

Medicine + Health

THE GEORGE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE AND HEALTH SCIENCES



GOING GLOBAL

After 20 Years, the Office of International Medicine Programs has Extended GW's Reach to Thousands Around the World



The Work We Do

According to the World Health Organization, the health of our global community is steadily making progress; however, the work is far from finished. The statistics surrounding the prevalence of diabetes, cancer, neglected diseases of poverty, and HIV/AIDS still stagger the imagination. The promise of preventing such needless disease and death is the inspiration for the work we do.

At GW's School of Medicine and Health Sciences (SMHS), we are committed to fulfilling that promise in our local, national, and global communities and we are determined to change the lives of our patients for the better.

This dedication is revealed through our students, faculty, and alumni as members of the SMHS family travel abroad on mission trips, operate free clinics in D.C., or establish international organizations that provide exceptional clinical care. Furthermore, students, scientists, and physicians from around the world come to GW to learn medicine and collaborate on

research, while GW researchers are committed to a global mission that leads them to all parts of the world.

This winter, the GW Research Center for Neglected Diseases of Poverty will open with state-of-the-art laboratories where our researchers will continue to make important advancements and will fight to eliminate infectious diseases of poverty. We will also establish the Center for Basic Research for the Cure and Prevention of HIV/AIDS under the leadership of renowned scientist Douglas Nixon, M.D., Ph.D., newly recruited chair of the Department of Microbiology, Immunology, and Tropical Medicine. Here, our faculty will work to develop new vaccines and treatments, providing real solutions for the most impoverished people in our country and around the world.

We are also making an impact within our own community. This past summer, the Rodham Institute was established to educate the District of Columbia's next generation of clinicians through community partnerships in order to prepare them to provide compassionate and high-quality health care for all people, regardless of their socio-economic background.

In the pages that follow, you will learn more about the impact that GW SMHS continues to have, here at home and around the world. If you are interested in getting involved or have an interesting story to tell, I encourage you to reach out and connect with us.

I hope you have a wonderful holiday season and a healthy new year.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jeffrey S. Akman'. The signature is fluid and cursive, with a long horizontal line extending to the right.

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

WALTER A. BLOEDORN PROFESSOR OF ADMINISTRATIVE MEDICINE
VICE PRESIDENT FOR HEALTH AFFAIRS
AND DEAN, SCHOOL OF MEDICINE AND HEALTH SCIENCES

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ART DIRECTION
Moiré Marketing Partners

Medicine + Health

is published by:
Office of Communications
and Marketing
2030 M Street, N.W.
Suite 4024
Washington, D.C. 20036
Telephone: (202) 994-8110
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smhs.gwu.edu

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GW medical student Yushkia Hill takes a patient's medical history and gives a physical exam at a mobile clinic in Thomonde, Haiti as part of the biannual SMHS mission to the Caribbean nation with Project Medishare. Photo by Jon Lascher



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Dean Akman helps an incoming SMHS student take the first step in his medical career.

A Journey of a Thousand Miles

“Your wardrobe is about to get a significant upgrade,” Michael Simon joked with the audience as he welcomed the M.D. class of 2017, along with their family and friends, to the White Coat and Honor Code Ceremony, Aug. 24. Simon, a second-year medical student at the George Washington University’s School of Medicine and Health Sciences (SMHS) and co-chair of the event along with fellow second-year students Divya Chalikonda and Margarita Ramos, encouraged the incoming class of medical students to “revel in the feelings you have right now as you anticipate that moment when you slip your arms into the sleeves of your new identity — a GW medical student.”

Simon introduced GW President Steven Knapp, who welcomed the 190 first-year students to the 11th oldest medical school in the United States. Knapp acknowledged the students’ choice of a “lifelong vision of caring for others” and praised their dedication to a “long and arduous, but we also hope a joyous road of preparation.”

“You have chosen to come to the George Washington University because you know that here you will learn the art of medicine in a vibrant urban setting, which also happens to be the seat of power and policy in the modern world,” Knapp said.

Jeffrey S. Akman, M.D. ’81, RESD ’85, Walter A. Bloedorn Professor of Administrative Medicine, vice president for health affairs, and dean of SMHS, extended his enthusiastic congratulations to the incoming class. He offered three pieces of advice to the students, each symbolized by the life of the university’s namesake, George Washington. “One, aspire to greatness. Two, be prepared for revolutionary change in medicine, in science, in health care policy, and, most importantly, in your identity. And three, never forget that honesty and integrity are the central components of the physician identity.” ■

Welcome PT Class of 2016

First day jitters were followed by excitement as the physical therapy (PT) class of 2016 gathered to meet their new classmates, get to know their professors, and learn more about what to anticipate over the next three years. “I’m so excited to be a part of this program,” said Nick Ienni, a first-year Doctor of Physical Therapy (DPT) student at the George Washington University School of Medicine and Health Sciences (SMHS). “I love the program’s small class size and the individual attention that each student receives.”

Senior Associate Dean for Health Sciences Joseph Bocchino, Ed.D., M.B.A., welcomed the 41 students who make up the DPT class of 2016. “Our DPT program is quickly becoming one of the best in the country,” he said. “I’m going to jump the gun by almost three years and tell you that when you leave here you are truly going to appreciate the incredible faculty members we have here and their dedication.”

Josh D’Angelo, DPT ’13, a student physical therapist at Virginia Therapy and Fitness Center, encouraged the new class to take advantage of SMHS’ expert faculty. “Having that one-on-one connection with my professors was so important to my learning experience,” he said.

“This is one of the strongest classes we have ever admitted,” said Joyce Maring, DPT, Ed.D., chair and program director of the department of physical therapy and health care sciences and associate professor of physical therapy and health care sciences at SMHS. The first day is always exciting, says Maring, adding “It’s a new beginning for the students and for the faculty.”

The new PT class is the largest in SMHS history, with students hailing from all across the United States. The class is comprised of 12 males and 29 females with an average age of 25. ■



Members of the largest class of PTs in SMHS history don their new white coats.



