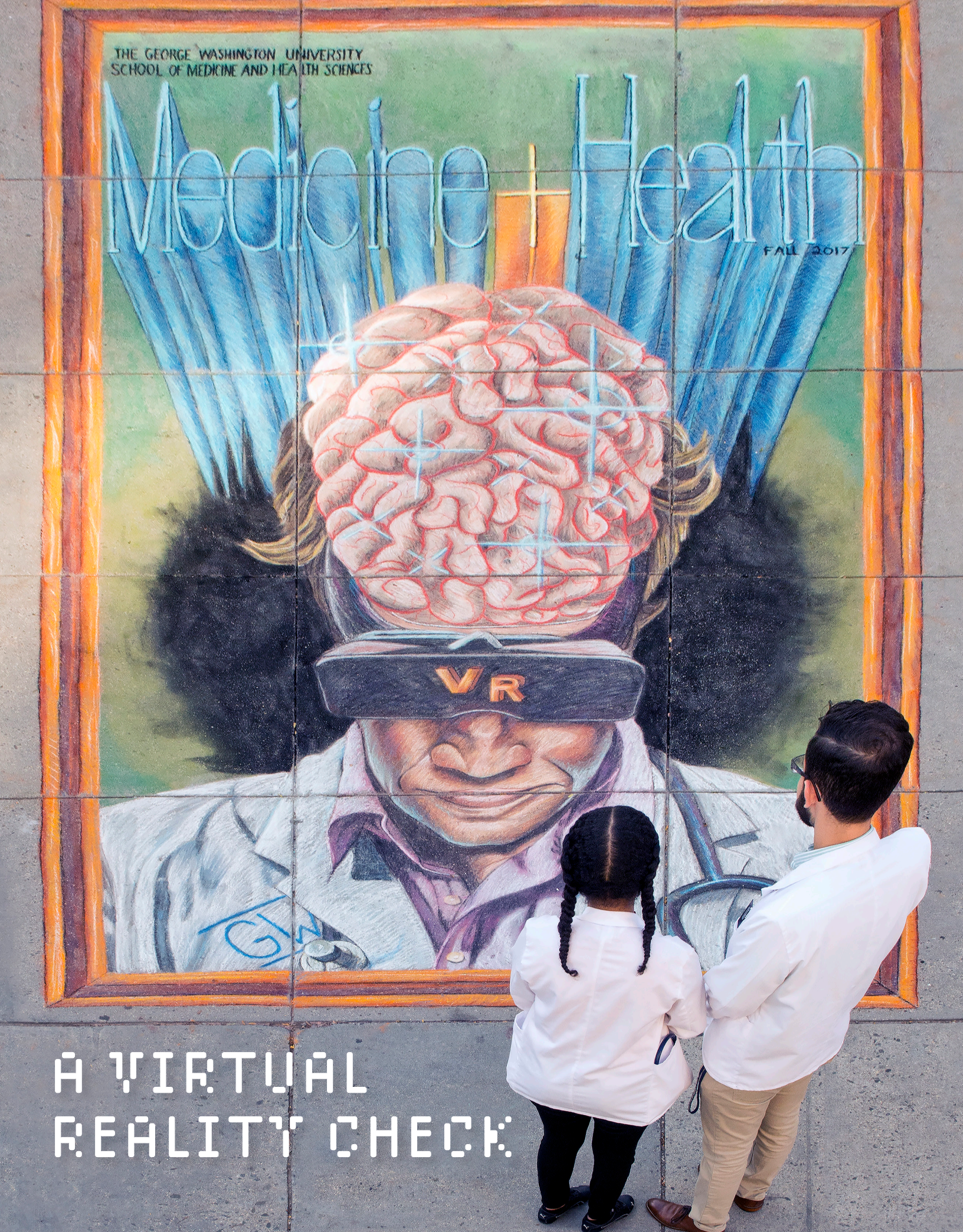
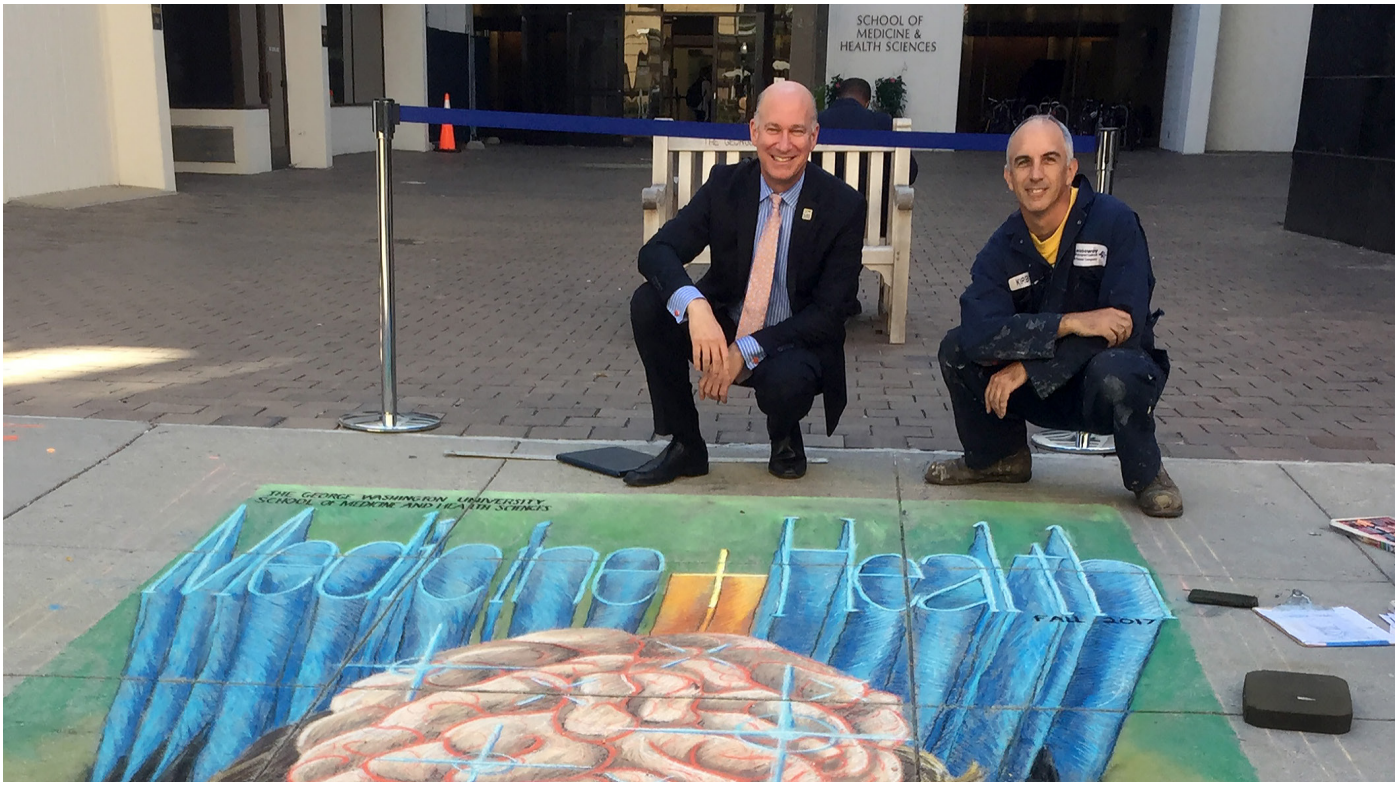


A VIRTUAL REALITY CHECK

A NOTE FROM ROSS HALL



With the recent inauguration of Thomas J. LeBlanc as the 17th President of the George Washington University, we celebrated and recommitted ourselves to a collective aspiration to achieve preeminence as a comprehensive global research university. Central to that vision is the continued success of the School of Medicine and Health Sciences (SMHS) and its academic and clinical partners. In the pages of this magazine, I am proud to highlight some of the remarkable advances that we are making in the areas of innovation, research, education, and clinical care on our path to preeminence.

Through the creativity of artist Michael Kirby, the magazine cover highlights our adoption of the emerging technology of virtual reality as a clinical and teaching tool in neurosurgery. The use of virtual reality in medicine is creating new opportunities to think about the way we train students, prepare for surgical and medical procedures, and educate patients, such as Danielle Collins, whom you will meet in this edition of *Medicine + Health*.

While we continue to lead in the use of futuristic technologies, we also remember our past and the important role that our faculty and alumni have played in advancing medicine and health care. In this issue, we embark on a long-form, nonfiction series called "Observation" that highlights GW's historic role during the HIV/AIDS epidemic in Washington, D.C. In the first chapter, I am interviewed about the very early days of the epidemic when GW was truly on the front lines. The message is that our path to preeminence is built on our commitment to educating our learners and providing compassionate, patient-centered care.

Finally, as we celebrate this holiday season of reflection, I want to express my sincere gratitude to all of our alumni, faculty and staff, trainees, students and friends of SMHS. Your dedicated engagement and generous support of SMHS is truly vital to our continued success and deeply appreciated.

Warmest regards,

JEFFREY S. AKMAN, MD '81, RESD '85

VICE PRESIDENT FOR HEALTH AFFAIRS

WALTER A. BLOEDORN PROFESSOR OF ADMINISTRATIVE MEDICINE

AND DEAN, SCHOOL OF MEDICINE AND HEALTH SCIENCES

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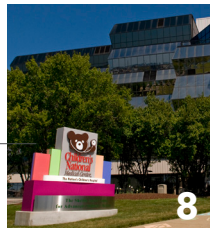
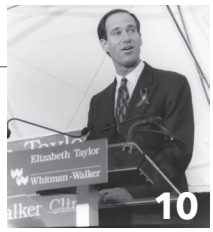
Features





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Chalk drawing by Michael Kirby of Murals of Baltimore: www.muralsofbaltimore.com

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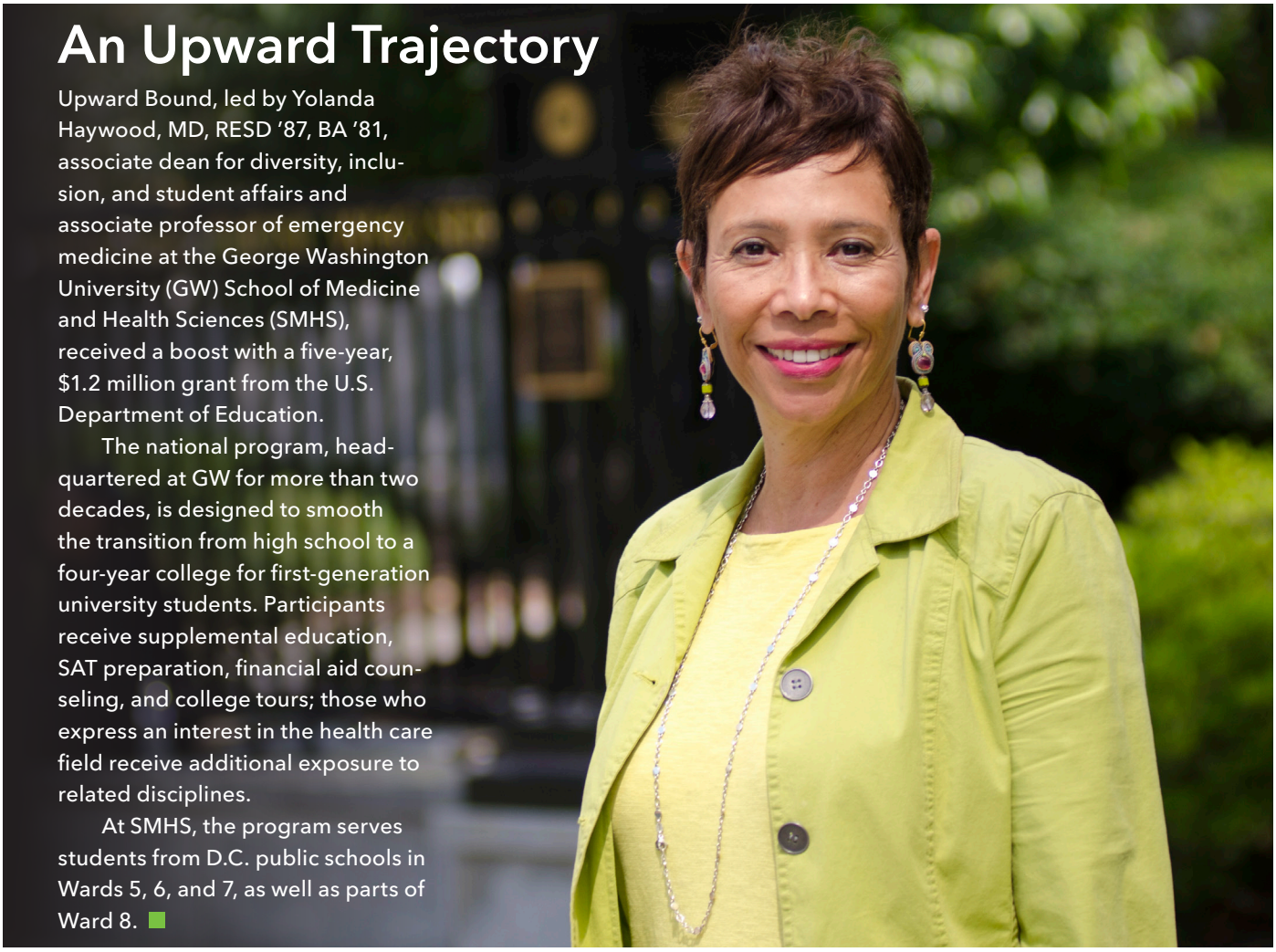
MAKING THE ROUNDS

An Upward Trajectory



Upward Bound, led by Yolanda Haywood, MD, RESD '87, BA '81, associate dean for diversity, inclusion, and student affairs and associate professor of emergency medicine at the George Washington University (GW) School of Medicine and Health Sciences (SMHS), received a boost with a five-year, $1.2 million grant from the U.S. Department of Education.

The national program, headquartered at GW for more than two decades, is designed to smooth the transition from high school to a four-year college for first-generation university students. Participants receive supplemental education, SAT preparation, financial aid counseling, and college tours; those who express an interest in the health care field receive additional exposure to related disciplines.

