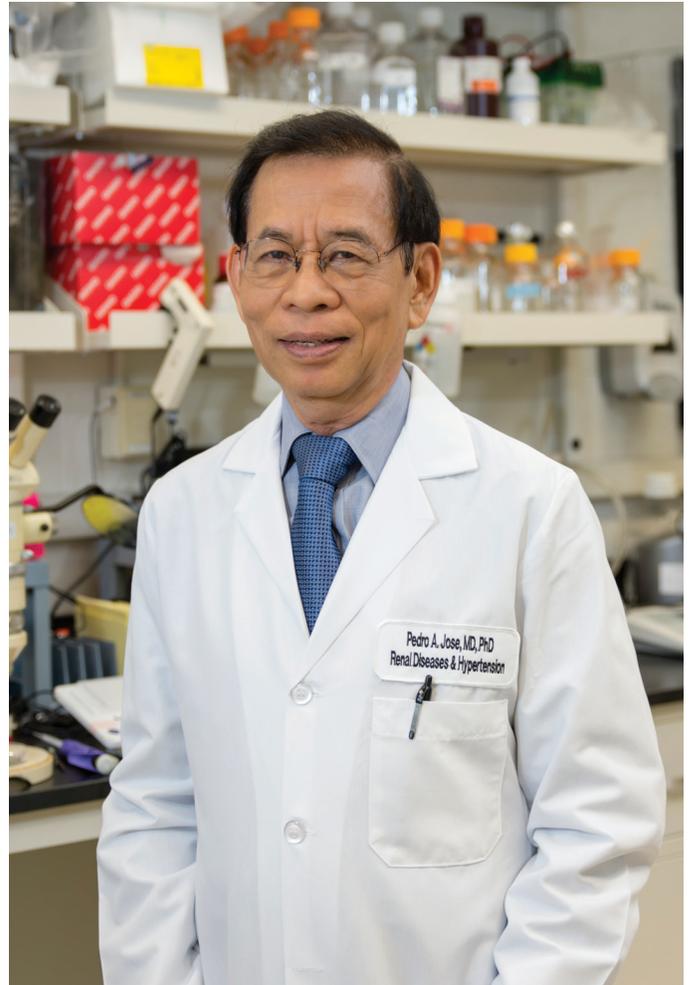


SMHS Program Director Honored Among Elite Academic Women

Joyce Maring, Ed.D., DPT, PT, program director for the Doctor of Physical Therapy Program, chair of the Department of Physical Therapy and Health Care Sciences, and associate professor of physical therapy and health care sciences at the School of Medicine and Health Sciences (SMHS), was among an elite group of 31 academic women leaders in science, technology, engineering, and mathematics who recently completed Drexel University's Executive Leadership in Academic Technology and Engineering (ELATE) Fellowship Program.

ELATE at Drexel is a collaborative project of Drexel University and Drexel University College of Medicine. The intensive one-year, part-time program focuses on increasing personal and professional leadership effectiveness, leading and managing change initiatives within institutions, using strategic finance and resource management to enhance organizational missions, and creating a network of exceptional women who bring organizational perspectives and deep personal capacity to the institutions and society they serve.

Maring was nominated for the fellowship by Jeffrey S. Akman, M.D. '81, RESD '85, vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS. She began the year-long program in May 2015 with online assignments and community-building activities. Throughout her fellowship, Maring was mentored by Joseph Bocchino, Ed.D., M.B.A., senior associate dean for health sciences at SMHS. As part of the program, fellows participated in three week-long in-residence sessions, where they enhanced their knowledge and skills in the business practices of higher education, project management with diverse stakeholders, and effective communication on a variety of leadership platforms. ■



Getting to the Heart of Hypertension

Pedro A. Jose, M.D., Ph.D., professor of medicine in the Division of Renal Diseases and Hypertension and professor of pharmacology and physiology at the GW School of Medicine and Health Sciences (SMHS), was a co-recipient of the prestigious 2015 Excellence Award in Hypertension Research, presented by the American Heart Association.

Jose received the award, which honors excellence in research and discoveries in hypertension, for his landmark research, which analyzes the relationship between a high-sodium diet and an increase in blood pressure.

"Rather than prescribing 'trial and error' drugs to our hypertension patients, [Jose and] his research will enable treatment of patients based on their genetic makeup," said Alan Wasserman, M.D., chair of the Department of Medicine and Eugene Meyer Professor of Medicine at SMHS. ■

Analyzing HIV

Michael Bukrinsky, M.D., Ph.D., professor of microbiology, immunology, and tropical medicine at the GW School of Medicine and Health Sciences and developmental core director of the DC Center for AIDS Research, received an R01 grant from the National Institute of Medicine for his research on HIV/AIDS. His project, "Metabolic Complications of HIV Disease Caused by Nef Released from HIV-Infected Cells," will analyze the role of the protein Nef when it is released from HIV-infected cells in metabolic co-morbidities, such as cardiovascular disease, dyslipidemia, atherosclerosis, and insulin resistance. Bukrinsky and his co-primary investigator have hypothesized that HIV-infected cells instigate these systemic metabolic diseases when Nef is released from viral reservoirs, and they will determine the mechanisms behind its extracellular activity. ■



"Establishing a charitable gift annuity at GW was a great option for me. It provides income I can count on, and I'm able to support GW and its programs at the same time!" – Mildred Reynolds, EdD '78

Mildred's gift will support the GW Institute for Spirituality and Health (GWish) and the Graduate School of Education and Human Development (GSEHD).