Oriented Toward Service

“Everything we do today has meaning and will have an impact on people in need; whether it’s a packaged meal, a homemade quilt, a reusable bag, or a first aid kit,” said Elana Neshkes, a second-year medical student in GW’s School of Medicine and Health Sciences (SMHS). As co-chair of the event, this day is especially powerful for Neshkes because, “It’s a way to bring together first- and second-year medical students along with physical therapy and physician assistant students to make a huge difference in the lives of people who need our help the most.”

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Neshkes, along with co-chairs Shweta Bansil and Brent Willowbee, both second-year medical students at SMHS, joined hundreds of SMHS students, staff, faculty, residents, and alumni to help those in need at this year’s Commitment to Community Day, Aug. 29. This year’s annual service-learning event was spent preparing 126,000 bagged meals made of rice, soy, dried vegetables, and micronutrients for Kids Against Hunger D.C. Metro, a humanitarian food aid organization that combats hunger in the United States and abroad. ■

GW Physician Assistant Program Earns Seven-Year Accreditation

The streak continues. GW’s School of Medicine and Health Sciences (SMHS) Department of Physician Assistant (PA) Studies, one of the earliest established PA programs, recently

received reaccreditation by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). The SMHS program earned a seven-year accreditation period, the maximum term granted by the ARC-PA.

“We are extremely proud of our students, graduates, faculty, and staff, and we’re grateful for their contributions to the self-study process,” said Lisa Mustone Alexander, Ed.D. ’03, M.P.H. ’89, PA-C ’79, director of the PA program, which began in 1972. “This is an accomplishment that speaks to the excellence and integrity of the program.”

The SMHS PA program, one of 173 entry-level accredited PA programs nationwide, has been named among the nation’s leaders, according to *U.S. News & World Report*. The program is consistently recognized for its pioneering curriculum and unique focus on community outreach, patient advocacy, and leadership.

“For the past 40 years, the GW PA program has been a leader in the training and education of PAs in the United States,” said Jeffrey S. Akman, M.D. ’81, RESD ’85, Walter A. Bloedorn Professor of Administrative Medicine, vice president for health affairs, and dean of SMHS. “It comes as no surprise that they were granted the maximum accreditation term of seven years.”

More than 2,000 PAs have graduated from the university, and GW graduates continue to play an important role in extending the services of physicians to deliver quality care in clinics, hospitals, and private practices. ■



A Quest for Quality

“It can be exhausting and unpredictable, but this is an incredibly exciting period of time in health care,” said Carolyn M. Clancy, M.D., assistant deputy undersecretary

for quality, safety, and value at the Veterans Health Administration and associate clinical professor of medicine at GW’s School of Medicine and Health Sciences (SMHS). Clancy, who directed the Agency for Healthcare Research and Quality (AHRQ) at the U.S. Department of Health and Human Services for nearly a decade, shared her perspective on the future of health care quality during the inaugural SMHS Annual Health Care Quality Lecture, Oct. 17.

As director of the AHRQ, Clancy oversaw the development of an annual report on health care quality and health care disparities for submission to Congress. “The good news is that every year for the past decade we’ve seen statistically significant improvements in quality,” Clancy said. “But statistically significant isn’t the same thing as clinically important.” The annual rate of quality improvement is slow — between 2 and 2.5 percent — and health care disparities remain a persistent challenge.

Clancy outlined the six priorities that have been identified by AHRQ’s National Quality Strategy: making care safer by reducing harm caused by delivery of care, ensuring that each person and family is engaged as partners in their care, promoting effective communication and coordination of care, promoting the most effective prevention and treatment practices for the leading causes of mortality, working with communities to promote wide use of best practices to enable health living, and making quality care more affordable by developing and spreading new health care delivery methods. “There’s teamwork written all over this list,” said Clancy. “Historically that’s not how we’ve trained health professionals. It’s a big change, but it’s very exciting.” ■

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Making a Bigger Impact

Graduates of the 10th cohort of GW’s Master Teacher Leadership Development Program (MTLDP) are laying the groundwork for improving basic science learning among students in the School of Medicine and Health Sciences.

The group, led by Principal Investigator Rosalyn Jurjus, M.D., Ph.D., assistant professor of anatomy and regenerative biology, received a 2013 High Impact Teaching and Learning Practices grant from the Office of the Vice Provost for Teaching and Learning. The project, titled “Improving Anatomical Knowledge of Third-Year Medical Students Prior to OB/GYN and Surgery Rotations,” seeks to improve retention of basic science knowledge, including anatomical sciences, from the pre-clinical (first and second) to clinical years (third and fourth). The multi-disciplinary team will use computer-based e-modules and related laboratory interactive sessions to design, implement, and evaluate an interactive method of teaching clinically relevant anatomy to third year medical students on their surgical clerkships.

Co-investigators include MTLDP 10th cohort colleagues Jill Krapf, M.D., adjunct instructor of obstetrics and

gynecology; Juliet Lee, M.D., FACS, assistant professor of surgery; Gisela Butera, M.L.I.S., reference/instructional librarian Himmelfarb Health Sciences Library; Kirsten Brown, Ph.D., assistant professor of anatomy and regenerative biology; and Janette Krum Ph.D., associate professor of anatomy and regenerative biology, and of neurological surgery, as well as Ellen Goldman, Ed.D., associate professor of human and organizational learning at SMHS and director of MTLDP.

The MTLDP, administered by GW’s Graduate School of Education and Human Development for SMHS, is designed to strengthen teaching skills, encourage scholarship in education, and cultivate educational leadership potential. Since its inception, 116 faculty members have completed the program.

The Office of the Vice Provost for Teaching and Learning’s High Impact Teaching and Learning Practices supports innovative ideas from GW departments, faculty, and students to improve teaching and learning activities at the undergraduate and graduate level. ■

Match Made in Research

It’s important for future health care professionals to have someone who can motivate, challenge, and support them throughout their education. In an effort to establish and foster mentor/mentee relationships between faculty and medical students who are interested in clinical research, the Clinical and Translational Science Institute at Children’s National Health System (CTSI-HS) created the Mentoring Experience to Expand Opportunities in Research (METEOR) Program. The program, now in its second year, matches newly admitted George Washington University School of Medicine and Health Sciences (SMHS) medical students from underrepresented communities with mentors who specialize in clinical or translational research.