At SMHS, the program serves students from D.C. public schools in Wards 5, 6, and 7, as well as parts of Ward 8. ■

A Recipe for Healthier Patients

A new culinary medicine elective offers third- and fourth-year George Washington University (GW) School of Medicine and Health Sciences (SMHS) students hands-on training and the tools to teach patients real-world skills they can use to alter their diets, shopping habits, and meal preparation. GW is partnering with local nonprofit Capital Area Food Bank for the elective.

The new elective is just one of about 15 that have been added to the MD program's curriculum since it was revised in August 2014. "We believe that clinicians will better serve their patients by understanding and being able to teach them about the practical aspects of the science-based nutritional and dietary practices that can improve health," said Seema Kakar, MD, RESD '09, assistant clinical professor of medicine at SMHS, who taught the inaugural class. ■

The Path to Medicine

As the white coat slipped over Charlotte Gopinath's shoulders, she took the first step toward becoming a doctor; with the support of her husband and daughters, it's a path she won't embark on alone.

"It will be a wonderful journey for us as a family," Gopinath said at the White Coat and Honor Code Ceremony in August.

When receiving their white coats, the 183 members of the MD Class of 2021 stepped onto the stage in Lisner Auditorium not only to cheers from their friends and family, but also with the encouragement of their new GW family.

Keynote speaker Jehan "Gigi" El-Bayoumi, MD, RESD '88, professor of medicine at SMHS and founding director of the Rodham Institute, told the students to always practice acceptance. "A word from a physician or medical student can be the difference between night and day [for patients]," she said.

SMHS and Alexandria Schools Join Forces

The George Washington University (GW) School of Medicine and Health Sciences (SMHS) and Alexandria City Public Schools (ACPS) are joining forces to educate the health care workforce of tomorrow.

Through the agreement, students at T.C. Williams High School will have the opportunity to participate in a health and medical sciences Career and Technical Education (CTE) pathway. The program will begin to be rolled out in academic year 2018–19 for T.C. Williams students in grades 9 through 12.

"This is a wonderful opportunity for our students to get a head start on college, have access to a great education, and to develop a passion for a career field that has a critical need for future employees," said Interim ACPS Superintendent Lois F. Berlin. "The Career and Technical Education program at T.C. Williams provides students with the chance to fully understand the field of study they may pursue and make sound decisions about that career choice before they fully commit to it. We are very excited about this unique public-private partnership opportunity with GW."

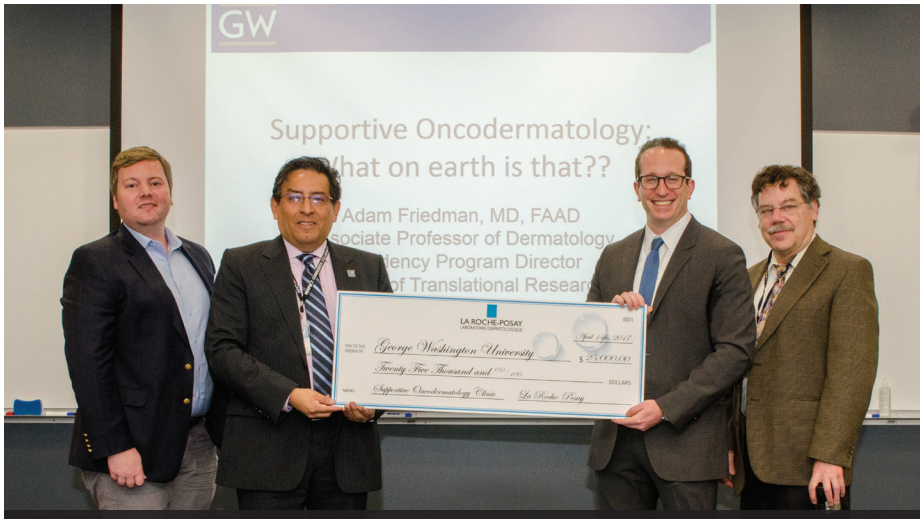
The strategic educational partnership will establish five new CTE pathways within the new GW-ACPS Academy of Health Sciences at the school, joining existing pathways in surgery and nursing that were developed by ACPS. It will start with the launch of a biomedical informatics pathway in fall 2018, followed by four additional pathways – sports medicine, pharmacy, emergency medical services and medical laboratory sciences that will launch over the next four years. GW faculty will work collaboratively with faculty from T.C. Williams to broaden and enrich the offerings for the students.

The dual-enrollment courses also mean students can receive early high school and college credit. The credits earned will be accepted by SMHS toward a bachelor's degree in health sciences at GW, if students meet admission requirements.

Recertified for Trauma Care

The George Washington University Hospital (GW Hospital) Center for Trauma and Critical Care (CTACC) added more validation of its high-quality care by again receiving verification as a Level I Trauma Center. The achievement came after an on-site evaluation from the Verification Review Committee, part of the American College of Surgeons' Committee on Trauma.

"Trauma patients have a profoundly high level of complex needs. That is why it is vital that our entire spectrum of care is meeting the highest of industry standards," said Babak Sarani, MD, director of Trauma and Acute Care Surgery at GW Hospital CTACC and associate professor of surgery at the GW School of Medicine and Health Sciences. "As a verified Level I Trauma Center, we are equipped to provide care to the most severely injured and critically ill patients from the time they are on the way to our emergency department through rehabilitation and discharge."



La Roche-Posay is partnering with the George Washington University Cancer Center to launch the GW Supportive Oncodermatology Clinic, providing a $25,000 grant to help get the clinic off the ground. The clinic offers comprehensive dermatologic needs to GW Cancer Center patients by addressing the broad range of side effects of cancer treatments.

Solutions for the Skin

Cancer treatments induce a host of side effects, but among the most distressing can be dermatological: hair loss, extremely dry skin and rashes, infections, painful nail conditions. Some patients turn away from treatment altogether, while others simply battle through. Adam Friedman, MD, associate professor of dermatology at the George Washington University (GW) School of Medicine and Health Sciences, however, believes he has a potential solution.

A new Supportive Oncodermatology Clinic, falling under the umbrella of the GW Cancer Center and within the oncodermatology program, is designed as a one-stop shop for patients. The clinic, which currently operates on a monthly basis, serves as a resource for both oncologists and their patients, while prioritizing survivorship and increasing knowledge of the burgeoning supportive oncodermatology field.

"This is somewhat unique … there are only a handful of other institutions across the country that offer a clinic that addresses the well-established and, for the most part, expected side effects to many if not all of the cancer therapies that are life-saving but also come with some significant baggage," Friedman said.

The side effects, he added, can include chemotherapy-induced alopecia, or hair loss, and xerosis, severely dry skin that can cause fissures in the hands and feet that are "exquisitely painful and hard to heal."

What's critical is seeing patients in the clinic early, when they can receive preventive medication to limit side effects, as well as during and after cancer treatment. "A lot of the skin, hair, and nail side effects we see can often persist well beyond the time when treatment has ended," Friedman explained. "Plus, having a history of any type of cancer increases your risk for skin cancer. So these patients need a different level of surveillance, a different level of care than someone who has not undergone treatment for cancer."

Integrating Medicine and Health

The George Washington University (GW) School of Medicine and Health Sciences (SMHS) announced the creation of the Office of Integrative Medicine and Health (OIMH).

This new office, housed within the Department of Clinical Research and Leadership under the guidance of Leslie Davidson, PhD, department chair, will build upon a strong foundation of GW programs in Integrative Medicine (IM). John Pan, MD '70, RESD '74, who founded the Center for Integrative Medicine (CIM) in 1998, will be the founding medical director of OIMH.

OIMH was established thanks to a generous donation of $500,000 by GW alumnus Patrick Sung, PhD, JD '77. The office will engage and support GW medical and academic faculty in IM practice and research. It will also seek to connect with the larger community of complementary and alternative medicine practitioners.

Sung, who was diagnosed with myasthenia gravis, worked with Pan to explore therapies other than the traditional offering. The integrative medicine approaches Sung adopted have put him in remission. "I saw a need to educate both patients and doctors," Sung explained. "It is my hope that by creating this office, we are accelerating the process. Both sides need to be aware of the holistic options, as well." ■

PTs Connect with Special Olympics Athletes

The main gym at Catholic University of America in late September was a cacophony of laughter and chatter as health care professionals and students provided health services and education for young Special Olympics athletes.

At the event, hosted by Healthy Athletes for the DC Special Olympics, 46 physical therapy (PT) students and eight faculty and staff members from the George Washington University School of Medicine and Health Sciences were on hand to help with FUNFitness screenings, which test athletes' flexibility, strength, balance, and aerobic fitness.

"We have a lot of theoretical knowledge of how to do these things, and it's great to bring it into the real world and see how to deal with patients and interact with them," first-year PT student Oliver Hecht said of the experience. "It's a fun opportunity for us." ■

The Next Steps Forward

The George Washington University (GW) School of Medicine and Health Sciences graduates had the "time of their lives" at the 2017 MD Diploma Ceremony, thanks to their classmates, family, friends, teachers, and mentors.

The event quickly turned into a party when students Arielle H. Katcher, MD, and Sean Yasha Saadat, MD, opened the ceremony by singing "(I've Had) the Time of My Life."

After the crowd quieted down, keynote guest speaker Lieutenant General Nadja Y. West, MD '88, 44th Army Surgeon General and Commanding General for the United States Army Medical Command, told the graduates to remember why they were there: to become clinicians. "It's a profession that should not be taken lightly, and a profession that must be treasured and nurtured throughout one's entire life," she said.

Earlier during GW's commencement weekend, the SMHS health sciences program hosted its 2017 Diploma Ceremony. Coming to the end of their training and the presentation of diplomas was overwhelming for many of the graduates. Hannah Hutter, MSHS '17, found the experience relieving. Even though classes had been over for a few weeks, now that her family was in town, it felt "like a real celebration."

Outstanding Graduate Student Award recipient, Majorie Brown, who received her MSHS in clinical research

administration, addressed her fellow graduates. "Our country's health care system is going through a major transition, and our work is more important now than ever before," she said. "Every problem holds an opportunity so great that it dwarfs the problem itself."

Presiding over his first diploma ceremony as Senior Associate Dean for Health Sciences, Reamer L. Bushardt, PharmD, PA-C, DFAAPA, led the recitation of the Hippocratic Oath and closed the ceremony with a charge to the graduates. Keeping with the theme of confronting change in health care, Bushardt advised the grads, "You are filled with character and the capacity for leadership that our world is crying out for right now." ■

ACING REACCREDITATION

BY CAROLINE TRENT-GURBUZ

The George Washington University School of Medicine and Health Sciences (SMHS) Physical Therapy (PT) program received a 10-year reaccreditation from the Commission on Accreditation in Physical Therapy Education (CAPTE) at the organization's spring 2017 meeting, a triumph that highlights the program's ongoing scholastic and leadership excellence.

"The accreditation process strongly emphasizes program outcomes, and therefore this achievement is a tribute to the remarkable faculty, students, and staff who commit so much time and effort to achieve the type of results recognized and commended by the commission," said Joyce Maring, DPT, EdD, program director for the Doctor of Physical Therapy program and chair and associate professor in the Department of Physical Therapy and Health Care Sciences at SMHS.

To achieve accreditation, PT programs must submit an extensive self-study report, which covers areas such as curriculum, resources, and faculty qualifications, and must host an on-site review. The team conducting the survey met with program stakeholders, reviewed additional documentation, and subsequently submitted its own report to CAPTE.

Of the SMHS PT program, CAPTE noted that Maring and the faculty had created "a comprehensive and high-quality program that recognizes the need for a strong faculty, strong intercollegial interactions, and strong ties to the clinical community. It is evident that leadership fosters the growth of faculty to provide a comprehensive professional program."

Maring, echoing CAPTE's assessment, gave credit to both her colleagues and the students. "Our stated mission is to prepare individuals to [be] highly skilled physical therapists who are able to practice in an evidence-based and ethical manner [with respect for] patients and clients from all backgrounds, across the life span, through the continuum of care, and at all levels of wellness and health. An external review just validated that we are collectively meeting this mission." ■

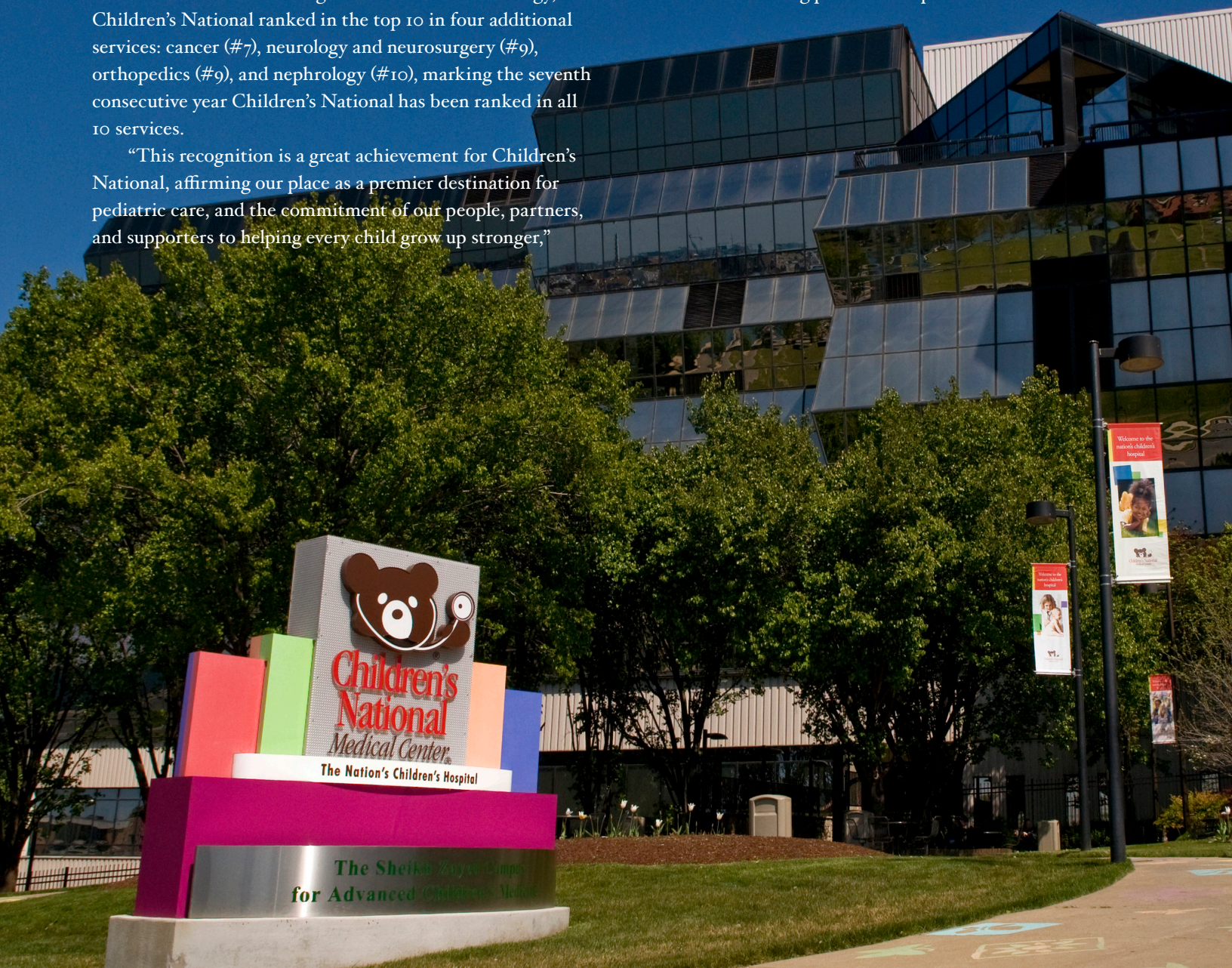
Top Honors for Treating Tiny Patients

George Washington University School of Medicine and Health Sciences (SMHS) clinical partner Children's National Health System (Children's National) recently received top honors in the 2017–18 *U.S. News & World Report* "Best Children's Hospitals" rankings, with its neonatology program ranking #1 out of more than 1,500 neonatal intensive care units coast to coast. Children's National was also named to the Honor Roll, a distinction given to the top-performing children's hospitals in the country.