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Leadership in Care

Mandi Pratt-Chapman, director of the GW Cancer Institute, is expanding her scope to the newly established GW Cancer Center, where she will serve as associate center director (ACD) for patient-centered initiatives and health equity. In this role, Pratt-Chapman, a nationally recognized leader in patient navigation and cancer survivorship policy and training, will build on her GW Cancer Institute initiatives by creating a patient support services program. She will also maintain a portfolio of sponsored projects related to patient-centered care and health equity; work with other ACDs in prioritizing team science to improve the

quality and equity of cancer prevention, care access, and delivery; support community relationships, engagement, and research; and enhance access to GW Cancer Center clinical trials.

"I am honored to be selected for this important role within the GW Cancer Center. I am proud of the work that we've already been able to do at the GW Cancer Institute, and I look forward to continuing to serve our community with the highest quality of patient support that we can provide," Pratt-Chapman said. "I'm looking forward to working with my colleagues to make GW the cancer center of choice for all the members of our community and in particular for those with unique needs, such as our LGBT population. This is an area we can lead the nation in addressing a substantial unmet need."

Pratt-Chapman was also recently recognized by the Union for International Cancer Control. She was named one of eight Young World Cancer Leaders, based on her track record in cancer control and prevention, and she attended the 2015 World Cancer Leaders' Summit (WCLS) in Istanbul. The summit addressed urgent actions needed to scale up international collaboration and reduce premature deaths from cancer by one-third within the next 15 years. ■

One of the Fellows



Lopa Mishra, M.D., director of the Center for Translational Medicine, professor of surgery at the GW School of Medicine and Health Sciences,

and a senior leader at the GW Cancer Center, was named a 2015 fellow by the American Association for the Advancement of Science (AAAS). Prior to her move to Washington, D.C., Mishra served as chair and professor of gastroenterology, hepatology, and nutrition at the University of Texas MD Anderson Cancer Center.

The AAAS recognized 347 fellows for their contributions to education, innovation, and scientific leadership. Fellows were nominated and elected by the steering groups of the AAAS' 24 sections, three AAAS members and fellows, and the AAAS chief executive officer. Mishra, who was selected for her discoveries on the suppressor role of the TGF-beta pathway in stem cells and advances in liver and gastrointestinal cancer, was one of 33 fellows recognized for contributions to medicine. ■

Top Honors

The American College of Physicians (ACP) recognized three GW School of Medicine and Health Sciences faculty members for their outstanding contributions to medicine in 2016:

- Carole Horn, M.D. '69, associate clinical professor of medicine, was awarded the Ralph O. Claypoole Sr. Memorial Award for Devotion of a Career in Internal Medicine to the Care of Patients;
- Alan Stone, M.D., FACP, clinical professor of medicine, received the Arnold P. Gold Foundation ACP Award for Medical Humanism; and
- Robert Wilkinson, M.D., MACP, Professor Emeritus of Clinical Medicine, received the Outstanding Volunteer Clinical Teacher Award. ■



Robert Wilkinson, M.D., MACP, Professor Emeritus of Clinical Medicine

RIGHT ON TARGET

BY CAROLINE TRENT-GURBUZ | PHOTOGRAPHY BY DAVID PERRY

Clay Siegall, Ph.D. '88, was 19 years old when his father was diagnosed with brain cancer. "Life changes as you know it," Siegall says. The University of Maryland premedical student — one of five siblings — stepped in on occasion to help, accompanying his father to the oncologist. It was there that his career began to take shape.

"I would ask the oncologists, 'Where do you get your tools? Where do you get your medicines?'" Siegall says. His advisors at the University of Maryland, with whom he shared his curiosity, explained how best to consider a path toward research. "I'm 19 years old, and I'm just learning about the world of medicine and research," Siegall recalls.

What he discovered was biomedical science. A six-month internship with the National Institutes of Health (NIH) opened up a world of tools and therapies — and possibilities. "I wanted to go to grad school and get a Ph.D., and that became my new mission: to learn how to make medicines that oncologists could use," he says.

The George Washington University (GW), which maintained a close relationship with the NIH, was "the perfect spot." As Siegall explains, many of the NIH scientists were adjunct faculty members at GW, and the Potomac, Maryland, native could stay close to home to support his family. "My mom was having a tough time," he says, "and partway through my second year of grad school, my dad passed away."

Siegall entered graduate school in the genetics department and conducted his research within GW's Institute for Biomedical Sciences, where he worked under Ajit Kumar, Ph.D., professor of biochemistry and molecular biology at the GW School of Medicine and Health Sciences. Kumar, Siegall says, further strengthened the link between GW and the NIH and introduced the young researcher to "very interesting science."

"He was my Ph.D. mentor and helped guide the early parts of my career and my education," Siegall recalls. "He helped continue my introduction to the NIH through connections with NIH scientists."

Siegall, in support of his GW mentor and the school's mission of advancing research, educating a diverse health care workforce, healing, and promoting a culture of excellence, later contributed a six-figure gift to Kumar and his lab in the Biochemistry and Molecular Genetics program.

Following graduation, Siegall returned to the NIH for a postdoctoral fellowship and, two years later, a full-time position. "I published a number of papers on my work in targeted cancer therapy," he says, and his research attracted the attention of

pharmaceutical companies. He turned down several offers, but Bristol-Myers Squibb offered him what he couldn't turn down: a position with a budget for lab space and slots for new employees. "They really laid out a plan that allowed me to go after the vision I had of making therapies," he says.