Nicole Findlay is one of four first-year medical students (the others are Sophia Akhiyat, Yodit Tsegaye, and Eussera El-Magbri) accepted into this year’s class. Under the mentorship of Gaby Moawad, M.D., assistant professor of obstetrics and gynecology at SMHS, Findlay is working on the development of a randomized controlled trial to determine the efficacy of estrogen therapy in the prevention of intrauterine adhesions.

Working with Findlay has been a gratifying experience for Moawad. “It gives me a great sense of achievement to see a student like Nicole excel in an area that she is passionate about,” he says. Findlay, for her part, believes participating in this program has given her a head start in her medical education. “It is helping me fulfill my goal of getting my research published one day,” she says.

This year, the METEOR program is focused on expanding its scope by implementing formalized mentorship



First-year medical students Yodit Tsegaye, Sophia Akhiyat, Eussera El-Magbri, and Nicole Findlay were selected to be the 2013 METEOR students

training for faculty members. “Similar to the way professors are trained to teach, we are teaching our faculty members to be effective mentors,” says Lisa S. Schwartz, Ed.D., associate director of research education, training, and career development at CTSI-HS and assistant research professor of clinical research and leadership at SMHS.

The program recently received an Innovation in Diversity and Inclusion grant from GW’s Office of Diversity and Inclusion, which will enable SMHS to evaluate and expand the program. The grant will support a workshop this spring featuring Lynne Holden, M.D., founder and president of the Mentoring in Medicine Program. It will cover many of the unique issues encountered in mentoring trainees from diverse backgrounds, for both the mentor and mentee, regardless of their field of study or career development stage. ■

At the Center of Psychoanalysis

The GW School of Medicine and Health Sciences (SMHS) is pleased to announce a new educational and research affiliation with the Washington Center for Psychoanalysis (WCP) that will provide educational opportunities for GW’s medical students and residents, as well as consultative relationships with the SMHS medical humanities program. As a new academic

division within the Department of Psychiatry, the WCP will be well-positioned for collaborations with other GW schools. Chair of the Department of Psychiatry and Behavioral Sciences James L. Griffith, M.D., says that he “hopes the presence of the WCP will help solidify a national identity for our department as a center of excellence for psychotherapy practice, training, and research.”

Psychoanalysis is both a treatment for mental illnesses and a systematic method for examining human subjectivity – a field of study that examines the private world of a person’s interior experience of living. While the use of psychoanalysis in our overall health care system has decreased due to the development of psychotherapies that are shorter in duration and less expensive, it is still used as a method for phenomenological inquiry that tracks patterns of a person’s lived experience within contexts of family, workplace, community, and culture. As such, a psychoanalytic perspective can add a depth of understanding to clinical treatment, psychiatric education, medical humanities, and psychiatric research.

“This affiliation will provide our students and residents with experiences that are not as easily attainable at other medical schools. With an understanding and appreciation for psychoanalysis, our students will be better prepared to understand and treat their patients,” said Griffith. ■



A Comprehensive Approach to Cancer in the Community

The GW Cancer Institute (GWCI) recently signed a \$2.1 million cooperative agreement to work with the Centers for Disease Control and Prevention (CDC) to design and implement a comprehensive technical assistance plan to support CDC-funded Comprehensive Cancer Control (CCC) programs. These programs are in all 50 states, Washington, D.C., seven tribes and tribal organizations, and in seven U.S.-associated Pacific Islands/territories.

GWCI will leverage its existing infrastructure, capacity, and relationships to provide technical assistance to CCC programs to help reduce the burden of cancer with a focus on local implementation of CCC activities, systems and environmental changes, sustainable partnerships, and communication strategies.

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The institute was also recognized by the Association of Community Cancer Centers (ACCC) as a top 10 cancer program in developing and pioneering solutions to address the challenges of treating cancer patients, receiving the association's 2013 Innovator Award.

The Innovator Awards, established in 2011 and sponsored by GE Healthcare, honor cancer programs that exhibit forward-thinking strategic planning and have developed pioneering, replicable programs for cancer care delivery. As an award recipient, GWCI had the opportunity to present the details and outcomes of their program at the ACCC National Oncology Conference before an audience of more than 500 cancer care providers from across the country.

“We aim to set the standard for patient-centered care,” said Associate Director of GWCI Mandi Pratt-Chapman. “This award is a testament to the GW Cancer Institute’s collaborative work with our clinical partners to continually improve the experience of patients.”

GWCI was recognized for its patient-centered programs that go a step beyond new national accreditation standards. The institute has focused attention on patient navigation quality improvements, a new distress screening protocol, and increasing referrals to survivorship services. GWCI continues to lead technical support for a Citywide Patient Navigation Network, a safety net for the city’s most vulnerable patients. Navigators in the network have removed barriers to cancer care for more than 7,000 patients in the past three years. ■

High-Impact Training



Jehan El-Bayoumi, M.D.

GW’s School of Medicine and Health Sciences (SMHS) recently launched a new initiative aimed at promoting health equity in the District of Columbia through community-focused education and training of health care providers. Named in honor of the late Dorothy E. Rodham and housed in SMHS, the Rodham Institute promises to build on the school’s long-

standing commitment to community engagement.

“The establishment of this institution will serve as a catalyst for GW and our community partners to unite and commit to a common goal of improving the health of all District residents, regardless of their neighborhood, their skin color, their gender, or their bank accounts,” said Jehan El-Bayoumi, M.D.,



SMHS residents and local high school students learn about new models of community health practices through Rodham Institute seminars.



Partnerships with groups such as Association of Black Cardiologists, Inc. and the Calvin Coolidge High School Alumni Association will enable the Rodham Institute to pair high school students with SMHS students, to provide a broad range of mentoring opportunities.

director of the Rodham Institute and associate professor of medicine at SMHS.