In addition to achieving the #1 rank in neonatology, Children's National ranked in the top 10 in four additional services: cancer (#7), neurology and neurosurgery (#9), orthopedics (#9), and nephrology (#10), marking the seventh consecutive year Children's National has been ranked in all 10 services.

"This recognition is a great achievement for Children's National, affirming our place as a premier destination for pediatric care, and the commitment of our people, partners, and supporters to helping every child grow up stronger," said Kurt Newman, MD, president and CEO of Children's National. "I'm particularly proud of our #1 ranking in neonatology, as in many ways it reflects the quality of care across our hospital."

In 1968 Children's National and SMHS established their clinical partnership, basing the school's Department of Pediatrics at Children's National and providing joint appointments to the pediatrics faculty members. Each year, more than 250 third- and fourth-year SMHS medical students receive their pediatric training and clerkship rotations in one of the nation's leading pediatric hospitals. ■



TAKING CHARGE

BY THOMAS KOHOUT

Thomas J. LeBlanc, PhD, stepped to the lectern at center stage in the Charles E. Smith Center for his inauguration as the George Washington University's (GW) 17th president on Nov. 13. The event marked just the sixth time in the last 90 years that GW has celebrated the installation of a new university leader.

"The leadership to which we aspire has four key dimensions," LeBlanc said in his inaugural address. "We must be grounded in active scholarship. We must be comprehensive. We must be global. And we must aim to achieve excellence and preeminence in everything we do."

LeBlanc was introduced by former U.S. Secretary of Health and Human Services Donna Shalala, who was president of the University of Miami when LeBlanc served as executive vice president and provost. She lauded him for his strategic leadership skills. Nelson A. Carbonell Jr., BS '85, chair of the GW Board of Trustees, followed the introduction with the presentation of the president's medallion and his charge.

"I charge you to take your keen understanding of history, your great appreciation for the academic vocation, your knowledge of the world, your sense of humor, your love of learning, and your personal integrity and combine them all for the benefit of this honorable, now nearly 200-year-old university," Carbonell said.

Leading up to the inauguration, LeBlanc spent his early months on the job touring campus and meeting with students, staff, alumni and the leadership and faculty of each of the university's schools and campuses. During those early visits, LeBlanc shared the aspirations he noted in his inaugural address about the university being a comprehensive, global research university that aims for excellence and preeminence.

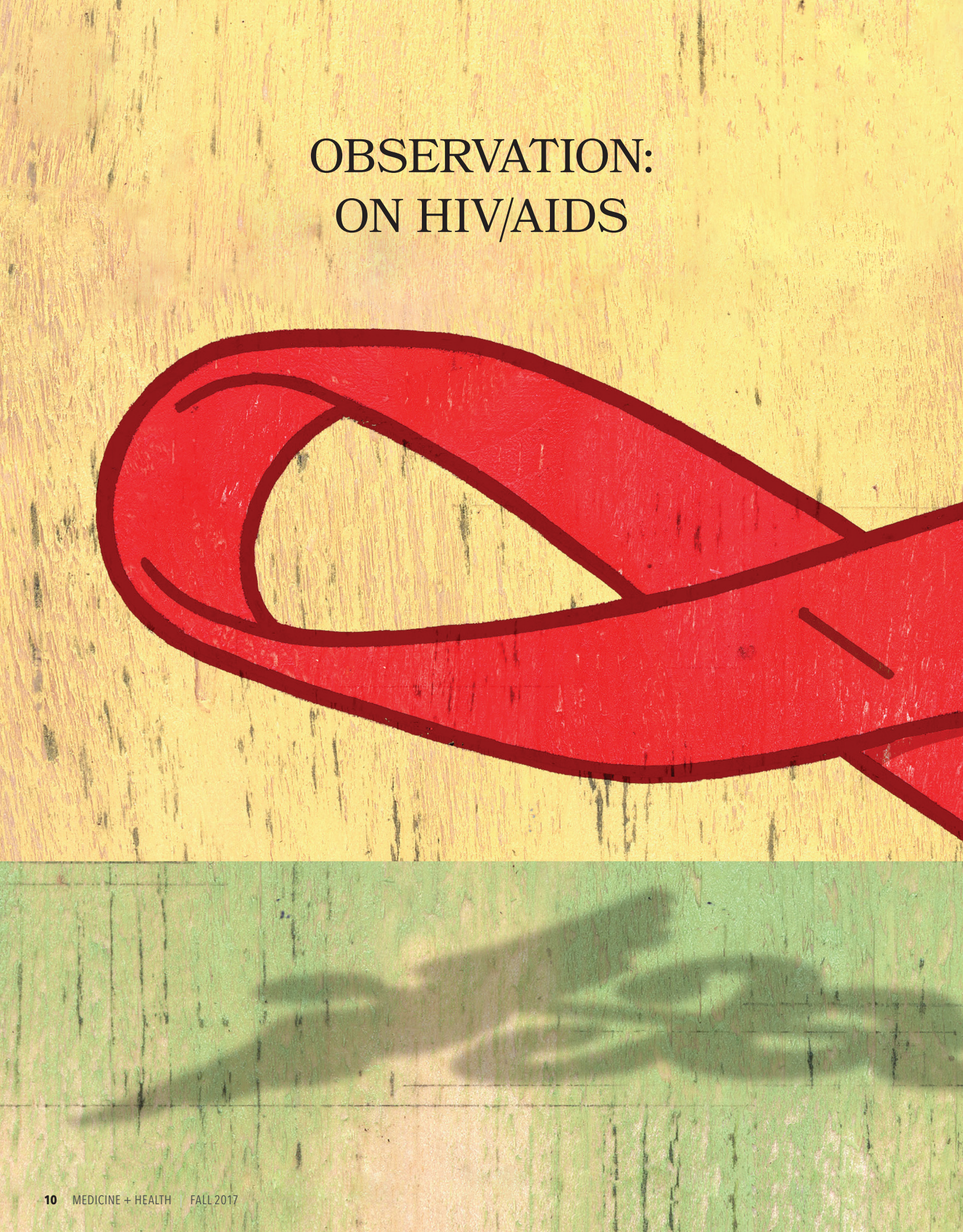
During his Sept. 1 visit to the GW School of Medicine and Health Sciences, LeBlanc explained, "Every one of those words is important to our mission." The professor of computer science and electrical and computer engineering by training added, "I chose each of those words, not because they make a nice slogan, but because I know how to measure progress on [them]. ... I am big on data."

Central to his mission of growing GW's stature as a comprehensive research institution, LeBlanc told SMHS senior leadership, deans, and department chairs that to be a serious university moving forward means being strong in the biomedical and health sciences. "We cannot aspire to preeminence without a strong [School of Medicine and Health Sciences], he said."

He outlined five areas on which he intends to focus in the early years of his presidency, from improving the undergraduate experience to evaluating the university's resource-raising abilities and engagement with alumni. Advancing the research enterprise will serve as another critical focal point, as will enhancing the relationship between SMHS and its clinical partners, the GW Medical Faculty Associates and GW Hospital. And finally, LeBlanc said, redefining the GW institutional culture will round out those early objectives.

"We can do anything we choose," LeBlanc said during his inaugural address, "but we can't do everything we choose. So, let us choose boldly, but also choose wisely. To commit to scholarship. To be comprehensive. To be global. To aspire to preeminence. These are our goals." ■

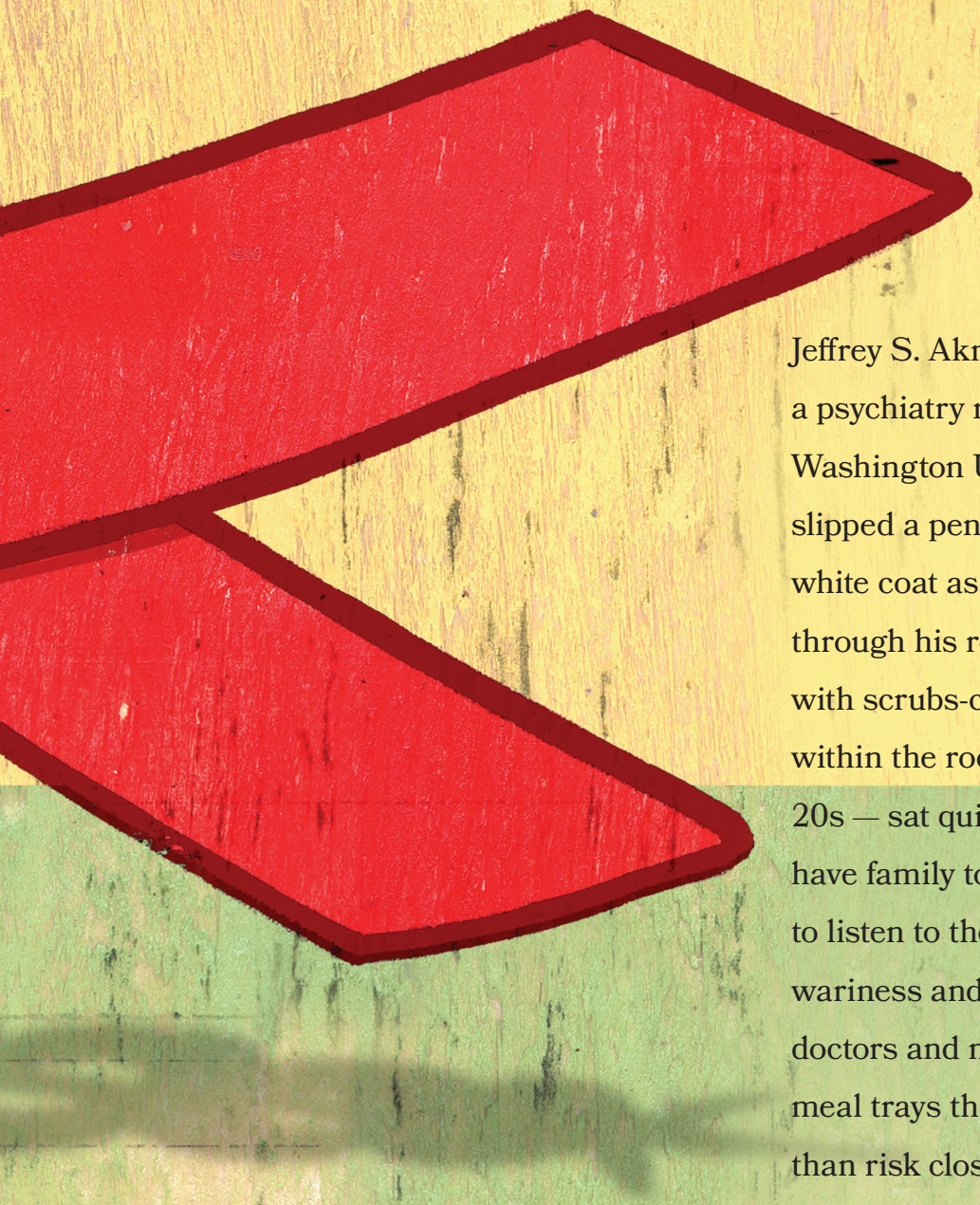
OBSERVATION: ON HIV/AIDS



CHAPTER ONE:

The Psychiatrist to Whom Doctors Should Refer HIV Patients

BY CAROLINE TRENT-GURBUZ



Jeffrey S. Akman, MD, two years into a psychiatry residency at the George Washington University (GW) Hospital, slipped a pen into the front pocket of his white coat as he methodically worked through his rounds. The hall was bustling with scrubs-clad hospital personnel, but within the rooms, patients — men in their 20s — sat quietly and alone. Some didn't have family to hold their hands, friends to listen to their woes. Others caught the wariness and fear in the eyes of their doctors and nurses, the orderlies who slid meal trays through an open door rather than risk closer contact.

But Akman was one of them. Gay, like them; out, like them; young, like them. He was also intrigued by their conditions: rare disorders such as Kaposi's sarcoma, a disease with bruise-like lesions of red, purple, and black; pneumocystis pneumonia, an opportunistic infection marked by a cough, night sweats, and weight loss. They'd also been diagnosed with a virus identified just two years earlier, but one that hadn't appeared in D.C. — until now.

It was 1983, a burgeoning era of change: the political world welcomed Reaganism, with its trickle-down theories and new brand of conservatism; classic values shifted to the materialism and bespoke power suits of young urban professionals; and homosexuality and homophobia were in the midst of a tonal shift.

As Akman, now three decades separated from his residency, recalls, the *Diagnostic and Statistical Manual of Mental Disorders,* the bible of the psychiatry world, had removed its entry on homosexuality several years earlier in a landmark moment. The last vestige of that entry — ego-dystonic homosexuality — would appear until 1986. With the arrival of the human immunodeficiency virus, or HIV, however, homophobia would remain woven into the nation's cultural fabric, requiring sustained activism and advocacy to unsnarl.