Standard cancer treatments typically involve cytotoxic drugs, agents that indiscriminately kill all cells that divide, whether cancerous or healthy. Targeted cancer therapies — Siegall's research focus — are more refined. He sorts them into three categories: those drugs that target the outside of the cell, those that target the inside of the cell, and those that target the immune system. "I think all three ways of targeting cancer will represent the future of cancer therapies," he says.

When new management took over at Bristol-Myers Squibb and made a brief departure from targeted therapies, Siegall, who had transferred to Seattle with the pharmaceutical giant, struck out on his own. He started Seattle Genetics, Inc. Today, the company has 12 cancer medications in development and one approved product, ADCETRIS, which is commercially available in more than 60 countries. "It's an antibody with a chemotherapy attached, so you can deliver the chemotherapy on the back of a vehicle that targets cancer, sparing healthy cells," Siegall explains.

Seattle Genetics has more than 250 sites around the globe for clinical trials, and one of those sites brought Siegall, in a roundabout way, back to GW. The H. Lee Moffitt Cancer Center and Research Institute at the University of South Florida in Tampa was once the home of renowned cancer researcher and lymphoma expert Eduardo Sotomayor, M.D., with whom Siegall worked. "Eduardo is well known to Seattle Genetics, and vice versa," Siegall says. In 2015, Sotomayor joined Siegall's alma mater as the director of the GW Cancer Center (GWCC), a major new initiative promoting cancer-related activities, including basic science and clinical research, patient care, and policy. With an aim of acquiring a prestigious National Cancer Institute designation, GWCC prioritizes revolutionary approaches to cancer, such as immunotherapy.

While Seattle Genetics specializes in medications targeting the cell surface, like ADCETRIS, it is expanding to include drugs that zero in on the inside of the cell and others that target the immune system. All of the therapeutic approaches, Siegall says, can potentially benefit the patient.

"We are very eager to treat cancer patients in the best way possible," he says. ■



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PAYING IT FORWARD



Stanley Kulaga Jr., M.D. '64



*Bennet Porter Jr.,
M.D. '53, A.A. '49*

SMHS ALUMNI GIVE TO PUT ADVANCED EDUCATION WITHIN REACH

BY CAROLINE TRENT-GURBUZ

Calculating the value of an education is both literal and figurative, an amalgamation of dollars and cents, and knowledge and skill. For many, the financial costs of a medical education are a burden to a budding health care career. At GW's School of Medicine and Health Sciences (SMHS), however, two alumni, whose new endowed scholarships total nearly \$2 million, have ensured that the next generation of physicians can focus their efforts on learning. Stanley Kulaga Jr., M.D. '64, and Bennet Porter Jr., M.D. '53, A.A. '49, had a first-hand understanding of

that burden — and the significance a scholarship can have on a physician's future.

Kulaga, a native of Reading, Pennsylvania, spent his summers and holidays working at his father's business, an auction house, to help pay for his education costs. During his undergraduate years at Temple University, a scholarship from Breyer's Ice Cream helped make Kulaga's financial burden more manageable. When he was accepted to medical school at GW, the costs were too great, but, thankfully, his dad stepped in to help when the GI Bill wasn't enough.

“After the GI Bill left off, his father actually paid for his medical school,” recalled Kulaga’s daughter, Karen Venezia. “Through his education, [he] was able to make a good living, and he felt it was important to give back to other young people who shared an interest in medicine but may not have the means to pay for school.”

Kulaga, added Venezia, always felt a connection to GW, even when he steered away from the practice of medicine to a clinical research career at pharmaceutical firm Merck & Co., where he worked for more than two decades.

“His medical career was always really important to him, and [GW] was where he obtained it, so [the school] was very close to his heart,” Venezia said.

For GW, Kulaga’s gift is invaluable.

“Cost is one of the most significant barriers to pursuing a medical education,” said Jeffrey S. Akman, M.D. ’81, RESD ’85, vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS. “Dr. Kulaga’s dream of ‘paying it forward’ in scholarships to M.D. program students at SMHS reflects a profound sense of gratitude toward his alma mater. His wonderful gift will ease the debt burden that our students face as they embark on their careers in medicine.”

Porter likewise felt obliged to give back to an alma mater that had given him so much.

“He thought education was so important and so appreciated the education he got at GW,” said Porter’s daughter, Ronda Pitts, adding that her father instilled that appreciation in her and her brother. “As I was growing up, he always talked highly of [the school] ... he owed a lot [to GW] for his successful career.”

Porter, after graduating from medical school, had a family practice with a fellow doctor in Silver Spring, Maryland, for close to 40 years. After retiring, he moved to Hermitage, Tennessee, and took a greater interest in creative pursuits: playing piano and organ, mostly by ear; analyzing music theory; and carving wood.

He always wanted to remember GW, Pitts said, so he created an endowment to the school in his will.

“The gift was amazing,” explained Dennis Narango, M.A., associate dean and associate vice president for development and alumni relations. “Dr. Porter made it unrestricted, enabling the Dean to use it where he determined it was needed most. GW is very fortunate to receive this donation.”

The gift, Akman decided, should go toward the students.