The institute's core functions will focus on medical education programs for residents and students, active evaluation of efforts to address health disparities in Washington, D.C., and providing leadership and fostering collaboration to address the community's critical health care needs. Students and residents will discover new models of community health care delivery through new GW training programs. The Rodham Institute will regularly assess the impact of activities on health care provider education, community health practices, and health disparities. Institute leadership will also provide ongoing synthesis and analysis of best practices needed for planning and priority setting of education and training, community health programs, and community linkages activities.

Initiatives that would ultimately grow into the Rodham Institute began in the Fall of 2012 with the first cohort of medical residents participating in the Underserved Medicine and Public Health (UMPH) concentration with GW's School of Public Health and Health Services. By exposing residents to health disparities in the local community, the hands-on program enhanced clinical competency in underserved settings, offered practical application of population-health principles and public health skills in medical practice, and helped to develop the residents' public health leadership

potential. Studies for the second cohort of residents are ongoing.

With key partnerships already established with the Association of Black Cardiologists, Inc. (ABC); the Calvin Coolidge High School Alumni Association; Girls Inc.; and The South East Tennis and Learning Center, the Rodham Institute is working to link high school students with medical students and students studying health professions, as well as SMHS faculty members, to provide a broad range of mentoring opportunities.

The Rodham Institute recently received the Dr. Walter M. Booker Health Promotion Award, presented by the ABC, Sept. 28. El-Bayoumi, who was recognized for leadership in founding the Institute, accepted the award on behalf of the Clinton family and the Rodham Institute.

Founded in 1974, the ABC is a nonprofit organization dedicated to eliminating the disparities related to cardiovascular disease in all people of color. The award, named after Dr. Walter M. Booker Sr., who passed away in 1998, recognizes innovative programs designed to prevent and reduce cardiovascular diseases in African Americans. ■

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Jeffrey S. Akman, M.D. '81, RESD '85, Installed as the Walter A. Bloedorn Professor of Administrative Medicine

BY LAURA OTTO

Before a full house and standing ovation, Jeffrey S. Akman, M.D. '81, RESD '85, vice president for health affairs and dean of the George Washington University School of Medicine and Health Sciences (SMHS) was formally installed as the Walter A. Bloedorn Professor of Administrative Medicine, Oct. 23. The endowed chair, named in honor of Walter Andrew Bloedorn who served as director of GW Hospital beginning in 1932 and dean of the school of medicine from 1939–57, was established in 1983 by the Walter A. Bloedorn Foundation to support the dean for academic affairs at SMHS.

“I’m humbled, honored, and inspired on a daily basis to lead the school that gave me so much,” said Akman, as he joined a distinguished group of leaders who have held this title, including Ronald P. Kaufman, M.D.; Roger Meyer, M.D.; Allan B. Weingold, M.D., Hon. '98; and John F. Williams, M.D. '79, Ed.D. '96, M.P.H., RESD '83.

As he addressed the audience, Akman took a moment to acknowledge those who have passed away; his twin brother Bryan, his former partner, Steven M. Dixon, M.D. '83, and his father’s cousin, Leonard C. Akman, M.D. '43.

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He recalled how Leonard Akman, a double GW alumnus, gave him his first microscope as he prepared for medical school. “As a 21-year-old student I didn’t fully recognize the meaning or significance of that gift regarding the path that I was to share with Leonard as a soon-to-be trained physician,” he said.

Leonard passed away a few years ago and left a substantial bequest to SMHS that reflected a deep well of gratitude to his alma mater. The gift established an endowed professorship in global psychiatry in Leonard’s parents’ names, Charles and Sonia Akman. It also supports the new Clinical Learning and Simulation Skills (CLASS) Center in Ross Hall. “When the new CLASS Center opens in 2014, our students and patients will enter into the Dr. Leonard Akman reception area and learn in the Dr. Steven Dixon conference room,” he said. In addition, future medical students will benefit by having tuition support from the Bryan J. Akman Scholarship fund, and medical students and residents will have opportunities to take international medical electives with support from the Dr. Leonard Akman Global Medicine Scholarships.

“It is particularly meaningful to have this very profound connection to Dean Walter Bloedorn, whose distinguished history includes opening the doors to the first African American physician to get hospital privileges at GW,” Akman said. “Those of you who know me, know that I am incredibly proud of this university and its school of medicine and health sciences. As they say, I am a person who bleeds buff and blue.”

Akman added that what comes with being a dean who is an alumnus is “a deep commitment to remember and honor the history of this school and those alumni, faculty, and deans who came before me; a responsibility to lead this institution by upholding and reflecting the core values of professionalism, integrity, civility, and humanism in medicine; a responsibility to lead our institution as it pursues its historic missions of education, research, clinical care, and service; a deep respect for our leadership in educating and training professionals across the health care spectrum; and, an obligation to look into the future and build something better.” ■

Banking on Science

International Partnership Creates a sub-Saharan African Biorepository to Support HIV/AIDS Research

BY KRISTIN HUBING

When the National Cancer Institute (NCI) announced in July 2013 that Stellenbosch University had been selected as the site for its first AIDS Malignancy Consortium sub-Saharan Africa biorepository, it represented the culmination of a long-standing relationship between the South African university and the George Washington University School of Medicine and Health Sciences (SMHS).

Since 2011, Stellenbosch University has contributed biological specimens from more than 300 South African patients with Kaposi's sarcoma, an AIDS-related malignancy, to NCI's East Coast AIDS and Cancer Specimen Resource (EC ACSR) housed at SMHS. The resource, invaluable to researchers, is part of the National ACSR, which exists to collect, preserve, and disperse biological specimens from patients with HIV-associated malignancies.

Sylvia Silver, D.A., professor of pathology and medicine at SMHS, director and principal investigator for the EC ACSR, will work closely with her South African counterparts to provide quality management expertise and advice on best practices as Stellenbosch University prepares to launch the sub-Saharan African biorepository in early 2014.

"This fits in with Stellenbosch University really becoming a center for biobanking," says Silver, who notes that Stellenbosch is also the recipient of a grant from the Human Heredity and Health in Africa (H3Africa) Initiative, which aims to facilitate a contemporary research approach to the study of genomics and environmental determinants of common diseases in Africa.