"It was politically a challenging time, both in the hospital and in the community and country," says Akman. "We had issues [involving] doctors who were HIV positive, and then the issues became 'what are the policies around doctors with HIV being engaged with patients?' We also had the politics of Ronald Reagan and his unwillingness to say the word *AIDS*."

Not far from Reagan's White House, though, was Dupont Circle, the hub of the gay community; the laidback, colorful neighborhood was a source of shelter and pride against a still-disapproving nation, and was only blocks from the old GW Hospital, a gray monolith looming on the corner of 23rd and Eye streets.

"We were very much, it became clear, at the epicenter of this epidemic in Washington, D.C., really because of GW Hospital's location," Akman says. "In those days, we were very, very connected to the gay community in Dupont Circle. Plus, the ... GW Health Plan, which was [then] an HMO that GW owned, also had a large number of gay patients."

The patients presented with profound complications, some involving the brain. There was no antibody test and no real treatments; within 18 months, most of those patients died.

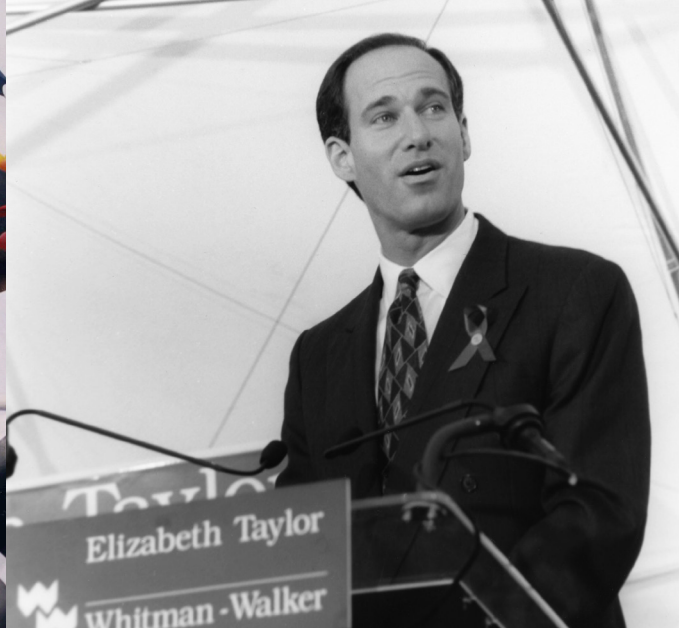
Akman, however, true to his nature and to his profession, calmly sat with them. He pulled his chair closer to their beds, leaning his head down to better hear them. He asked them questions about themselves, learned their personalities, who they loved, their fears of death and dying. He also volunteered roughly 20 hours per week at the newly established AIDS program of the Whitman-Walker Clinic, expanding the scope of his experience, welcoming more patients into the fold even as he bore witness to their tragedies.

"So many of my friends were dying," he recalls. "I had a lot of patients who were dying, and then my friends were dying. The whole period from the 1980s into the 1990s was just horrible. People were really sick."

But the young psychiatrist endured, driven by a need to understand the virus. "I just was curious," he recalls. "It was also, again without having a test in those days, you didn't know — I didn't know if I was affected. None of us did. For me, it was like responding to this unknown pathogen. Why was it affecting gay men?"

Ignoring the stigma of illness and the uncertainty of infection, Akman continued to treat the men with whom he identified. He became, he says, "the psychiatrist that [doctors] should refer patients with HIV to."

The infectious disease department was the first to send patients to him, while he continued to treat those already



admitted at GW Hospital and Whitman-Walker. Others soon followed, and Akman's clinical practice began to grow during his residency. He also attracted the attention of the National Institutes of Health; after completing his residency, he received a grant to travel the city, educating others on how to care for HIV patients.

"We educated literally thousands of people about HIV/AIDS," he says. "It was a time when people were calling AIDS 'AfrAIDS.' So much of the anxiety and the fear of AIDS was related to ignorance."

Akman was appointed to the American Psychiatric Association's committee on AIDS, which eventually became a commission, and widened his educational influence across the country.

Those dips into teaching turned into a dive when he joined the faculty at his alma mater, the GW School of Medicine and Health Sciences (SMHS), from which he had graduated in 1981. As a young faculty member, Akman found himself a protégé of Winfield Scott, PhD, then associate dean for student affairs. Scott, a psychologist, had been a fixture of the school since the 1970s. He, like Akman, was openly gay, and he was involved in the lesbian, gay, bisexual, and transgender (LGBT) community.

But then Scott got sick. "He declined pretty rapidly," Akman recalls.

Akman, at Scott's urging, had become a fixture himself of LGBT health community organizations, and he continued advocating for compassionate and evidence-based psychiatric care of HIV/AIDS patients. He took over Scott's academic responsibilities, including mentoring students.

Benny Waxman, MD, a renowned obstetrician and gynecologist and SMHS professor, also persuaded the young academician to share his boots-on-the-ground knowledge with medical students. Waxman, "a former teacher and very close friend," Akman says, taught the human sexuality course — or he did until he, too, was diagnosed with HIV. Akman again took over.

Both mentors later died.

Since that time, however, Akman — now the vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS — has continued his trajectory upward, a path shaped by his own passion and memory of the faces of those he said goodbye to.

He's served on the D.C. Commission and the Presidential Advisory Committee on HIV/AIDS, among others, through the start of the 21st century and the end of the Obama administration, and, like his mentors, has shaped younger minds on how to thoughtfully treat LGBT and HIV/AIDS patients. And like his younger self, puzzled by the makeup of the disease, he's continued his pursuit of understanding the virus by building out the school's HIV/AIDS research portfolio with top-notch basic scientists.

"If we're involved in the cure — not if, the fact that we *are* involved in finding a cure for HIV/AIDS — that's amazing," he says. "It's amazing. Certainly nothing I would have thought of when I was a young resident sitting at a bedside of a person at GW Hospital, holding their hand as they died, that someday we would actually be in the conversation around curing HIV. That's hard to imagine." ■

"Chapter One: The Psychiatrist to Whom Doctors Should Refer HIV Patients" is the first of several installments of "Observation: On HIV/AIDS," highlighting the pivotal role the George Washington University (GW) School of Medicine and Health Sciences has had on HIV/AIDS treatment, research, and education in Washington, D.C. This series features several GW researchers and clinicians, shining a spotlight on how the virus has touched their lives and how they continue to work toward an end to the epidemic.

"Observations" is a new online, long-form nonfiction series covering SMHS areas of academic excellence.

Post-Baccalaureate Pre-Medicine Program Sets Students up for Success in Medical School

BY KATHERINE DVORAK

For Caitlin Davis, the pivot from economics to medicine materialized after years of working in health policy research and witnessing the difference an expert could make in the medical field. For Matt McHarg, it came after struggles with his own health. For both, the desire to change their life and their career path led to George Washington University's (GW) Virginia Science and Technology Campus, home to the School of Medicine and Health Sciences' (SMHS) Post-Baccalaureate Pre-Medicine program.

The program, directed by Lisa Schwartz, EdD '10, assistant professor of integrated health sciences at SMHS, launched in 2015. It's designed for students who have received a bachelor's degree in an area other than the life sciences, but whose passion for medicine won out.

Davis said the linkage between the post-baccalaureate program and the SMHS MD program caught her eye when choosing schools; she is now in her second year of medical school at GW. "I can't imagine being somewhere other than D.C.," Davis said. "Especially with everything that has been going on [here] with health care in the past year, it has been wonderful to be at the epicenter of all that."

The linkage option does not guarantee acceptance to SMHS; students must apply and be admitted, with the condition that they finish the post-baccalaureate program and score well on the MCAT, according to Schwartz.

McHarg originally planned to serve in the Navy, but medical issues disqualified him from service. "I spent a lot of time in hospitals over the past three years, and I'm doing much better now, but that spurred my interest," he said. "Interacting with different types of health care professionals

got me interested in the type of work they do and the impact they have on everyone they see."

GW's Post-Baccalaureate Pre-Medicine program includes 12 months of classes and then a "gap" or "glide" year during which the students apply to medical school, according to Schwartz. The program gives students the educational foundation they need to enter medical school — classes such as general chemistry, organic chemistry, biology, physics, biochemistry — and gives a high level of attention to prepare students for the medical school application process.

McHarg, a northern Virginia native, was drawn to GW's program because of its proximity to home. Currently in his gap year, he said the program prepared him not only for his classes, but also for the MCAT exam and the medical school application process. He said the support given by the faculty, including Schwartz, really made a difference.

The yearlong program is rigorous and accelerated, Schwartz noted. Some schools in the United States integrate their students into the undergraduate program, but at GW they are taught in classes dedicated only to their cohort. This distinction allows students to learn in a high-level learning environment.

The first cohort of students, which included Davis, had just 10 members; the second and third cohorts expanded to 17 students. Schwartz said the program is aiming to grow to about 30 to 35 students in each cohort.

That small class size drew praise from both Davis and McHarg. "I remember talking to people taking prerequisite science classes for medical school in college, and it was such a terrible experience for them because they took them in enormous lecture classes," Davis said. "[GW's] program was the complete opposite of that ... we had great opportunities to have personal relationships with the professors and with our classmates."

In fact, as McHarg spends this year going on medical school interviews, he's also serving as a teaching assistant (TA) for the program. He, along with another member from his cohort, is tasked with setting up and preparing experiments for the students, writing up notes on procedures, and helping with tutoring and review sessions. "The experience you get from being a TA was something that I was interested in. Being able to teach other people is going to be beneficial for medical school," he said.

In addition to opportunities such as teaching assistantships, the benefit of a program like GW's includes affiliation with an academic medical center full of clinicians, researchers, and academics, added Schwartz.

"I'm able to tap into that in terms of opportunities for students to do research as well as having [faculty] as guest lecturers for the seminars," she said. "It's not typical that you have these thought leaders in health care at your disposal to come educate pre-med students.

"This post-baccalaureate program is ... a collaborative effort," she added. "Everything we do is to put these aspiring doctors in the position to be successful in the future. This is the first step in the rest of their career." ■

A Progression of Science

BY CAROLINE TRENT-GURBUZ

Allan Goldstein's office, a narrow room with a bank of windows overlooking the George Washington University (GW) campus, is a tribute to the octogenarian who occupies it. A bulletin board displays a collage of photos of the well-known researcher shoulder to shoulder with scientific greats — Jonas Salk, for one. Framed photos on the wall above his desk and on his window ledge, meanwhile, show him paired with political heavyweights — members of the Bush and Clinton dynasties — and his family. Another wall holds a collection of books and papers, many he authored himself. His topic of choice: thymosins, small proteins isolated from the thymus gland, which Goldstein discovered.

Thymosins "have been my life's work, starting with being a postdoc at the Albert Einstein College of Medicine," explains Goldstein, PhD, Professor Emeritus in Residence in the Department of Biochemistry and Molecular Biology at the GW School of Medicine and Health Sciences. "What is that, 53 years working on the same thing?"

Goldstein, who joined the GW faculty in 1978, has authored about 430 papers. One of the most recent, a study on thymosins' impact on cystic fibrosis (CF), carried out in collaboration with colleagues Luigina Romani and Enrico Garaci from Italy, is making considerable waves in the scientific community after its publication in Nature Medicine.

CF, according to Goldstein, is a genetic disorder that affects not only the lungs, but also the gastrointestinal tract and other parts of the body. Those with CF have a limited life span and must deal with a host of medicinal interventions.

This November, the George Washington University School of Medicine and Health Sciences, with Allan Goldstein, PhD, Professor Emeritus in Residence in the Department of Biochemistry and Molecular Biology, hosted the Fifth International Symposium on Thymosins in Health and Disease. The biennial symposium, which alternates between the U.S. and Italy, brought together leading researchers from around the world to present on advances made in the chemistry, biology, and clinical application of thymosins.

"Over the years, there's been a bunch of drugs developed that can treat one or more [aspects] of the disease, but not really stop the progression," Goldstein says. "Individuals, in addition to having to take 40 or so different drugs a day — picture taking 40 different pills — have to spend 12 to 15 hours a day on different physical therapy and machines. It's horrendous, and it's really challenging."

CF also presents two major problems: first, because it's an autosomal recessive mutation, a protein necessary to keep the chloride channels open in cells is missing an amino acid, resulting in the protein being misfolded; second, because the chloride channel isn't working properly, there's immune dysregulation. "A lot of the immune system is out of whack, basically," Goldstein says.

Using an established mouse model, Goldstein tested thymosin α1 (Tα1), which is produced naturally in the body, to see if it could correct the immune system defect. "Lo and behold, we started administering Tα1 to these mice, and not only did it correct the immune problem, but it also corrected this misfolded protein," Goldstein says. "We thought, 'This is truly amazing.' "

In other words, Tα1 treated the symptoms while also halting the progression of the underlying disease. The next step, Goldstein says, was to test Tα1 on human cells from patients with CF. "We sprinkled in Tα1, and it corrected it in humans. Now we're able to stop the progression in animals and also in vitro in human cells," he said.

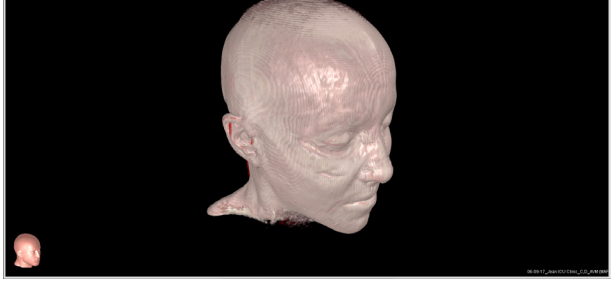
Tα1, whose drug version, Zadaxin, has been approved in Europe, though not yet in the United States, is now the main focus of a planned Phase I trial in Italy. It is a concrete result of his life's work, and Goldstein hopes to see it improve the lives of thousands.