“Reducing student debt load is one of my highest priorities,” he said. “When I became aware of this magnificent unrestricted gift, I immediately decided that it would be most beneficial in supporting scholarship opportunities for our students. Dr. Porter leaves a remarkable legacy as his gift will make a significant difference in the lives of many GW medical students.” ■



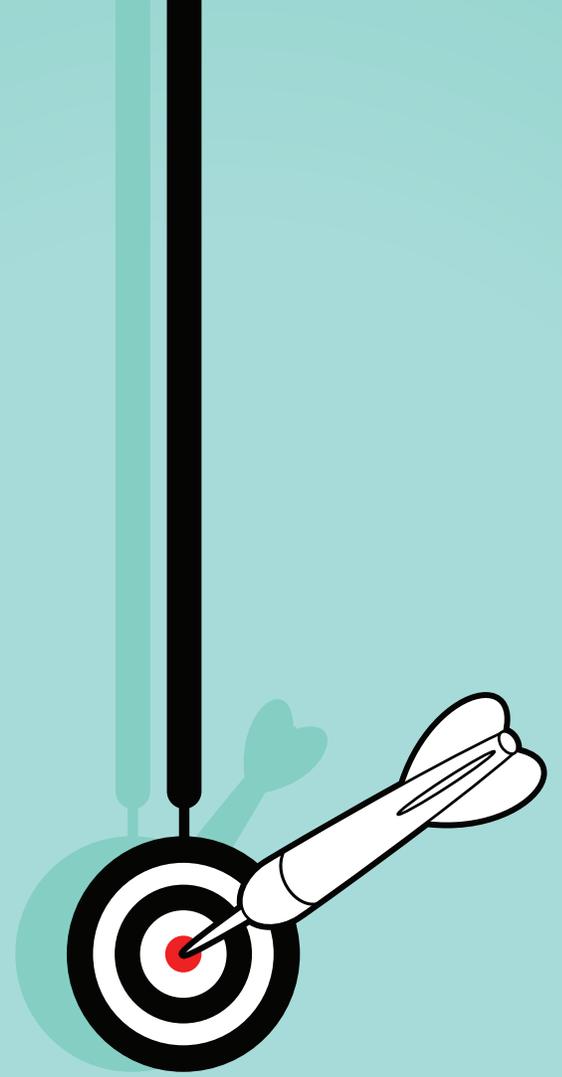
SUPPORT FOR PRIMARY CARE

Just a few weeks removed from a record-high drawing of the Powerball lottery, a pair of GW School of Medicine and Health Sciences (SMHS) M.D. program Class of 2017 students received substantial prizes of their own: the third annual Primary Care Scholarships.

For third-year students Yodit Beru, M.P.H., and Alexander Sullivan, the slushy Jan. 28 morning began normally with a full-class gathering for their Practice of Medicine course. Unlike the typical day-long workshop, however, this particular class began with rounds of applause from classmates as Beru and Sullivan were awarded their \$100,000 scholarships.

The scholarship, now in its third year, was established anonymously by two grateful patients of primary care physician Matthew Mintz, M.D. ’94, RESD ’97, assistant dean for pre-clinical education and associate professor of medicine at SMHS. This year, more than a dozen third-year students applied for the award. Selection is based on rigorous criteria including academic standing, commitment to pursuing primary care as a specialty, and debt load.

Both of this year’s recipients discovered their love for the front-line medical specialty as GW Healing Clinic volunteers, Beru serving as a co-clinic manager of the Cheverly Health Center clinic in Prince Georges County, Maryland, and Sullivan serving as co-director of provider relations for the Bread for the City clinic in Washington, D.C.’s Shaw Neighborhood. ■



DRAWING FROM
THE WELL

It's a simple, buzzworthy word, frequently used but rarely acknowledged in the fast-paced, high-stress world of health care professionals: *wellness.*

BY CAROLINE TRENT-GURBUZ

For many, enduring the years of medical school, internship, and residency is a rite of passage; long hours and only snatches of sleep are a kind of boot camp, and wellness — taking care of oneself — can fall by the wayside while taking care of others, leaving some physicians vulnerable to the very conditions they may be treating. According to the American Foundation for Suicide Prevention, physicians are likely to grapple with depression, mental illness, and alcohol and substance abuse, and as many as 400 commit suicide every year in the United States.

The GW School of Medicine and Health Sciences (SMHS) M.D. Class of 1985 intends to address this trend by doing what they've committed their lives to: healing.

"We all get into medicine because we love taking care of others," says Lawrence "Bopper" Deyton, M.D. '85, M.S.P.H., senior associate dean for clinical public health and professor of medicine at SMHS. "Only in the last couple of years have we recognized that we need to teach our medical students and our interns and residents that their own wellness, their own health, is an important component of being a complete professional."

Deyton, along with a few of his classmates — Stephen Cozza, M.D. '85, professor of psychiatry at the Uniformed Services University of the Health Sciences; Mark Woodland, M.D. '85, RESD '87, Emeritus Vice Dean for Graduate Medical Education at Drexel University College of Medicine and chair

of the Department of Obstetrics and Gynecology for the Reading Health System; and Debbie Katz, M.D. '85, national physician lead for community and health, OptumHealth — came up with an idea to prioritize that component while planning their 30th medical school reunion. That idea, a fund supported by GW alumni, will promote physician wellness after graduation and training.

"The gift was conceived as a legacy gift to GW," Cozza explains. "I hope it creates a sustained effort to support the health of physicians in their practice through a variety of different educational, advocacy, mentoring, and other service programs."

The key, Deyton says, is not looking just at physicians' professional wellness, but "wellness writ large."