Johann Schneider, M.D., head of the division of anatomical pathology at Stellenbosch, will serve as the principal investigator for the sub-Saharan biorepository. "Though this will be a Stellenbosch University-based facility, we see it as an important asset for the country as a whole and for sub-Saharan Africa at large," he says. "This is an opportunity to facilitate high-quality research and to encourage researchers to become part of an extensive network that will enable collaborative research in this field," which he notes has been hindered thus far by difficulties with logistics and transportation in African countries with limited infrastructure.

"Another challenge with biorepositories in this part of the world is that people are not familiar with the concept," says Schneider, who is pleased with the discussions that the award has stimulated amongst high-level South African government officials. "There are ethical and legislative issues that need to be overcome — data transport agreements, import/export permits — but if we can achieve a successful outcome it will level the ground for future negotiations at the national level," he says.

According to Silver, the long-term goal is for the sub-Saharan biorepository to become a stand-alone regional biorepository of the ACSR that would make specimens available

"This is an opportunity to facilitate high-quality research and to encourage researchers to become part of an extensive network that will enable collaborative research in this field."

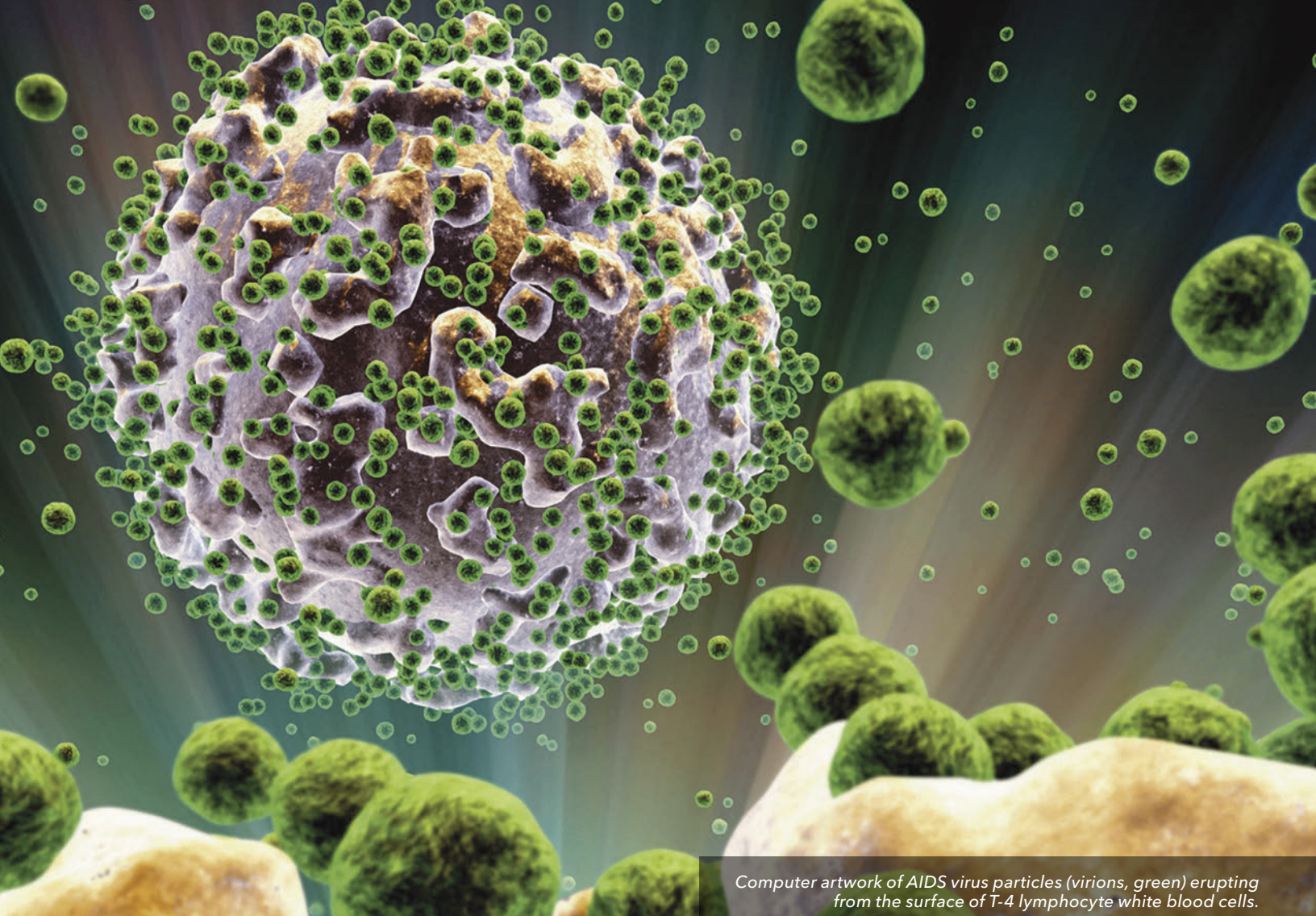
—Johann Schneider, M.D., head of the division of anatomical pathology, Stellenbosch University

to international researchers who work in HIV malignancies. "It's been proven that public health research done in-country has a larger impact on getting public health initiatives in place than research that is done out of country," notes Silver. "Not to mention that there is an amazing resource of scientists in Africa whose capacities need to be enriched." ■

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Computer artwork of AIDS virus particles (virions, green) erupting from the surface of T-4 lymphocyte white blood cells.

Managing in the Midst of Disaster

Immunologist Douglas F. Nixon, M.D., Ph.D., Joins GW's Efforts to Eradicate HIV/AIDS

BY LAURA OTTO

It was a blustery December afternoon in 1983 when Douglas F. Nixon, a medical student at Westminster Medical School in London, found himself in the midst of a manmade disaster, one that he had to manage. A car bomb planted by the IRA had exploded at Harrods department store, killing six people and injuring 75. "I was the medical student on duty when the bomb went off," says Nixon. "It was my responsibility to triage the injured and oversee the situation." The magnitude of that catastrophe changed Nixon's outlook on medicine forever.