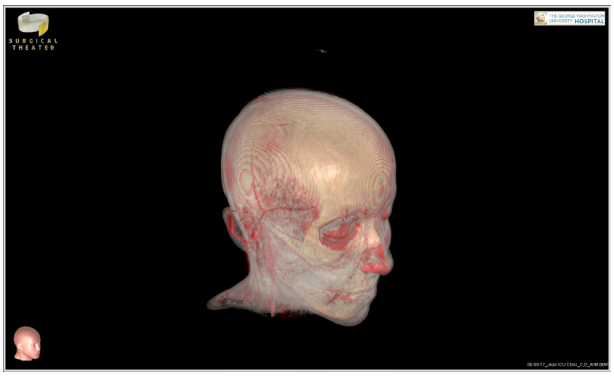
"I've been here a long time, but what's wonderful, as a scientist and a teacher, is to see the progression of science," he adds. "It is really, really amazing." ■

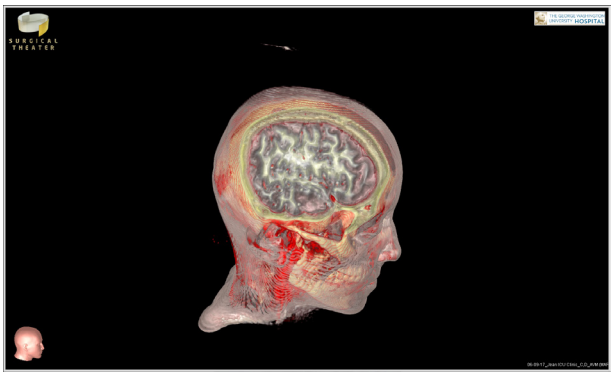
A VIRTUAL REALITY CHECK

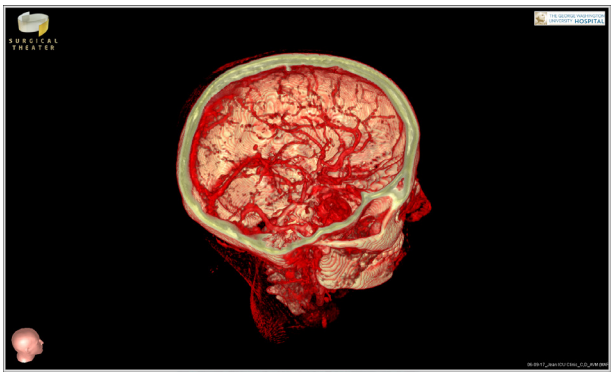
BY CAROLINE TRENT-GURBUZ

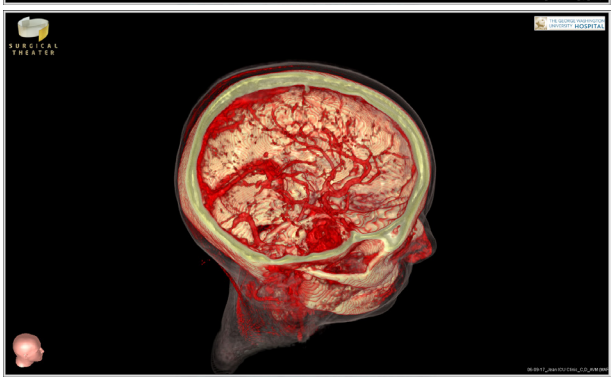
THE BLACK AND BULKY HEADSET FITS SNUGLY, THOUGH AALAP HERUR-RAMAN, SENIOR VIRTUAL REALITY PROGRAM LEAD FROM SURGICAL THEATER, CAN ADJUST THE STRAPS AS NEEDED. WHEN HE TAPS ON THE KEYBOARD IN FRONT OF A PAIR OF COMPUTER SCREENS, IT'S IMPOSSIBLE NOT TO PEER THROUGH THE BINOCULAR-LIKE EYEPIECE AS THE IMAGE – UPSIDE DOWN, PER THE SURGICAL POINT OF VIEW – ZOOMS INTO A SKULL, REVEALING A MAZE OF COLORFUL VASCULATURE AND BRAIN MATTER.











"There are the blood vessels," points out Anthony Caputy, MD, chair of the Department of Neurological Surgery and Hugo V. Rizzoli Professor of Neurological Surgery at the George Washington University (GW) School of Medicine and Health Sciences (SMHS), on the corresponding computer screens. Herur-Raman adjusts the opacity of the brain matter — thick and gray — until it faded away. "You can always add some of the brain matter back in," Caputy continues, "so you can see where the brain is in relation to the blood vessels. You can even see where the tumor is in relation to the blood vessels."

The tumor, a bright green mass appearing behind the left eye socket, is the target of the unique device, which provides medical professionals and patients a 3-D glimpse of a specific condition.

"THIS IS ONE OF THOSE RARE TECHNOLOGIES THAT HAS COME ALONG THAT BUILDS BRIDGES AMONG DIFFERENT MEMBERS OF THE HEALTH CARE TEAM, AMONG DIFFERENT DEPARTMENTS OF THE HOSPITAL, AND CERTAINLY AMONG PATIENTS AND THEIR FAMILIES," GOLDBERG SAYS.

Precision Virtual Reality (VR), a product of Ohio-based company Surgical Theater, is based on an F-16 flight simulation program. A chance meeting at a coffee shop with a neurosurgeon led the company's founders — both Israeli Air Force officers — to tweak their simulator program for neurological surgery.

"[It's] actually not terribly complex," explains Todd Goldberg, vice president of sales at Surgical Theater. "We are essentially a VR studio; instead of making music or movies, like you think of studios in entertainment, we make personalized medical content that's useful for patients and surgeons. The components consist of a very high-powered computer, with the latest, greatest, and most advanced graphics processing unit, or GPU, and the latest and greatest Intel chip. But the real brain of the system is the software itself."

That software, which identifies potential surgical paths for brain and spinal conditions, is key for the SMHS Department of Neurological Surgery's approach to patient

outcomes. “It’s a huge part of this three-pronged process: education, patient engagement, and surgical planning,” says Jonathan Sherman, MD, associate professor of neurological surgery at SMHS, who, as a longtime proponent of the tool, led the campaign to bring it to GW Hospital.

Right now, budding neurological surgeons have access to the Ammerman Lab, a microsurgical lab in SMHS’ Ross Hall that focuses on skull base, minimally invasive, microvascular, and spine surgeries, as well as basic science research. There, residents can literally get a “feel” for surgery — the texture of tissues, vibrations, additional movements — but with Precision VR, they get a more in-depth understanding of the structural aspects of the brain and spine.

“[When it comes to] the education of residents and students, even professionals, Precision VR will help them better understand what we’ll encounter in surgery and the risks of the surgery,” Caputy says. “You can show [them], here’s the anatomy, here’s the motor pathways, here’s the sensory pathways, here’s the optic pathways. You can cut everything out around the pathway you want to show, whereas before, you would show it with brain slices. Their mind would have to put the 3-D together.”

Those complementary aspects, he adds, are critical to education. “We need both of those labs to train people.”

From a patient perspective, the tool is equally powerful for edification and engagement.

“Looking at an MRI or a CAT scan, patients almost tune you out because they don’t quite understand everything that’s going on, and they think they have to be a physician or health care professional to interpret a CAT scan or MRI,” says Michael Rosner, MD, vice chair of the Department of Neurosurgery and professor of neurological surgery at SMHS. “To be able to take all that data and just put it in the three-dimensional model is ... very, very helpful.”

GW Hospital patient Roodelyne Jean-Baptiste, for example, previously had two surgeries to treat brain tumors, which were “brutal,” she says. Last winter, she was told she needed a third surgery, but she balked, thinking her tumor was relatively small. Her physician (Sherman) insisted, however: “He said, ‘No, we can’t hold off because of the size.’ We had to move so fast because it was already affecting me. The tumor was making me unable to eat and dizzy.”

After her surgery, Sherman used Jean-Baptiste’s MRIs and Precision VR to explain the complexity of her tumor. “He actually showed me exactly what he was talking about when he had to avoid a cut and what he had to stay away from when he went into the brain,” she recalls. “If I had had [the 3-D image] from the first time I encountered the procedure, I would have never hesitated to do it. You can actually see what the doctor is saying instead of agreeing with them just to agree with them.”

While Jean-Baptiste was able to get a better handle on her specific tumor, Sherman and his fellow neurological surgeons gained insight into what surgical strategies worked best. With a tumor, for example, Precision VR includes arrows for possible surgical entries, and surgeons get a clear view of what obstacles they may need to navigate around to ensure a successful procedure.

"Now, we can plan out ahead of time and really see the anatomy," Sherman says. "It helps us get a better perspective on what we're going to do surgically. We can use this technology to plan surgical [techniques], and then in the OR, we can actually use it to navigate to what we're doing."

Caputy agrees, adding that by visualizing the environment, surgical teams can identify areas of concern ahead of time. "Surgeons can devise a strategy that best allows them to achieve their goal: tumor removal and the preservation of functions," he says. "You want the most effective approach, and Precision VR can help you plan for that."

GW Hospital was the first hospital in the mid-Atlantic region to offer the tool, a boon for local patients and surgeons. "This is yet another way that we are moving the care standard higher at GW Hospital," says Kimberly Russo, MBA, MS, CEO and managing director of GW Hospital.

Although the tool is primarily geared toward neurology-related conditions and procedures at GW Hospital, its potential extends far beyond its technological appeal. As Goldberg explained, health care has a tendency to create silos; Precision VR, however, promises to break down those divisions and allow for better collaboration.

"This is one of those rare technologies that has come along that builds bridges among different members of the health care team, among different departments of the hospital, and certainly among patients and their families," Goldberg says.

Sherman likewise believes that the tool's value isn't limited to neurological surgery. "Ultimately, we're [trying] to get this across disciplines," he explains. "My goal is that this isn't just a neurosurgical tool; this is ... something we can use for all areas of subspecialty in surgery. We're just touching the tip of the iceberg of what our potential is with this technology." ■

TAKING AWAY FEAR OF THE UNKNOWN

BY KATHERINE DVORAK

On a Monday in early June 2017, Danielle Collins went to Pilates like any other day. But during the class she felt a sharp pain in her head, forcing her to leave early. She chalked it up to a bad migraine, but after two days of suffering through the pain, Collins decided to see a doctor, only to discover she was experiencing life-threatening bleeding in her brain.

Collins, who works as a realtor at Chevy Chase, Maryland-based Wydler Brothers Real Estate, found out at 27 years old that her brain was bleeding due to a ruptured arteriovenous malformation (AVM), an abnormal connection between the arteries and veins.

"I was running 8 miles five times a week before this happened," Collins says, adding that she has always been health conscious. "I hadn't taken Advil, hadn't had a drink of alcohol, hadn't had anything in almost seven years. So I didn't take Aleve or Excedrin ... which would have thinned my blood and probably killed me."

Collins quickly found herself sitting in a room at the George Washington University (GW) Hospital looking at images of the inside of her brain. The device used, Precision Virtual Reality (VR), offers 3-D views of medical conditions and helps identify possible surgical paths.

"It provided a tangible way to understand the surgical plan, and made me feel like I was truly a part of the process," she says. "When you have an injury on your body, like a gash on your arm, you can see that. But when something is undetectable by sight, to provide sight to the areas that would be blind to you is incredible. It took away part of the fear of the unknown."

Over the next 10 days at GW Hospital, Collins received two angiograms, an MRI, CAT scans, and a craniotomy. "This was the best thing that ever happened to me," she says. "No day is a bad day to me anymore; I woke up this morning."

Only months removed from her surgery, Collins was back at work and back to her morning runs. "Running is time to clear my head," she says. "I run because I want to live a long life, I want to have a healthy body."

Now, Collins notes, she wants to give back, with plans to create a fund to support family members of hospital patients.

She adds that she found peace in a Bible passage from 2 Timothy 1:7 that says: "For God has not given us a spirit of fear, but peace (love), power, and a sound mind."

"On June 12, God, with the team of surgeons and everyone at GW, gave me a sound mind, and it was something I never even knew I needed because I had no prior knowledge of the AVM," she says. "It's amazing what minds collectively put together were able to do to save my mind." ■

The New Face of the MFA

BY KATHERINE DVORAK

As the health care landscape in the United States continues to evolve, Robert E. Kelly, MD, CEO of the George Washington University (GW) Medical Faculty Associates (MFA), knows the organization needs to be ready for any changes that may come.

"I want to create a vision for the organization of how we want to position ourselves in the marketplace," Kelly says. "As health care changes from the fee-for-service model to value-based models and population health models, we need to be ready for that."

It has been almost a year since Kelly began — he took the helm of the MFA on Jan. 9, 2017 — and already he's making his mark. He has made strides in creating a strong management team, hiring for crucial roles such as chief financial officer, chief information officer, and chief business development officer.

As CEO, Kelly is tasked with overseeing operations management, the administrative structure that supports the clinical enterprise, as well as financial services. He is also responsible for developing and implementing the mission and strategic vision of the organization.

There is no typical day, according to Kelly; he jokes that as you move up in an organization, it gets harder to describe what you do each day. Right now, he's working to put organizational structures and performance metrics in place to create stability and improve efficiency.

"What I want to do is make sure the doctors and all the providers feel like the MFA is here to support their practice," Kelly says. "I'm impressed with the commitment to patient care, and [I'm] impressed with everybody's sense of mission."

His vision to support changes in health care, such as the move from volume to value, includes growing the MFA's reach throughout Washington, D.C., and into neighboring communities in Virginia and Maryland. Patients, he notes, are going to want care close to where they live; they'll come to Foggy Bottom for complex procedures, but for the routine exams, the closer to home the better. That means setting up MFA physicians in parts of Virginia and Maryland, so that they can see patients outside D.C.'s borders.

Health IT is another area Kelly has his sights set on exploring; the MFA is "just scratching the surface of what is there for us," he says. Big areas of opportunity in the IT space, he adds, include mobile health care and telemedicine. Additionally, he wants the MFA to start looking more closely at big data and analyzing information to make it useful in the clinical setting.

Kelly comes to the MFA from New York-Presbyterian, where he served as president and chief operating officer. He also served on the faculty of Weill Cornell Medicine, as professor of clinical anesthesiology from 1998 to 2015. He earned his MD from the University of Cincinnati Medical Center and was an anesthesiology resident at New York Hospital-Cornell Medical Center. Before getting involved in the administrative side of medicine, Kelly was a practicing anesthesiologist for a decade.

He says in moving to the MFA, he sees differences between the work he did for a major hospital and the work he does now for the medical faculty group — but not that many differences.

"As the president of the hospital, I was very involved in the faculty organizations because the reality is without the physicians, the hospital doesn't run," he says. "Being a physician has helped keep me grounded and aware of how important the doctors are. ... I've been aware of faculty issues and have been dealing with them throughout my career."