"By wellness, we mean global wellness or holistic wellness," he says, "not just physical health or mental health, but also career wellness and family wellness."

The Class of '85 is hoping that its gift, aimed at making a direct impact on current and future generations, will serve as an inspiration to other SMHS alumni and reunion classes.

"I am very proud that our class has thought enough of this effort to create this legacy and to move this effort forward," says Woodland, who has presented on physician wellness for multiple health care associations. "I encourage all members of the Class of 1985 and any other alumni to help us in this very important program." ■

PA Program Near and Dear

Melissa Bader Lewis was an environmental scientist, but as a college student at Rutgers University, she worked as an emergency medical technician (EMT), delivering care and comfort to patients. Her boyfriend (and later husband), Ian, was an EMT as well, and they envisioned their children following them into the profession. It's a tradition, says Bader's mother, Rochelle "Shelley" Bader, Ed.D. '93, that runs strongly in the EMT community.

Unfortunately, Melissa never got the chance to see that tradition fulfilled. At the age of 33, she suffered a fatal pulmonary embolism, despite the efforts of the EMTs who rushed to her aid.

"My husband and I wanted to do something to honor the memory of our late daughter," Bader explains. She and her husband, Barry, established a \$230,000 endowed fund through their estate plan to support scholarships for physician assistant (PA) students who previously served as EMTs.

"The PA program at GW has always been near and dear to my heart," she says. "My husband and I believe in trying to honor the memory of people and paying things forward."

Bader, who was a staff member at the GW Himmelfarb Library and the Office of the Dean of the School of Medicine

and Health Sciences (SMHS) for 36 years (she retired in 2007 as associate vice president for educational resources), and Barry also established a \$140,000 endowed fund to support an annual, one-day development retreat for SMHS librarians.

Patrisha Creevy, PA-C '79, says that not only was the PA program near and dear to her heart, but it also became home. "I loved GW," Creevy says. "I would do it again in a heartbeat."

Creevy, who didn't have much money as a student, worked part-time with a few of her classmates at a health clinic to make ends meet. After graduation, she decided to stay in the area. A cardiology specialist, she worked at several hospitals in the District, and her ties to GW remained strong; she volunteered as an interviewer for the GW PA applicants, a group of students she describes as "rocket scientists, for sure."

"I like to give back, I like asking questions and getting feedback, and [I like] just being nice and encouraging to [the applicants]," she says.

Creevy had also regularly donated to the GW PA program, but after retirement, she decided to include GW in her estate plan with a gift to support scholarships for PA students.

"I just felt like I had to give back and help somebody who needed it like I did," she says. ■

CLASH OF THE CLASSES: PT Alumni Scholarship Competition

The Doctorate of Physical Therapy (DPT) Alumni Scholarship Competition began as a friendly rivalry. The DPT student presidents of the GW School of Medicine and Health Sciences (SMHS) Classes of 2012, 2013, and 2014 charged their classmates with donating funds, with the stipulation that the class with the most participating donors — not the highest amount raised — would be declared the winner. So, for one month at the end of 2014, the three classes got to work. The victor: the Class of 2013.

The real winners, however, were the three recipients of the first-ever SMHS DPT scholarship; PT faculty members chose Krissy Mariano, Sara Lewis, and Rachel Plumb, all of whom are members of the Class of 2016 and volunteers with the National Multiple Sclerosis Society and SMHS Free from Falls program. With support from the scholarships, the trio have been able to pursue additional and valuable educational opportunities.

After the success of the first competition, the three classes — plus the Class of 2015 — held the second annual competition this past winter. The Classes of 2013 and 2015 tied for first place, and 60 new donors have now joined the fundraising effort.

For more information on the PT Alumni Scholarship Competition, please contact Sarah Klein at smklein@gwu.edu and visit <http://smhs.gwu.edu/physical-therapy/support/dpt-alumni-scholarship-competition>. ■



GW's Constellation Grows Larger

Nadja West, M.D. '88, Adds a Third Star to Her List of Achievements



Lt. Gen. Nadja West's children, Logan and Sydney, replace her two-star shoulder board rank with the three-star shoulder board rank during her formal ceremony in honor of her promotion to lieutenant general, Feb. 9, 2016. *Photo by Brandon Marrone.*

In December 2015, with the help of her children, Nadja West, M.D. '88, pinned on her third star, reaching a trio of milestones in the process, becoming the United States Army's first African-American woman Lieutenant General, the highest-ranking woman to graduate from the U.S. Military Academy at West Point, and the first African-American woman to serve as the U.S. Army Surgeon General.

There has been no shortage of firsts for West's career. She was the Army Medical Command's first female African-American two-star general when she served as the senior medical officer on the Joint Staff and medical advisor to General Martin Dempsey, the chair of the Joint Chiefs of Staff. As Army surgeon general, West takes over for another trailblazer, Lt. Gen. Patricia Horoho, who was the first woman to hold the position.

In her new post, West is the commanding general of the United States Army Medical Command, providing advice and assistance to the Army secretary and chief of staff on all health care matters pertaining to the U.S. Army and its military health care system. ■



A Salute to Service

Jay Katzen, M.D. '72, B.A. '67, was among six George Washington University alumni who received the 2016 Alumni Outstanding Service Award at the 55th annual Alumni Outstanding Service Awards ceremony.

The annual award is presented to those alumni who advance the mission of the University through dedicated volunteer efforts in support of its programs, thereby ensuring the University's impact on the community and future generations of students.