After medical school, as a junior intern at St. Thomas' Hospital in London, Nixon again found himself in the eye of a disaster. A large influx of young men, all roughly his own age and suffering from an unknown illness, began turning up at the

hospital looking for help. "Today, we know this disease as HIV/AIDS," he says. "But at the time we knew very little about this mysterious illness except that it was spreading among gay men in Los Angeles, New York, and even here in London, but we couldn't do anything to treat them." Watching these young men succumb to this devastating disease day in and day out, Nixon felt compelled to take action. He focused his research efforts on the search for treatment options to help those suffering from HIV/AIDS. For the next 25 years, Nixon would immerse himself in clinical research, basic immunology and virology, and molecular biology, including experience in vaccine development, in the effort to eradicate the disease.

Now that quest has brought him to Foggy Bottom, and GW's School of Medicine and Health Sciences (SMHS).

Nixon joined the SMHS faculty on October 1 as the Ross Professor of Basic Science Research and chair of the Department of Microbiology, Immunology, and Tropical Medicine (MITM). “I have been impressed by GW and the MITM department’s focus on neglected infectious diseases of poverty for some time,” he says. “I’m thrilled to be a part of this team and help my fellow faculty members further their own research objectives.”

“It’s fantastic to have Dr. Nixon join GW SMHS in a major leadership role,” says Vincent A. Chiappinelli, Ph.D., associate vice president for health affairs and associate dean of SMHS. “As chair of MITM, Dr. Nixon will lead an expansion of our research capacity, not only in HIV/AIDS, but also in other infectious diseases that ravage millions of people throughout the world.”

In his new role, Nixon, who also serves as chair of the NIH AIDS Vaccine Research Subcommittee, will recruit additional faculty to help in the fight to eliminate infectious diseases of poverty and create two centers within MITM: the Research Center for Neglected Diseases of Poverty and the Center for Basic Research for the Cure and Prevention of HIV/AIDS. It’s a role for which Nixon feels he is well prepared.

In the mid-1980s, when Nixon left London for the University of Oxford, where he trained as a pathologist, the HIV/AIDS epidemic had just begun to spread. In England, when physicians train to be pathologists, they must practice microbiology and immunology as well. They are not just trained in forensic pathology, according to Nixon. “I have always been interested in immunology,” he says. “If you think about the way the immune system works, its major role is to help defend us against bugs, and for an immunologist you have to be interested in the bugs and how they interact.”

There was a lot of research excitement regarding the new virus. “At Oxford, my medical specialty was as a clinical virologist, meaning I have been trained to diagnose and treat viral infections,” explains Nixon. “In order to work with the virus experimentally, you had to have access to special containment labs.” Oxford’s clinical virology lab had a containment lab, and because Nixon’s supervisors trusted him, he was able to conduct his research in the only containment lab in the city, but outside normal business hours. In the first six months of research in the containment lab, Nixon identified a piece of the human immunodeficiency virus that could stimulate a white blood cell, which was considered to be a substantial finding at the time, leading to an article in the journal *Nature* with Nixon as lead author.

As an immunologist, Nixon felt that he should focus his efforts on creating a vaccine. He left Oxford and spent the next three years at a biotechnology company in New York. Nixon created a lipopeptide vaccine that was approved by the



Douglas Nixon, M.D., Ph.D.

“There have already been tremendous efforts in D.C., such as the work that Drs. Alan Greenberg and Gary Simon have developed with the District of Columbia Developmental Center for AIDS Research. If we can complement their efforts with greater emphasis on the basic science of HIV/AIDS, then we can put our GW stamp on HIV/AIDS research within the District.”

–Douglas Nixon, M.D., Ph.D.

FDA. “I designed the product from beginning to end, took the Investigational New Drug to the FDA, and designed the clinical trial for it,” he explains, “but unfortunately funding ran out, as often happens with biotech companies.”

Nixon then went on to be a postdoctoral fellow at the Aaron Diamond AIDS Research Center, part of the Rockefeller University in New York; was promoted to assistant professor; and then was recruited to the University of California, San Francisco (UCSF) as associate professor. Most recently, he has served as a professor of medicine and associate chief of the Division of Experimental Medicine at UCSF.

Coming back to the East Coast to take the position at GW was the obvious next step for Nixon. Washington, D.C., has one of the highest prevalence rates of HIV infection in the country, according to the Centers for Disease Control and Prevention. “We need to help emphasize the problem in the context of our political capital city,” he says. “There have

already been tremendous efforts in D.C., such as the work that Drs. Alan Greenberg and Gary Simon have developed with the District of Columbia Developmental Center for AIDS Research. If we can complement their efforts with greater emphasis on the basic science of HIV/AIDS, then we can put our GW stamp on HIV/AIDS research within the District.”

Nixon is wasting no time putting MITM’s new lab to use. First on his to-do list, he says, is researching viruses that live in humans. “I want to see if we can mobilize them to fight HIV infection.” ■

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Building Momentum

In 2010, SMHS was awarded \$15 million by the National Institutes of Health through the Recovery Act Limited Competition: Extramural Research Facilities Improvement Program (C06), which the university combined with additional funds to build 34,930 square feet of new collaborative laboratory space on the 5th and 6th floors of Ross Hall. Under the leadership of the newly appointed Chair of the Department of Microbiology, Immunology, and Tropical Medicine (MITM) and Ross Professor of Basic Science Research, Douglas F. Nixon, M.D., Ph.D., SMHS will populate these new labs with current and new faculty who will help in the fight to eliminate infectious diseases of poverty. Nixon says the new lab is “an amazing space. I think it will bring together the scientists who work here in a way that individual labs don’t; it will foster new collaborations.” The lab is well equipped with technology that will enable communication and interaction with GW’s global partners.

The Center for the Research of Neglected Infectious Diseases of Poverty will be established and the lab’s state-of-the-art equipment will enable SMHS researchers to identify innovative ways to prevent and treat these debilitating diseases.