But the best part of his work at the MFA, Kelly says, is the people he gets to work with, such as Anton N. Sidawy, MD, MPH '99, the Lewis B. Saltz Chair of the Department of Surgery and professor of surgery at the GW School of Medicine and Health Sciences and chairman of the Board of Trustees at the MFA; Jeffrey S. Akman, MD '81, RESD '85, vice president for health affairs, Walter A. Bloedorn Professor of Administrative Medicine, and dean of SMHS; and GW Hospital CEO Kim Russo, MBA, MS.

"The people here are great. They are passionate, committed," Kelly says. "They really see the mission of what patient care is about." ■

GROWING OUR WORKFORCE

GW ADVANCES EFFORTS TO AID CLINICIAN-INVESTIGATORS

BY KATHERINE DVORAK

Health research can't be confined to insights obtained from examining a petri dish or peering through a microscope. Often, biomedical research needs to be looked at from the perspective of someone trained in medicine who understands the patient experience. That's where clinician-investigators come in.

These experts, who focus on both clinical work and research — and often hold dual degrees in medicine and science — bring important viewpoints to the biomedical workforce. They are a crucial part of health care, but also an underrepresented one.

According to the most recent National Institutes of Health (NIH) Physician-Scientist Workforce Working Group Report, published in 2014, there were only about 9,000 clinician-investigators among the 50,000 or so NIH-funded researchers during 2008–12.

Clinician-investigators face many obstacles, including winning funding, finding time for both lab work and clinic work, and drawing people from a career focused solely on medicine into one that involves research. To address those and other challenges, the George Washington University (GW) School of Medicine and Health Sciences (SMHS) hired Alison Hall, PhD, to serve as associate dean for research workforce development.

Hall oversees research development activities across the school, offering guidance on research education, promoting research opportunities, and stimulating sponsored research support.

Clinician-investigators need the ability to form effective research networks, find collaborators on campus and off, and work with mentors in their field of study, says Hall. Those are areas, she notes, where GW can make major strides.

One action item Hall has already completed is the development of a searchable GW researcher database. She also plans to tackle the creation of a peer-to-peer learning community connecting clinician-investigators with one another and the rest of the GW research community. It will give them ways to share proposals and approaches, and also talk about the challenges they face.

In addition to fostering career growth for clinician-investigators, students will be in Hall's field of vision as she takes on the additional role of co-director for the medical student research track. "I'm thrilled so many students are interested in research. I'd like to help them be even more successful," she explains.

Another area of importance is funding, which comes in part through grants from the NIH and other foundations. Efforts to bring more research dollars to GW will include gathering faculty to write T-32 training grants, which can be used to train graduate PhD students, postdoctoral fellows, and medical fellows, Hall adds.

GW wants to grow its cadre of clinician-scientists to join those already working at GW and making advances in the lab and the clinic. Two such experts are Aileen Chang, MD, MSPH, assistant professor of medicine at SMHS, and Homa Ahmadzia, MD '08, MPH '08, BA '04, assistant professor of obstetrics and gynecology at SMHS and of global health at the Milken Institute School of Public Health at GW.

Both received NIH KL2 Career Development Awards through the Clinical and Translational Science Institute at Children's National Health System. The KL2 awards support newly trained clinicians in the development of successful clinical and translational research careers.

AILEEN CHANG

Chang began studying the dengue virus nearly 10 years ago, which led to her researching similar viruses, such as chikungunya. Not long after her arrival at GW, the Zika outbreak hit. That timing allowed Chang to lend her knowledge to GW's efforts in researching and understanding the virus, and led to her receiving a KL2 award for her study, "Zika-Induced Guillain-Barre Syndrome: Elucidating the Role of Antibodies."

Guillain-Barre Syndrome (GBS) is a neurological disorder caused by an array of different infectious diseases, Chang explains. With the Zika outbreak, the incidence of GBS increased. "I wanted to see what caused GBS, and if it would be something we could potentially prevent," Chang says. "Sometimes GBS is caused by vaccines, like the flu vaccine, and researchers are in the process of making a Zika vaccine. We want to make sure that the vaccine would be safe for the general public."

Chang seeks to determine whether Zika-induced GBS is caused by antibodies to the virus or caused by the virus itself. She helps to enroll patients in studies, collects the samples, and analyzes the data.

Chang also works with a host of scientists in the Department of Microbiology, Immunology, and Tropical Medicine, including Jeffrey Bethony, PhD, professor of microbiology, immunology, and tropical medicine; Rebecca Lynch, PhD, assistant professor of microbiology, immunology, and tropical medicine; Robert Miller, PhD, senior associate dean for research, Vivian Gill Distinguished Research Professor, and professor of anatomy and regenerative biology at SMHS; and Gary Simon, MD, PhD, Walter G. Ross Professor of Medicine and of Microbiology and Tropical Medicine, director of the Division of Infectious Diseases, and vice chair of the Department of Medicine. Investigators analyze the samples, determine the antibody content, and research whether antibody levels cause differing levels of nerve damage in vitro.

Chang says the most valuable part of her KL2 award is that it allows her the time she needs in the lab, while also giving her the opportunity to see patients in the clinic. "Because lab-based science is so advanced, there's no way I will ever be as good as people who are spending all of their time in the lab," she admits, but adds that her clinical-based expertise offers something extra. "I can bring an idea of what direction we might want to go in order to best address patients' most pressing questions or needs."

HOMA AHMADZIA

For Ahmadzia, being a clinician-scientist means balancing two interests, weaving them together to help patients and further research.

Her research interests lie in the use of the drug Tranexamic acid in prevention of postpartum hemorrhage, for which she recently received a KL2 award.

"Pregnancy is understudied in research. It [involves] a vulnerable population, and researchers are always very skeptical about studying it. So I wanted to study a critical area that has potential impacts not only regionally, but also nationally and globally," she says.

Tranexamic acid stabilizes fibrin, which helps the body naturally process blood clots. "It doesn't form new blood clots, it just helps stabilize your ability to keep blood clots you've already formed," she explains. "It optimizes the body's ability not to bleed out, which can be a big risk during delivery."

Currently, she is investigating the bioavailability of an IV formula for Tranexamic acid. Ultimately, she'd like to see the utilization of an oral option for the drug during childbirth. There are concerns, however, that the drug could increase the risk for blood clots (no study has yet shown that, though). Ahmadzia is addressing those concerns in her research by looking at how the body responds to the drug.

Ahmadzia adds that her clinical work is aiding in her research because it helps her identify women who may be eligible for the study or who may be at risk for hemorrhage.

She also has a personal motivating factor for the work she does: Ahmadzia's family is from Afghanistan, and although she has lived in the United States since age 4, she knows how great an issue maternal health is in that country and others like it. "While I can't be in those countries or directly be involved," she says, "I always feel like this is my way of helping. If not helping directly there, then at least by conducting research here that may one day be used globally." ■

A TALE OF PERSEVERANCE

BY CAROLINE TRENT-GURBUZ

At 19 years old, Aung Myint stepped on a plane, American visa in hand, leaving behind his Myanmar home. He'd seen universities and colleges shuttered following political instabilities and military rule, and he knew he couldn't stay.

"When you're [that age]," he recalls, "you're adventurous."

It's a story Myint, MD, RESD '16, BA '07, a fellow in gastroenterology at the George Washington University (GW) Hospital, tells all the time – to residents, his attending doctors, his patients. It's easiest, he says, to start at the beginning.

A refugee, Myint landed in New York City with few resources; the only thing he knew about America, he says, was from the movies. He tried his hand at academia at the City College of New York, but high tuition and a lack of English language skills led him to drop out. So, for the next four years, he worked: delivering Chinese food, waiting tables, washing dishes, picking up garbage.

"Then something good happened," he says. "I got a green card. That, I think, was a turning point."

Myint moved to Washington, D.C., enrolling in night classes in a medical assistantship program on K Street. "During the day, I worked at Giant to make sushi," he says. "After nine months of that and training, they had me here at the [GW Medical Faculty Associates (MFA)] for job training, an externship. They liked me, and that was when I started working here as a medical assistant."

During the next nine years, Myint went back to college part-time, first earning his associate's degree at Northern Virginia Community College, then his bachelor's degree in biology at GW. He went south again, this time to Florida for medical school, but he wanted to return to GW for a residency in internal medicine.

"This is almost my home because I've been here so long," he says. "Everybody that I used to work for [at the MFA], I get to work with again in a different capacity. A lot of the people who were residents when I was a medical assistant are now attendings. It's kind of a reunion."

Myint, who was voted both resident of the year and now fellow of the year, credits his achievements to the "long journey" that took him from a wandering teen to an established medical professional.

"Perseverance is why I think I got here," he explains. "Most [of my co-residents and co-fellows] are shocked [when they hear my story]. Most of them come from here and go to college, go to medical school, and didn't have to worry about the things I had to. I've been through a lot, so most things don't bother me."

What matters to him, Myint says, is talking to patients and solving problems. "You really feel good after you've made some improvement in quality in a patient's situation," he says. "It doesn't have to be lifelong, a cure of something, but you just talk to them, and if you can make them feel better, just for a little bit, it feels good." ■

Photograph courtesy of Elliott Jermyn

ELLIOTT JERMYN KEEPS THE TRAINING ON TRACK

BY KATHERINE DVORAK

On a typical weekday, Elliott Jermyn, PT '01, ATC, rises before the sun and makes his way to Redskins Park in Ashburn, Virginia. As the clock strikes 7 a.m., a slew of National Football League (NFL) players enter the training room; maybe quarterback Kirk Cousins, or outside linebacker Ryan Kerrigan, possibly wide receiver Jamison Crowder. As the men shuffle in, Jermyn, the Redskins' physical therapist (PT) and assistant athletic trainer, gets to work.

That's Jermyn's routine seven days a week from mid-July through December, or even February if the team makes it to the postseason. There are no holidays, and no breaks. "I always knew growing up that I wanted to somehow be involved in football," Jermyn says, admitting he once thought that might be as a player on the field, but in the end he "was nowhere near the caliber of being able to do that."

A few years after graduating with a degree in kinesiology from Pennsylvania State University, where he worked with the Nittany Lions football team, Jermyn applied to the George Washington University School of Medicine and Health Sciences (GW) PT program. Jermyn says attending was a "no-brainer ... as soon as GW accepted me, I knew that was where I was going to go."

While at GW, Jermyn pursued outpatient orthopaedics. With a goal of opening his own practice, he asked GW's faculty if his internships and residencies could be in the orthopaedic setting. They obliged him. A series of orthopaedics jobs following graduation from GW in 2001 ultimately led to a six-year stint at Precision Health & Fitness in Bethesda, Maryland.

But then in 2008, football again came calling. The Washington Redskins were looking for a new physical therapist who also was a credentialed athletic trainer. Jermyn fit the bill.

Fast-forward more than a decade and Jermyn says he couldn't imagine working anywhere else. "I'm very happy that I made this decision. It brought me back to an area that I didn't know I'd been missing," he says.

His motto for the rehabilitation work he does day in and day out is simple: "You try to strengthen what's weak, and you stretch what's tight."

Pre-game preparation means taping, bracing, stretching, manipulating, and often dry needling, one of Jermyn's specialties. It's a procedure akin to acupuncture that uses needles to go deep into the skin to release trigger points, or areas of active irritated tissue within the body. "I found that to be a total game changer in my practice," says Jermyn. "Instead of just rubbing on something for 20 minutes, I can [do dry needling]. The muscle always comes out firing better."

During games, Jermyn and the other trainers are "glorified water boys," he jokes. They keep everyone hydrated, but always with an eye on the field, grabbing players who come off who may need some soft-tissue work or manual manipulation. "Even though it looks like we have the best seats in the house, and we do, we're pretty darn busy on game day," he says.

Among the most common injuries Jermyn treats are those in the knees, such as meniscal tears; shoulder troubles, like acromioclavicular joint separation or labral tears; and ankle pain.

Then there are the drastic injuries. Jermyn recalls a player who tore his brachial plexus, the network of nerves that sends signals from the spine to the shoulder, arm, and hand. He's also seen lower leg fractures, and occasionally an open fracture where the ankle is pointed in the wrong direction.

That's one of the challenges, having a person who in any other setting might not even be walking, but who actually needs to be prepared to play an NFL game, Jermyn says. But the chief concern is the safety and health of the players, and getting them back onto the gridiron can take longer than they'd like. "Sometimes you have to step in and say, 'you may feel good, and you look good, but safety-wise, you're not ready to go,' " Jermyn notes.

Those are the hard times, along with the 80-hour workweeks and lack of weekends. But then there's Sunday.

Many people spend that day looking ahead to the workweek, but Jermyn and his team are thinking back to their efforts from the week before, and — with every yard gained or touchdown made — knowing it was worth it.

After a loss, "you come in to work, and you almost can't look anyone in the eye," Jermyn says. "And that's everyone, the secretaries upstairs, the chef and his staff; it's like a death march.

"But then you win a game, and everyone's as happy as can be." ■

BREAKING BIG LEAGUE BARRIERS

BY KATHERINE DVORAK

In September 1933, the Pittsburgh Steelers, then called the Pittsburgh Pirates, took to the gridiron for the first time to play the New York Giants. Seventy years later, in a role still dominated by men, Robin West, MD '97, RESD '02, added to the team's storied history as assistant team physician for 11 seasons and three Super Bowls.

West says she never thought about the barriers she overcame as a woman in sports medicine. Even when shattering glass ceilings by earning positions as director of sports medicine and head team physician for the Washington Redskins and lead team physician for the Washington Nationals — the first woman to hold both titles — West says what matters most is a strong work ethic, integrity, and humility.

"My mom raised me as a single [parent], and she taught me to believe that there really are no barriers and that you can achieve anything you want to achieve," West says.

Before her work in Washington, D.C., West added another "first" to her resume; in 2014 she became the chair of Inova Health System's newly established Sports Medicine Program. It's a highlight of her career.

"I got to build it from the ground up — there was nothing — and in the past three years we've really made something unique," she says. The goal of the program, she adds, is "to be a one-stop shop for athletes of all ages and all abilities."

Returning to D.C. was a homecoming, she adds. West moved to the east coast from California to attend Johns Hopkins University, and stayed for medical school and residency in orthopaedic surgery at George Washington University.

West chose orthopaedic surgery as her specialty because it enabled her to work in sports medicine and treat patients of all ages, she says. "I always wanted to take care of little kids, adults, and grandparents, and be able to treat a whole family of patients. That's why I ultimately chose sports medicine. I have these motivated patients who are really involved in their health care and trying to get back to play," she explains.