Katzen is a practicing ophthalmologist with the Eye Center in Alexandria, Virginia. A native Washingtonian, he serves as a member of the GW School of Medicine and Health Sciences (SMHS) Dean's Council and the GW Board of Trustees, and, along with SMHS M.D. program classmate Stuart Kassen, M.D. '72, FACP, MACR, and Lara Oboler, M.D. '95, he plays a key role in the university's comprehensive campaign – *Making History: The Campaign for GW*.

Katzen has built on the philanthropic efforts of his family members, Cyrus and Myrtle Katzen, who made a \$10 million gift to GW in 2008 to fund a range of cancer research initiatives. Today, Katzen oversees the family foundation, which has contributed substantial resources to local charities and organizations, including the GW Heart and Vascular Institute and the Katzen Cancer Research Center.

Past SMHS recipients of GW's Alumni Outstanding Service Award include Lara Oboler, M.D. '95, in 2014; Richard Popiel, M.D. '81, RESD '83, M.B.A., B.A. '75, in 2013; Christopher L. Barley, M.D. '93, in 2012; Jack Summer, M.D., RESD '81, who received the Jane Lingo Alumni Outstanding Service Award in 2011; and Kerry Kuhn, M.D. '73, RESD '77, B.A. '70, in 2009. ■

1960s

Stephen H. Mandy, M.D. '66, B.A. '63, received the Samuel J. Stegman Award for Distinguished Service, the highest honor bestowed by the American Society for Dermatologic Surgery (ASDS), for his significant contributions to the ASDS and to the field of dermatologic surgery.

1970s

Richard Abbott, M.D. '71, received the Mark Tso Golden Apple Award from the International Council of Ophthalmology at the World Ophthalmology Congress held in Guadalajara, Mexico, in February. Abbott is currently the Thomas W. Boyden Health Sciences Clinical Professor of Ophthalmology at the University of California-San Francisco.

Terry Garfinkle, M.D. '77, M.B.A. '08, has been appointed the chief medical officer of Partners Community Physicians Organization in Massachusetts.

Kenneth Alan Miller, M.D., RESD '77, was named one of the Castle Connolly Top Doctors in the New York metro area.

Russell C. Libby, M.D. '79, B.S. '74, FAAP, was named a top doctor by the *Washingtonian*, *Northern Virginia Magazine*, and Castle Connolly.

Sallie J. Fourcroy, M.D., Ph.D., M.P.H., RESD '79, received the 2016 GW Department of Urology Harry C. Miller, M.D., Award at the Third Annual Harry C. Miller, M.D., Visiting Professorship Symposium and Awards Luncheon in March.

1980s

Joyce S. Tenover, M.D. '80, Ph.D., was named one of the 2016 Bay Area Top Doctors by *San Francisco Magazine*.

Howard Alan Zucker, M.D. '82, was appointed by Governor Andrew M. Cuomo as New York State Health Commissioner. He was confirmed by the New York State Senate on May 5, 2015.

Terrance Lee Baker, M.D. '84, FAAE, was named Physician of the Year by the American Association of Physician Specialists, Inc.

Michael Doll, MPAS, PA-C '88, won the 2015 GW Physician Assistant Program Public Service Award for his dedication and commitment to the PA profession.

1990s

Justin L. Cashman III, M.D. '97, M.B.A. '16, was named an Anne Arundel County Top Doc for 2015.

2000s

Ian Marks, PA '00, was recently promoted to lieutenant commander in the United States Coast Guard. In 2014, Marks was awarded the Coast Guard Commendation Medal.

Charles Randal Gill, M.P.H., B.S. '05, received the 2015 Foster G. McGaw Graduate Student Scholarship from the Foundation of the American College of Healthcare Executives.

Michael D. Jacobson, PA-C '05, received the 2015 GW SMHS Physician Assistant Program Dr. Jules Cahan Distinguished Teaching Award for his ongoing service and mentorship of GW's PA students.

Robert Roose, M.D. '05, M.P.H. '05, expanded his responsibilities in a dual role as chief medical officer/vice president of addiction and recovery services, Mercy Behavioral Health Care.

Tina Brown, M.S. '07, turned her health care enterprise master's thesis into an owner-operator practice, Divine Fitness and Health Services, Inc. The practice is a for-profit, minority-owned, and veteran-owned health promotions organization that seeks to address some of the issues associated with health disparities and health inequities, and to help improve health and health outcomes among African Americans and other minorities in the Baltimore community.

Stacey B. Hodgman, M.S. '08, was recently promoted to divisional vice president of clinical integration and patient navigation at Kindred Healthcare.

Jarett Feldman, M.D. '09, recently joined the Mount Kisco Medical Group, a multi-specialty practice serving eight campuses in eastern New York. Feldman is also a fellow in hematology and medical oncology on the genitourinary medical oncology service at Memorial Sloan Kettering Cancer Center.

Felecia Patterson, DPT '09, opened her own practice, Total Fitness Solutions Physical Therapy, in Bowie, Maryland. The practice is a comprehensive clinic promoting overall health and wellness through PT services and fitness/education.

Catherine Denny Printz, DPT '09, was appointed assistant clinical professor of physical therapy and rehab science at the University of California-San Francisco (UCSF). She splits her time between clinical work within the UCSF faculty practice and teaching within the Doctor of Physical Therapy program.

Jennifer M. Stonebrook, M.S. '09, was selected to the 2016 Professional Education Committee of the National Hospice and Palliative Care Organization.