“Faculty at MITM work with colleagues in Brazil, Uganda, and Thailand, so we need to be able to communicate with them on the ground, and communication hubs in the new MITM space will allow us to do that,” adds Nixon.

The new labs will provide space in Ross Hall to support GW’s growing biotechnology capacity through increased efficiencies, creating more collaborative learning spaces for students, laboratory personnel, and faculty.

A sleek, glass and steel emergency-egress exterior stairway was constructed to meet code regulations, provide better access inside Ross Hall, and serve as an additional route out of the building. Upgrades to the electrical, plumbing, and HVAC systems have also been completed as part of the renovation.

THE FINE ART OF CURRICULUM ENHANCEMENT

BY THOMAS KOHOUT

Since the 1910 publication of the Flexner Report, Abraham Flexner's famed assault on the state of medical education, two years of basic sciences followed by two years of clinical rotations has been the standard prescription for physician training among U.S. medical schools. But much has changed in health care since the dawn of the 20th century, and faculty leaders at the George Washington University School of Medicine and Health Sciences (SMHS) believe it's time medical education evolved as well.

Associate Professor of Medicine Matthew Mintz, M.D. '94, RESD '97, who leads the M.D. program curriculum revision and implementation process, along with a team of SMHS faculty and administrators, has been taking a closer look at the school's curriculum — as well as those of other medical schools — in an effort to develop a revised and enhanced M.D. program that reflects the challenges facing tomorrow's health care professionals.

The early plans they've developed seek to provide more time for independent learning while emphasizing active-learning pedagogies and early clinical experiences. Mintz says the curriculum will still focus on the traditional medical education fundamentals. The difference, he says, will come in the order in which some of that information is presented.

The most obvious change to the curriculum will be a shortened and integrated preclinical curriculum. Currently students cover the basic sciences, then take discipline-based courses, and then move into the clerkships. The idea for the revised curriculum, according to Mintz, is to reduce that preclinical period and get students started on the wards earlier.

"We believe that students learn medicine best when they are directly in contact with patients," he says. "Early medical ward experience is a real benefit to the development of clinical skills and reasoning."

Mintz adds that SMHS is not just shortening the preclinical curriculum, but also integrating it. Incorporating some of the basic science training into the clerkship experience is expected to add relevance to the information. "When you look at a patient, you don't just see their anatomy or their biochemistry; you think of all of these things as a whole," explains Mintz. "Hopefully, by aligning these basic science topics in the clinical context, it will help integrate these important competencies as well as help students to start thinking like doctors."



The reduction in class time is also expected to leave more time for independent learning, research, or special educational experiences that are uniquely available thanks to GW's Washington, D.C., location.

Elements of the current curriculum, such as the school's popular track program, will remain in the revised curriculum, according to Mintz. "However, there also will be some additional offerings in the revised curriculum, such as public health, diversity, and professional development."

Senior students will continue to have acting internships, rotations in emergency medicine, and electives, as well as an intensive, one-month capstone course. The course, previously called Practice of Medicine IV, will continue to prepare students as they get ready for their residencies. It will focus on the refinement of many technical skills and reinforcement of essential clinical competencies.

Faculty members have already begun experimenting with some of the new teaching methodologies, such as team-based learning and other active-learning techniques, contained in the new curriculum. New instructional technologies, such as video- and audio-recorded lectures and tablet computing in the classroom, have already entered the testing phase and will be available for all students as the revised curriculum is introduced.

"We conducted a lot of site visits," says Mintz of the early days of curriculum development. "We found many interesting ideas at a number of different schools, but we never identified one particular school whose model fit our needs. I believe that while many other schools have done, or are doing, what we're doing — shortening the preclinical training period and integrating the basic sciences — the way in which we accomplish that will have a unique GW spin to it." ■



Cardiac catheterization patients with their heart-health team; Catheterization Lab (Cath Lab) Technician Dan Sage (left, seated), Cath Lab Nurse Charles Flemming (left, standing), Ugandan Cardiologist Peter Lwabi, M.D., (far right, standing), and Children's National Health System Cardiologists Kanishka Ratnayaka (next to Lwabi) and Craig Sable (right, seated).

OUT OF THE DARKNESS

Cardiac Care in East Africa Offers a Brighter Future for Pediatric Patients

BY KRISTIN HUBING

Streptococcal infection is a ubiquitous childhood illness in the United States — and easily treated with a short course of antibiotics. Soon it's a distant memory for the infected child. But in the developing East African country of Uganda, where recurrent Streptococcal infections often go untreated, the consequences are dire. Rheumatic fever can ensue, which causes chronic rheumatic heart disease (RHD). Without surgical intervention, RHD-induced cardiac fibrosis can lead to heart failure and possibly death.

According to the World Heart Federation, the global burden of disease caused by RHD falls disproportionately on children and young adults living in low-income countries. This resolvable cardiac problem, which has been extremely rare in the developed world since 1960, is still responsible for more than 230,000 deaths worldwide annually. This makes it the most common cause of cardiovascular disability and death in children and young adults.

Enter Craig Sable, M.D., professor of pediatrics at the George Washington University School of Medicine and Health Sciences (SMHS), and executive director of

telemedicine and director of echocardiography at Children's National Health System in Washington, D.C. Since his first trip to the African continent in 1999, Sable has been keenly interested in global health as it affects children with heart conditions. Despite the region's pervasive lack of access to care, he is encouraged by the fact that with intervention, most children with heart problems can survive into adulthood. "This got me interested in seeing how we could expand beyond our borders," says Sable, who focused his efforts on not only bringing children to U.S. hospitals for cardiac surgery, but also expanding capacity in their home countries.

By 2007, Sable had teamed up with the Uganda Heart Institute (UHI) at Mulago National Referral Hospital in Uganda's capital city, Kampala. That year marked the country's first pediatric open-heart surgery, which was performed by a team of U.S. medical professionals led by Sable. The partnership blossomed, and after two years of collaboration, Ugandan physicians were doing open-heart surgeries on their own. Uganda is "one of only three countries in sub-Saharan Africa doing that," says Sable, who leads one of four visiting teams that travel to UHI annually.