West became lead team physician for the Nationals in October 2015, and the director of sports medicine for the Redskins in June 2016. Between the work she does for the two teams — including traveling with the Redskins for away games and with the Nationals for playoffs — as well as her role at Inova, it's a lot to balance.

But juggling jobs is nothing new for West; while in Pittsburgh she worked not only with the Steelers, but also as head team physician at Carnegie Mellon University and head team physician at the University of Pittsburgh for its wrestling, swimming/diving, gymnastics, and men's basketball teams.

So how does she coordinate so many roles at once?

Photograph courtesy of Inova

"I think balance is always difficult. No one's going to be in balance perfectly, but what I try to do is surround myself with really dependable people who have the same values I do. I rely on them in all aspects of my life," she explains. "I rely on my husband to help with our family and our kids at home, and then I rely on my colleagues at work; they have a huge role in the building of our sports medicine program. I really believe in the 'TEAM' acronym: Together Everyone Achieves More."

As with most people working in so many different capacities, West says there's no typical day, week, or even season for her.

West's responsibilities with the Redskins include regular visits to the training room to see players and working the sidelines for every pre-season, regular season, and post-season game. "With the NFL, we are really under the spotlight, because during these games the cameras are on us and they're following us, so we have to be fast and reactive to these injuries," West says.

When the Nationals are playing, the team physicians will attend to athletes during the game, splitting the games between them, as well as evaluating the players the next day. It's different from working with the NFL. "We're not on TV, we're behind the scenes working on injury prevention; we're treating overuse and chronic-type injuries. Because it's a much longer season, the stopwatch is not on us as much, and we have a little more time if somebody's injured," she says.

No matter where West is, under bright stadium lights, in the operating room, or in the clinic, she's doing what she always wanted to do: treating patients and getting them back to play. "I love being able to care for them through the injury and through recovery," she says. "The journey is what makes the whole experience." ■

Outside the Wire

Jessica Basso shifts from military medic to GW MD student

BY KATHERINE DVORAK

In 2007 on the outskirts of Baghdad, Iraq, Jessica Basso accompanied a convoy "outside the wire," beyond the confines of her U.S. Army forward operating base. Then the worst happened — a suicide vehicle-borne IED hit her unit. It was a watershed moment for the young Army medic.

"I had this epiphany of 'thank God that I have the knowledge and training I have.' I knew without a shadow of a doubt that ... if one of my soldiers was harmed, I would [be] able to treat them," recalls Basso, now a third-year medical student at George Washington University (GW) School of Medicine and Health Sciences.

Although Basso didn't have to put her medical skills to the test that day — none of the soldiers in the convoy was seriously injured — she knew in that moment she wanted to go further in the medical field, rather than be content with the knowledge she already had.

Basso served 15 months in Iraq, working as a personal security detail medic. The team she worked on was attached to the 18th military police battalion commander and his command team. When the battalion commander or command sergeant major would leave the base to check on the well-being of soldiers stationed at other bases or to work with Iraqi police officers, Basso was part of the squad accompanying them.

"VIPs are always assigned a full squad, which consists of everyone from drivers to mechanics to weapons experts, and there's always one medic attached," she explains. "I was lucky enough to be the medic for one of these teams."

When those VIPs visited local Iraqi police stations to establish relationships between the military police and the Iraqi police, Basso would treat the Iraqi police, their family members, and patients in nearby villages. "I got a lot of exposure there and many humbling experiences, to say the least," she says.

At the end of her deployment, Basso was promoted to staff sergeant and her days turned to administrative work, helping other medics and soldiers with their home lives and finances. She was still taking care of her fellow soldiers, but not in the way she wanted.

It was hard to leave the military, Basso says. She signed up immediately after 9/11; with a bit more than a year of high school left at the time, she could only fill out preliminary paperwork. Upon graduation, she officially joined and decided to combine her military service with her underlying interest in medicine.

Now at GW, Basso says she has grown more than she ever could have imagined. "This school and the staff are bringing out the best in me, helping mold me to become not just a great physician and competent leader, but also a better person," she says.

GW's mission statement drew Basso to Foggy Bottom, in particular its dedication "to improving the health of our local, national, and *global* communities."

"To this day, that statement resonates with me," Basso says. "Coming from the military and having the experiences I've had, I thought 'This school understands. They want physicians who are going to go out and make a difference, whether it's in America or overseas.' " ■

A GAME-CHANGER IN HOOKWORM INFECTION

BY CAROLINE TRENT-GURBUZ

Hookworm, a chronic parasitic infection primarily affecting children in poor, rural areas of the tropics, counts more than 400 million infected around the globe, but two George Washington University (GW) researchers believe they have a game-changer on their hands: a potential vaccine.

"Worldwide, [a hookworm vaccine] would be huge," says David Diemert, MD, associate professor of microbiology, immunology, and tropical medicine at the GW School of Medicine and Health Sciences (SMHS). "A major effect, clinically, is development of iron deficiency and anemia, and that causes problems with physical and cognitive development, [which] affects school attendance and school performance. On to adulthood, it affects economic productivity, cognitive functioning, and so on. That could all be prevented if we have a vaccine."

That's where Diemert and Jeffrey Bethony, PhD, professor of microbiology, immunology, and tropical medicine at SMHS, come in.

The two previously completed a Phase I trial of their recombinant vaccine, during which they tested its safety with volunteers. Those volunteers were infected with hookworm to create a controlled human infection model, Bethony says.

Now, with a $3 million grant from the National Institutes of Health, he and Diemert will move on to Phase II with a new set of volunteers, who will help test the vaccine's efficacy.

"Our Phase I trials really only looked at safety and immune responses to the vaccines, and now we're actually going to see if they're effective at preventing infection," Diemert says. "The way we're going to do that is we'll vaccinate volunteers and then deliberately challenge them with an infection of hookworm, since we've been developing that infection-challenge model here at GW for the past couple of years."

The volunteers will receive three injections of the vaccine over four months. A month after the last injection, they'll get a dose of hookworm larvae, and Diemert and Bethony will monitor them for another nine months. All told, Diemert says, Phase II should take about two years, with 48 volunteers.

While he and Bethony, along with collaborating GW researchers, are aiming to see if immunization with the vaccine leads to protection against hookworm, they also have a secondary goal: testing the effects of novel immunostimulants given with the vaccine to see if a boost to the immune system aids the vaccine's performance. The immunostimulants, or more specifically Toll-Like Receptor immunostimulants, have never before been tested in those with hookworm infection and a boosted immune system, Bethony says.

"A lot of effort in this award is going toward determining the immune response to these novel immunostimulants," he explains. "Our vaccine studies always attempt to add something to the general knowledge of vaccines and not just to the vaccine-pathogen being studied."

FACULTY NEWS

From left, T.C. Williams High School students Lane McCaslin, Catherine Mellette, Emma Goeas, and Grace Hogan present their work at the 2017 American Medical Informatics Association annual meeting in Washington, D.C.

Coding for Change

During the 2016–17 academic year, Jennifer Ushe, an engineering teacher at T.C. Williams High School in Alexandria, Virginia, and her biotechnology class partnered with the George Washington University (GW) School of Medicine and Health Sciences (SMHS) Biomedical Informatics Center, led by Qing Zeng, PhD, professor of clinical research and leadership at SMHS, on a project to develop applications to address medical disparities, such as childhood diabetes, adolescent anxiety, and healthy eating in pediatrics.

"We worked using the biotechnology CTE [Career Technology Education] learning objectives," said Ushe. "Students worked in teams to select a topic and, using techniques introduced by Dr. Zeng, researched these topics in great detail." She added that topics for the course ranged from biotechnology in the environment to genetic engineering.

The teams brainstormed, researched, and coded using the application "Scratch," a basic-block web programming application. Some of the notable apps developed included a game to promote physical activity among children with cystic fibrosis and an educational tool for parents about genetic disorders, such as Down syndrome.

Following the project, four students – Emma Goeas, Lane McCaslin, Grace Hogan, and Catherine Mellette – were selected to participate in a summer internship at the GW Biomedical Informatics Center. The students spent several weeks designing a game to help teenagers with anxiety using an application called "Game Salad." At the completion of the internship, Goeas submitted the group's research project for the American Medical Informatics Association (AMIA) High School Scholar Program and in September they were selected to present their work during a poster session at the AMIA Annual Symposium, in Washington D.C., Nov. 4–8, 2017.

The 2017–18 class of T.C. Williams biotechnology students is learning about biomedical ethics, through the book "The Immortal Life of Henrietta Lacks" by Rebecca Skloot, as well as through an online course titled "Social and Behavioral Research." The course offers hands-on research experience. Students are exploring ethical principles, attaining human subjects research certification, and learning how to write and evaluate consent forms and institutional review board proposals. Additionally, they will act as research investigators in testing the physiological and emotional effects of the therapeutic game that was developed by the T.C. interns this past summer. ■

More than Skin Deep

Elizabeth Robinson, MD, a third-year resident in the Department of Dermatology at the George Washington University School of Medicine and Health Sciences recently received a pair of research awards.

The DermMentors Resident of Distinction Award and the Rising Derm Stars Award both acknowledged Robinson's research on the use of a synthetic anti-inflammatory cannabinoid as a dermatological treatment. Robinson looked at ajulemic acid in particular, which is a result of modifications to the THC compound found in cannabis. Her research shows that this modification and others display anti-inflammatory properties without causing central nervous system activity.

The DermMentors Resident of Distinction Award, sponsored by Beiersdorf, a German personal care company, was presented to Robinson at the Coastal Dermatology Symposium Oct. 5–7 in Portland, Oregon. As one of five recipients, she was invited to present her research at the conference. Award recipients also were assigned mentors and had the opportunity to learn from and interact with top thought leaders in dermatology.

As a recipient of the Rising Derm Stars Award, Robinson presented her research at the Fall Clinical Dermatology Conference held in Las Vegas in October 2017. Residents are paired with mentors for the duration of the conference, enhancing the overall experience. ■

Leadership Qualities

Bruno Petinaux, MD, RESD '02, clinical associate professor of emergency medicine at the George Washington University (GW) School of Medicine and Health Sciences (SMHS), was named chief medical officer (CMO) of GW Hospital in June 2017, having served as interim CMO during the previous year.

Petinaux, who also serves as co-chief of the section of emergency management at the hospital, led the development and execution of safety and quality initiatives prior to his official appointment.

In addition to his work at GW, which includes serving as director of the Emergency Medicine Track at SMHS, he works as the medical team manager for the Virginia Task Force 1/USA 1 Urban Search and Rescue Team. ■

Formative Events

Lawrence "Bopper" Deyton, MD '85, MSPH, senior associate dean for clinical public health and professor of medicine at the George Washington University School of Medicine and Health Sciences (SMHS), joined a prestigious group of endowed professors at the school, becoming the Murdock Head Professor of Medicine and Health Policy on June 5.

As a leader in public health and medicine, Deyton's career has taken him from Capitol Hill to SMHS, and he has played a pivotal role at government institutions such as the Office of the Surgeon, the National Institutes of Health (NIH), and the Federal Drug Administration.

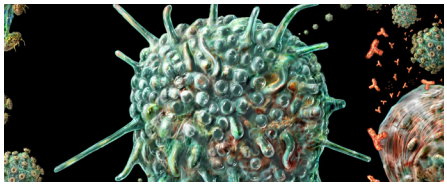
Murdock Head, MD, DDS, JD '58, was a professor emeritus at GW, serving on the faculty for nearly 30 years; his son, Mark, MD '82, was there to congratulate Deyton.

Also celebrating Deyton's installation was friend and former mentor Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases at NIH. In his remarks, Fauci recalled the role Deyton played at NIH during the height of the HIV/AIDS epidemic. ■

The Wright Leadership

Karen A. Wright, PhD, PA-C, interim chair and assistant professor in the Department of Physician Assistant (PA) Studies and program director for the PA program at the George Washington University School of Medicine and Health Sciences, has added a new role: assistant dean for student life and academic support of health sciences.

Wright will direct academic support services, advance new student life initiatives, and develop and implement new programs and activities with other faculty. She'll also work in collaboration with the associate dean for academic planning and assessment in health sciences to design individualized programs for students, and she'll pursue research and academic activities related to student experience, such as wellness, community engagement, and the culture of diversity and inclusion. ■



The Hired Gun in the War on HIV/AIDS

In the fight against HIV, Brad Jones, PhD, assistant professor of microbiology, immunology, and tropical medicine at the George Washington University School of Medicine and Health Sciences, has another tool at his disposal, thanks to a five-year, $2-million grant from the National Institute of Allergy and Infectious Diseases of the National Institutes of Health (NIH).

Jones and his team will study specific T-cells known as "killer T-cells," which play an important role in the immune system; previous studies have shown that killer T-cells, depending on the individual, have varying strengths, which may explain why some people respond better to therapies than others. Jones will compare several killer T-cell samples to see which perform better in eliminating HIV reservoirs. The results could provide guidance on how researchers can better develop vaccines and immunotherapies, potentially leading to the ultimate goal of curing HIV.

Jones was also recently published in Cell Host & Microbe. His study, supported in part by the multimillion-dollar NIH BELIEVE grant and amfAR generationCURE, found that defective HIV proviruses, which had been thought to be harmless, actually produce viral proteins and distract the immune system from targeting and killing intact proviruses; intact proviruses can help reduce the HIV reservoir and cure HIV. ■

Financial Matters

The George Washington University School of Medicine and Health Sciences (SMHS) recently welcomed Deb Dickenson, MBA, to its roster of deans; Dickenson, who has more than 25 years of experience in administrative and financial management positions, will serve as the assistant dean for finance, planning, and fiscal operations for SMHS.

In her new role, Dickenson will act as the principal financial officer responsible for planning, organizing, executing, evaluating, and monitoring the school's financial functions. She will also advise SMHS leadership on fiscal matters and financial plan development.

"I am honored to be joining the leadership team at the GW School of Medicine and Health Sciences," Dickenson said. "I look forward to supporting faculty and staff, as well as the school's strategic plan, programs, services, and initiatives." ■

Making New Connections

Vittorio Gallo, PhD, began his new role within the school to enhance research relationships between the George Washington University (GW) School of Medicine and Health Sciences (SMHS) and Children's National Health System (Children's National), July 1, 2017.