2010s

Aaron Henry, PA-C '10, a representative of the American Academy of Physician Assistants within the men's health network, participated in a dialogue on men's health issues at the White House in January 2016.

Rachel Van Dusen, M.D. '10, RESD '15, was appointed to the Columbia Memorial Hospital Specialty Clinic and was named assistant professor of surgery at Oregon Health and Science University. Van Dusen, a general surgery specialist, is a member of both the American College of Surgeons and the Association of Women Surgeons.

IN MEMORIAM



In Memoriam – Robert I. Keimowitz, M.D.

Former Dean and Professor Emeritus Robert I. Keimowitz, M.D., died March 25, 2016, 10 days before his 77th birthday. A beloved member of the GW community, Keimowitz joined the School of Medicine and Health Sciences (SMHS) faculty in 1970 and served in many roles at the school, including as assistant dean for admissions, dean for academic affairs, and dean.

He was admired and respected by those who knew him, and he made a significant impact on the lives of his patients, his students, and the faculty and staff whom he served and mentored. He was dedicated to the practice of medicine and remained an active member of the GW community long after he retired as dean. Until recently, Keimowitz supervised

medical students in the clinical setting as a preceptor and saw patients at the GW Medical Faculty Associates.

"Bob Keimowitz was a great leader for SMHS," said Jeffrey S. Akman, M.D. '81, RESD '85, vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS, for whom Keimowitz served as a mentor. "A caring and brilliant physician who was deeply dedicated to his students, he leaves a lasting legacy through his changes in the M.D. admissions process and curricular innovation, through his mentorship of current SMHS leadership and faculty, and through the thousands of alumni whom he taught, advised, and encouraged."

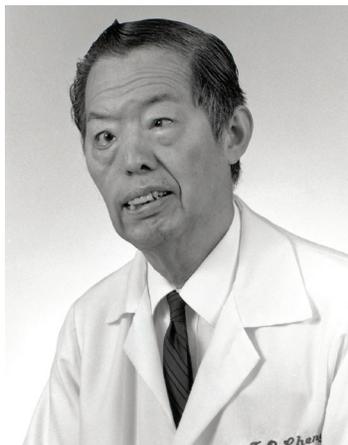
His love for medicine was evident, and he considered one of his greatest accomplishments at SMHS to be his overhaul of the admissions process and a curriculum revamp in 1993, which included the development of an innovative new medical education program called "The Practice of Medicine."

During a fall 2012 interview with *Medicine + Health* magazine, Keimowitz said, "My identity is completely tied to medicine. In addition to filling my personal interest in helping people, it merges absolutely fascinating science, and it's wonderful to watch the science advance. So I keep phasing out, but never completely stopping, because I love it."

Keimowitz was born and raised in upstate New York and earned his bachelor's, master's, and medical degrees in the 1960s from the University of Vermont. He studied renal physiology at the National Institutes of Health before joining the SMHS faculty. He is survived by his wife, Hazel, their two daughters, and four grandchildren.

Tsung O. Cheng, M.D., professor of medicine, passed away Dec. 24, 2015, in Bethesda, Maryland, where he lived. The 90-year-old internationally renowned cardiologist was originally from Shanghai. He joined the GW School of Medicine and Health Sciences (SMHS) faculty as an associate professor in 1970 and specialized in cardiac catheterization, coronary artery spasm, and mitral valve prolapse. He received the school's first Lifetime Achievement Distinguished Researcher Award in 2007.

Cheng lectured extensively and was a fellow of several institutions, including the American College of Physicians, American College of Cardiology, American College of Chest Physicians, American College



of Angiology, International College of Angiology, and Society for Cardiac Angiography.

A prolific writer, Cheng served as an editor and contributor for several leading academic journals, including *Vascular Medicine and Angiology*,

and he wrote more than 1,500 articles and 24 books or book chapters. He is survived by his wife of more than 60 years, Marie Ellen Cheng; their children, Yvonne Cheng Dennis and Mark Cheng; four grandchildren; and his sister, Josephine Cheng, of Shanghai.

"Every year at annual report time I would ask T.O. if I could make him 'emeritus,' and each time he said no because it sounded too much like retiring," recalled Alan Wasserman, M.D., chair of the Department of Medicine and Eugene Meyer Professor of Medicine at SMHS, in the department's newsletter, *GW Medicine Notes*. "He said he didn't need to be emeritus and would 'die with his boots on,' and at 90 years of age, that is what he did on the way to work."

CLASS NOTES

Albert L. Sheffer, M.D. '56, passed away Dec. 22, 2015, at age 86. An allergy and immunology specialist, Sheffer was director emeritus of the allergy section at Brigham & Women's Hospital, and a former professor of medicine at the Harvard School of Medicine. He joined the Harvard faculty in 1964 as a clinical professor of medicine, and, along with Frank Austen, M.D., AstraZeneca Professor of Respiratory and Inflammatory Diseases in Harvard's immunology Ph.D. program, established the allergy clinic and began the Allergy

Training Program. Sheffer maintained a private practice for 24 years until 1993, when he joined the Brigham staff full time, serving as the director of allergy medicine until 1998. He was a past president of the American Academy of Allergy and Immunology, the first chair of the expert panel that generated the National Heart, Lung, and Blood Institute's Guidelines for the Diagnosis and Treatment of Asthma, and co-chair of the first Global Initiative for Asthma Committee.

Christina D. Gerdes, M.D. '12, was recently appointed chief psychiatry resident at the Columbia University Medical Center.