In this newly established position as associate dean for child health research, Gallo supports faculty in their pursuit of child health research funding by identifying appropriate funding sources and providing educational opportunities to enhance grant-seeking skills. He also provides overall coordination of the school's child health research efforts and will provide general administrative leadership for the operation of strategic projects in child health, in coordination with Robert Miller, PhD, senior associate dean for research, Vivian Gill Distinguished Research Professor, and professor of anatomy and regenerative biology at SMHS. ■

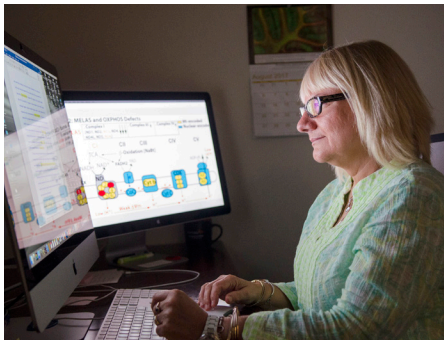
Tackling research workforce development

Alison K. Hall, PhD, created two initiatives for researchers in her first few months on the job as the George Washington University School of Medicine and Health Sciences' new associate dean for research workforce development: a weekly grant funding alert service and an online researcher database.

In the role, Hall provides oversight of research workforce development across the school. She gives guidance on research education, promotes research opportunities, and provides sponsored research support.

A new blog on the SMHS website, Research Matters, combines many of Hall's first initiatives into one place. It includes archived grant funding alerts, a new GW researcher database, and posts from GW experts about specific issues affecting research.

Hall is a published neuroscientist with a focus on neurodevelopment and the peripheral nervous system. She most recently served as the deputy director of the Division of Training, Workforce Development and Diversity at the National Institute of General Medical Science. Prior to this experience, Hall was the associate dean for graduate education at the Case Western Reserve University School of Medicine. ■



On Point

Anne Chiaramello, PhD, associate director of the Institute for Biomedical Sciences, and associate professor of anatomy and regenerative biology at the George Washington University School of Medicine and Health Sciences (SMHS) received the Reviewer's Choice Award at the 67th Annual Meeting sponsored by the American Society of Human Genetics (ASHG) for their poster titled "Clinical and Molecular Genetic Analyses of a Rare De Novo Point Mutation in the MT-APT 6 Gene Associated with Maternally Inherited Leigh Syndrome." Leigh Syndrome is a neurological disorder characterized by progressive loss of mental and movement and commonly results in death within two to three years of life. The award, presented at the ASHG Annual Meeting Oct. 17–21, is based on innovation, interest, and translation. Only the top 10 percent poster abstracts at the world's largest human genetics meeting, are eligible to receive the honor.

Receiving the award with Chiaramello was Christine Brantner, PhD, senior research scientist in electron microscopy at GW's Nanofabrication and Imaging Center; Andrea Gropman, MD, professor of neurology at SMHS, and division chief for neurodevelopmental disabilities and neurogenetics at Children's National; and Martine Uittenbogaard, PhD, lead research scientist in anatomy and regenerative biology at SMHS. ■

LaMantia Installed as Jeffrey Lieberman Professor of Neurosciences

In what he called a "milestone in an odyssey from the Midwest to the mid-Atlantic," Anthony-Samuel LaMantia, MD, director of the George Washington University (GW) Institute for Neuroscience and professor of pharmacology and physiology at the GW School of Medicine and Health Sciences, became the inaugural Jeffrey Lieberman Professor of Neurosciences this summer.

Surrounded by loved ones, LaMantia beamed as he thanked them for the moment.

"If one is to achieve any measure of success in his or her professional and personal journey, that success is built upon the love, support, and guidance of family, friends, and colleagues. They make the journey possible," he said.

LaMantia has played a pivotal role in expanding the GW neurosciences faculty and has been a catalyst for partnerships and collaborations across the school. ■

Vilain Joins Department of Genomics and Precision Medicine

Eric Vilain, MD, PhD, now serves as chair and professor of the newly renamed Department of Genomics and Precision Medicine at the George Washington University (GW) School of Medicine and Health Sciences and Children's National Health System (Children's National).

He also is a professor of pediatrics and is continuing in his role as director of the Center for Genetic Medicine Research at Children's National.

Vilain brings 30 years of expertise to GW. He is a renowned geneticist and is one of the world's foremost experts in the genetic determinants of sex development and sex differences. ■

Meteoric Rise

Sharad Goyal, MD, professor of radiology at the George Washington University (GW) School of Medicine and Health Sciences and chief of the Division of Radiation Oncology at GW Hospital, is taking health policy to task as a recipient of the 2017 Health Policy Fellowship from the American Society for Radiation Oncology (ASTRO). The fellowship, which is awarded to only two ASTRO members every year, is offered to those who display interest in becoming leaders in health policy.

Goyal, who will collaborate with the Trachtenberg School of Public Policy & Public Administration and the Milken Institute School of Public Health at GW, plans to develop a program focusing on health policy issues in oncology and radiation oncology. He will also look at improving the current coding and billing system, as well as proposing alternative payment models for radiation oncology. ■

Special Election

James Gehring, MD, assistant professor of medicine at the George Washington University (GW) School of Medicine and Health Sciences (SMHS), has ascended to new heights: He was recently elected to serve a four-year term as physician director-at-large on the National Commission on Certification of Physician Assistants' (NCCPA's) board of directors.

Gehring, who specializes in working with physician assistants (PAs) and PA students, has long been "passionate about PA education and ensuring the opportunity for continued scholarship in the field," he said. "I look forward to working in this role with the NCCPA to further those opportunities."

In addition to his positions with NCCPA and SMHS, Gehring serves as the division director of hospital medicine at GW Hospital, where he helped establish the PA hospital service and acted as the program's supervising physician for seven years. He is also the medical director of the SMHS PA program. ■

Granting Support

Ian Chua, MD, hospitalist fellow and research instructor of pediatrics at the George Washington University School of Medicine and Health Sciences, recently garnered support for a research project thanks to a grant from the Council on Medical Student Education in Pediatrics (COMSEP).

Chua, the 2016 Richard T. Sarkin Foundation for Medical Education awardee, is focusing on a project called "Patient Experience Debriefs: Medical Student Interviews of Hospitalized Patients Guiding Reflections on Future Practice."

To be awarded a grant, proposals must align with COMSEP's mission of promoting exemplary teaching practices; advancing innovation and scholarship in medical student education in pediatrics; and fostering the personal growth, professional success, and collaboration of COMSEP members. ■

CLASS NOTES

Hope T. Jackson, MD '09, RESD '16, CERT '14, Minimally Invasive Surgery Foregut/Bariatric Surgery Fellow, University of Washington Medical Center, was selected to the 2017 class of 40 Under 40 Leaders in Minority Health. The select group, chosen by the National Minority Quality Forum, represents the next generation of thought leaders in reducing health disparities.

"Our country needs new leaders to fulfill the dream of eliminating health disparities in a generation," said Congresswoman Robin Kelly, PhD, Congressional Black Caucus Health Braintrust chair. "Fresh ideas and new approaches are needed to decrease health inequalities for minority communities currently suffering from poor access to quality health care."

Vanila M. Singh, MD '97, MACM, was named chief medical officer for the Office of the Assistant Secretary for Health at the United States Department of Health and Human Services (HHS). In that capacity, Singh will serve as the primary medical advisor to the assistant secretary for health on the development and implementation of HHS-wide public health policy recommendations. For the past 13 years, she has served as a clinical associate professor of anesthesiology, perioperative and pain medicine, at Stanford University School of Medicine.

1970s

Christine Edry Seidman, MD '78, received the 2017 Johns Hopkins University School of Medicine Distinguished Medical Alumni Award from her residency alma mater. Seidman serves as the Thomas W. Smith Professor of Medicine and Genetics at Harvard Medical School and Brigham and Women's Hospital, an investigator of the Howard Hughes Medical Institute, and a senior associate member of the Broad Institute.

Susan H. Senft, MD '79, FRCOphth, FAAO, board certified ophthalmologist, was recently featured in the International Association of Health Care Professionals (IAHCP) publication *The Leading Physicians of the World*. Physicians are nominated by IAHCP on the basis of data collected from a variety of different resources, such as medical affiliations and consumer reviews.

1980s

Neal Barnard, MD '80, RESD '84, FACC, adjunct associate professor of medicine at SMHS, presented a lecture on music's effects on the brain, at the Historic Fargo Theatre in July.

Mary F. Campagnolo, MD '82, MBA, BS '78, was recognized for the eighth consecutive year as a Top Doctor for 2017 by *Inside Jersey*. Campagnolo also served as a New Jersey delegate at the 2017 Congress of Delegates at the American Academy of Family Physicians, and as a delegate to the American Medical Association's House of Delegates meeting in 2017.

Timothy Carman, MD '89, was named to the 2017 Board of Directors for the American Board of Hair Restoration Surgery (ABHRS) and the 2017 ABHRS Ethics Committee. Carman also serves

as faculty member of the International Society of Hair Restoration Surgery.

Jeffrey Gorodetsky, MD '87, primary care physician, joined the SMG New England Family Practice of Andover, Massachusetts.

1990s

Harlan Dorey, MD '99, was appointed chief medical officer at the Naval Health Clinic Patuxent River in October 2017.

Matthew Feinsod, MD '96, board-certified ophthalmologist, was recently named interim chief medical officer for biotechnology company Applied Genetic Technologies Corporation.

David Laughrun, MD '90, joined the faculty of the University of Southern California Keck School of Medicine in July 2017 as assistant professor of clinical medicine with an emphasis on adult congenital heart disease.

Stephan I. Lee, MD '98, was recently promoted to clinical professor of medicine in the Department of Medicine at the University of California – San Francisco School of Medicine.

2000s

Lisa Laws, MS '08, recently joined Duke Clinical Research Institute as an audit coordinator in Quality Assurance and Regulatory Services, supporting investigators in identifying regulatory requirements.

2010s

Sylvia Gonsahn-Bollie, MD '10, RESD '13, received her diplomate certification from the American Board of Obesity Medicine. Gonsahn-Bollie practices in Richmond, Virginia, at West End Internal Medicine, a Bon Secours Medical Group.

Daniel Gerscovich, MD, RESD '16, recently joined Carolina Orthopaedic and Neurosurgical Associates in Spartanburg, South Carolina, where he will serve as a total joint specialist employing operative and non-operative treatments for all joint conditions. Previously, Gerscovich completed a fellowship in joint reconstruction at the Anderson Clinic.

Kerry Kennedy Townsend, MSIII, published the op-ed piece "A Medical Student's Perspective on Medicaid," in the July 26 edition of the Huffington Post.

Visionary Alumnus Harry S. Brown, MD '59

"Sight-restoring surgery affects not just the individual, but also the caretaker, the family, the community, the society, and the culture. The potential impact is huge. … We've been given the gift of being able to restore sight. … It's important that we use our abilities to their fullest."

– Harry S. Brown, MD '59

Harry S. Brown, MD '59, an ophthalmologist and alumnus of the George Washington University School of Medicine and Health Sciences (SMHS), passed away on April 16, 2017, four months shy of his 87th birthday.

In 1974, Brown, who practiced ophthalmology in Santa Barbara, California, until his retirement in 1992, founded the nonprofit organization Surgical Eye Expeditions (SEE) International. An around-the-world journey in 1970 inspired him to create the organization, which provides sustainable medical, surgical, and educational services through volunteer ophthalmic surgeons. For more than 20 years, the SMHS Department of Ophthalmology has sent senior residents on weeklong SEE International trips as a part of their training. Since the organization's founding, more than 3 million patients in 75 countries have been examined and treated, and more than 400,000 patients have had their vision restored through surgery by SEE International ophthalmologists.

In 2014, Brown received the American College of Surgeons/Pfizer Surgical Humanitarian and Volunteerism Award for his 40 years of service.

IN MEMORIAM

David Forest Ballinger, BS '79

John Angelo Boscia, MD '77

Harry S. Brown, MD '59, FACS

Jerome W. Canter, MD '55

Giovanni Disandro, MD, RESD '66

Vincent J. DiFrancesco, MD '40

Herbert S. Gates Jr., MD '58, RESD '59

Ronald E. Gunther, MD '60

Louisa C. Littleton, MD '45

John Francis Mayo, BS '86, BS '80

Grant W. Miller, MD '51, FACS

Julian S. Neistadt, MD, RESD '56

Robert M. Pash, MD '71

Alfred K. Pfister, MD '62

Ray E. Plymyer, MD '52

Erick R. Ratzer, MD '58

Raul G. Reyes, MD '50

James A. Richardson, MD '55, BA '51

Brian Robert Stanley, MD '79

Garrett M. Swain, MD '45, RESD '52

Martin S. Wolfe, MD, RESD '62

ALUMNI EVENT CALENDAR

Upcoming Events

Feb. 21–24, 2018
Physical Therapy Alumni Reception, APTA Combined Sessions Meeting, New Orleans.

For more information contact Sarah Klein at smklein@email.gwu.edu.

March 10, 2018
Annual Harry C. Miller, MD, Visiting Professorship Symposium and Luncheon, Ross Hall.

For more information contact Sylvester Owens: rsowens@email.gwu.edu.

March 16, 2018
MD Program Medical Residency Match Day, Ross 101, Noon, followed by Match Day Luncheon.

For more information contact Sylvester Owens: rsowens@email.gwu.edu.

April 10, 2018
Annual Washington, D.C., GW Medical Alumni Reception (Admitted Student Reception). City View Room, 1957 E Street, NW, Washington, DC.

For more information contact Sylvester Owens: rsowens@email.gwu.edu.

May 17–20, 2018
George Washington University Commencement Weekend.

For more information contact Sylvester Owens: rsowens@email.gwu.edu.

May 19–23, 2018
Physician Assistant Alumni Reception, AAPA Annual Meeting, New Orleans.

For more information contact Sarah Klein at smklein@email.gwu.edu.

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Post-Baccalaureate Pre-Medicine Program Sets Students up for Success in Medical School

In 2015, George Washington University (GW) School of Medicine and Health Sciences launched its Post-Baccalaureate Pre-Medicine program at GW's Virginia Science and Technology Campus in Loudoun County, Virginia.

Designed for students who have earned their bachelor's degrees, but need to boost their life sciences credentials before applying to medical school, the rigorous year-long program, directed by Lisa Schwartz, EdD '10, assistant professor of integrated health sciences at SMHS, has already begun connecting students with their medical education goals. Read more on page 14.