Gerald G. Kellar, M.S. '12, was named among the 2015 "40 under Forty" by the American Society for Clinical Pathology for achievements and qualities that are vital to the pathology and laboratory sciences fields.

Josh D'Angelo, DPT '13, co-founded the nonprofit organization Move Together, whose purpose is to increase access to quality rehabilitation medicine around

the corner and around the world. In May 2016, he will lead a group from the SMHS PT program on an international service trip to Guatemala.

Lauren A. Katkish, M.D. '13, published "Pseudohyperkalemia in chronic lymphocytic leukemia" in *Minnesota Medicine*, July 2015; published "Incidence and severity of pseudo-hyperkalemia in chronic lymphocytic leukemia: A longitudinal analysis" in *Leukemia & Lymphoma*, online in January 2016, DOI:10.3109/10; and presented the poster "Incidence of Unprovoked Thromboembolic Events

in Patients with Chronic Lymphocytic Leukemia (CLL)" at the 57th American Society of Hematology Annual Meeting in December 2015.

Elizabeth M. Phillips, M.D., RESD '15, along with **Hamid Shokoohi, M.D., M.P.H. '06, RESD '07**; **Neal Sikka, M.D., B.S. '15**, received honorable mention in the 2015 GW New Venture Competition for their project Bleed Freeze, a device that combines compression, cooling, and medication to help control nosebleeds in children and adults.

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IN DEVELOPMENT



Since the George Washington University launched its capital campaign, *Making History: The Campaign for GW*, we at the GW School of Medicine and Health Sciences (SMHS) have attained many significant gifts that will help us realize our vision and achieve our priorities. The SMHS

share of the entire \$1 billion campaign goal is a robust \$225 million, and philanthropic contributions have greatly benefited our four pillars of excellence: students, faculty, programs, and facilities.

At SMHS, we have reached many milestones up to this point. We have already surpassed the \$100 million mark. We have received generous gifts of all sizes, and we are particularly grateful for contributions designated for student support — one of our top fundraising priorities.

After the 2016 fiscal year ends on June 30, there will be only two years left in our campaign. These final years will be very structured as we work to achieve our attainment goal. We will continue to emphasize the GW Cancer Center in our fundraising efforts. This new center is dedicated to innovative research, personalized patient care, and cancer policy, and aims to be a national leader in the cancer health care system.

Making History is not just about fundraising, it's also about expanding our network of active participants in the SMHS community from among our alumni, friends, and community partners. Critical to this effort has been the work of our volunteer leaders, especially our campaign co-chairs, Stuart S. Kassan, M.D. '72, FACP, MACR; Jay E. Katzen, M.D. '72, B.A. '67; and Lara S. Oboler, M.D. '95. Thank you to all volunteers for being our most valued advocates during this campaign.

As we enter the final two years of the campaign, I ask you to commit to our fundraising efforts if you have not done so already. There are many ways to participate, such as by joining our volunteer leaders as they magnify the message of *Making History* for a broader audience, or by hosting an alumni reception in your home or hometown. If you are contacted by a member of our development staff, don't hesitate to schedule a one-on-one meeting to learn more about the funding needs of our important initiatives. Or you can participate by visiting our website, smhs.gwu.edu, and making a secure donation through the "Give" section.

No matter which way you choose to be a part of our campaign, now is the time to do it. Please don't hesitate to act as we enter this critical stage of *Making History*.

Sincerely,

Dennis Narango, M.A., C.F.R.E.

Associate Dean, SMHS and Associate Vice President for
GW Medicine Development and Alumni Relations

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Ophthalmology, Ellsworth Uveitis & Retina Care

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Psychiatry; Chevy Chase Psychiatric Services; Assistant Clinical Professor of Psychiatry and Behavioral Sciences, GW School of Medicine and Health Sciences

Floyd Alexander Katske, M.D. '76, RESD '77
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Richard G. Popiel, M.D. '81, RESD '83, M.B.A., B.S. '75
Internal Medicine; Executive Vice President, Healthcare Services & Chief Medical Officer, Cambia Health Solutions & Regence Health Insurance Company

Smita H. Patel, M.D., DFAPA
Psychiatry, Assistant Clinical Professor of Psychiatry and Behavioral Science, GW School of Medicine and Health Sciences

Rakesh C. Sahni, M.D.
Cardiology; Maryland Cardiology Associates

Mark W. Surrey, M.D. '72, FACOG, FACS
OB/GYN-Fertility; Professor & Clinical Director, Reproductive Surgery, University of California-Los Angeles; Co-Founder and Medical Director, Southern California Reproductive Center

Allan B. Weingold, M.D., HON. '98
OB/GYN; Professor Emeritus, Former Chair of OB/GYN, Former Vice President for Medical Affairs and Executive Dean, The George Washington University

Art B. Wong, M.D. '67
Emergency Medicine; Founder, Emergency Physicians Medical Group, PC

The Dean's Council advises the dean of the School of Medicine and Health Sciences on strategic priorities and important issues for the school, and provides generous support and advocacy.

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MATCH DAY

Since 1952, graduating M.D. students receive their residency appointments simultaneously through the National Resident Matching Program. GW School of Medicine and Health Sciences (SMHS) maintains a reputation for placing graduates in many of the most prestigious residency programs nationwide. This year, SMHS students matched in more than 30 specialties, with internal medicine and pediatrics leading the list. [Read more on page 18.](#)