Peter Lwabi, M.D., head of pediatric cardiology and deputy director of UHI, credits Sable and his team with proving that "world-class cardiac surgery can be done in countries with meager resources." Lwabi values the partnership as a "model of skills transfer that is done within the local environment and does not require sending health care workers abroad for costly training."

In addition to treating RHD, Sable and his team see pediatric patients with a variety of other heart defects, including ventricular and atrial septal defects and Tetralogy of Fallot, and they opened a cardiac catheterization laboratory in 2012 that was built by and is fully funded by the Ugandan government. They are also in the process of building a telemedicine room at UHI for videoconferencing, which, Sable says, "will allow us to complement our time on the ground with ongoing patient consultation and distance education." This doesn't change the fact that in Uganda there is currently only one cardiac unit for every 13 million people — compared to one for every 120,000 people in the United States — but it allows the UHI to expand its reach, says Sable.

The partnership with UHI has also generated a research component aimed at preventing RHD in sub-Saharan Africa. Led by Andrea Beaton, M.D., assistant professor of pediatrics at SMHS, the initiative is funded by a three-year Clinical and Translational Science Award. Her 2012 study titled "Echocardiography Screening for Rheumatic Heart Disease in Ugandan Schoolchildren" was published in *Circulation*, a journal of the American Heart Association. The study shows that in resource-constrained settings, "screening by echocardiogram improved early detection by 300 percent compared



Chris Martin was born with an abnormal vessel that feeds blood to his right lung. Without life-saving heart surgery as a six-week-old, performed by Craig Sable, M.D., during a mission to Uganda, Martin might never have seen his first birthday. Today he is likely to live a healthy life without medication.

to clinical exam alone," says Beaton. The findings were named one of the top 10 advances in heart disease and stroke research in 2012 by the American Heart Association.

The Larry King Cardiac Foundation, Gift of Life International, Samaritan's Purse International Relief, and British-based Chain of Hope are among the organizations that have helped fund the cardiac procedures performed at UHI. Beaton notes that "Craig has been fundamental in the development of a sustainable cardiovascular surgery program in Uganda. He is involved at every level, from on-ground coordination to recruitment of volunteers and continued distance education. On top of all that, he is a tireless and successful fundraiser, who is uniquely able to inspire donors with his vision of lifesaving cardiovascular surgery for the children of Uganda, in Uganda."

Sable stresses the importance of government support for the endeavor. "We have to convince the government that investing in a program like this will help enhance their reputation and build overall medical infrastructure, despite all the other challenges the country faces," he says. "At the end of the day, when you look a parent or child in the eye who knows that their life depends upon whether or not they get this procedure, it's heartbreaking. But we can have an impact." And, as Lwabi attests, they already have. ■



Where Education Ranks High

BY LAURA OTTO

It's 9:30 on a summer evening in 2009 and Kimberly Weaver has just found out she won't be able to participate in her online discussion course next week. Weaver, an independent duty medical technician (IDMT) in the United States Air Force, has received orders for her second deployment, this time to Qatar. Stationed for six months, Weaver will serve as the senior squadron medic for the 37th Expeditionary Bomb Squadron.

Moving forward to 2013, Weaver has gone from the middle east to the far east where she is stationed at Kadena Air Base in Okinawa, Japan. It's safe to say that her educational experience is drastically different from that of the average student, given her unpredictable deployment cycle.

"The most difficult aspect of online learning is the fact that it's virtually impossible to conduct lab classes overseas," says Weaver, who plans to complete her B.S.H.S. in clinical health sciences at the George Washington University School of Medicine and Health Sciences (SMHS) in the spring of 2015. Communication is the most important thing. "I am constantly checking in with my professors to make sure they know my current situation and to ensure my education remains on track," she adds.

As an IDMT in the Air Force for 11 years, Weaver has daily duties that include patient care and medical administration. She chose distance education through SMHS because of the school's long-standing relationship with the U.S. military.

Armed with a mission to educate service people and veterans, SMHS forged a partnership with the U.S. Army and Navy in the early 1970s. Whether service members are training on the ground, deployed overseas, or stationed on a boat in the middle of the Pacific Ocean, one thing has remained constant for these partners — their dedication to education.

"GW offered the most flexible and, in my opinion, the best education program for me to pursue my goal of becoming a medical provider using online learning," says Weaver.

The program has continued to expand its degree offerings to military personnel who have completed prior training in health care fields. And now, for the third year in a row, SMHS has been recognized as a military-friendly school by Victory Media, a veteran-owned business that surveys tens of thou-

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—Kimberly Weaver, IDMT, U.S. Air Force

sands of institutions to capture best practices in recruitment and retention of military personnel as civilian employees, students, and franchisees.

"It shows our commitment to providing a quality education to veterans and active-duty service members," says Catherine Golden, M.P.A., director of distance education and military programs in the Department of Clinical Research and Leadership at SMHS.

"We are constantly thinking about the space in which our service members learn," says Golden. "Our students are often deployed around the world, where an Internet connection may not be consistently available, and we try to work within these constraints."



Like Weaver, Ryan Wallace, an 11-year veteran of the U.S. Coast Guard who recently retired, always considered completing his education to be a top priority.

A former emergency medical technician in the Coast Guard, Wallace attended the Navy Independent Duty Corpsman school in San Diego, where he was trained in advanced patient care, medical administration, and environmental and occupational health. It was there that Wallace heard about SMHS's support of students serving in the armed forces.

Stationed in the Great Lakes, the Saint Lawrence Seaway, and the Indian Ocean, Wallace would go for days with little or no internet access. It was the support and mentorship of Diane J. Jones, Ph.D., PA-C, adjunct assistant professor in the Department of Clinical Research and Leadership at SMHS, that Wallace credits with helping him complete his education and start his civilian career. "Professor Jones understands how hard it is to get a job after you retire from the military," he says.

"Unfortunately, treating soldiers in the field doesn't translate into civilian employment opportunities without further advanced education, such as going on to medical school or becoming a physician assistant," says Jones, who is the director of the Division of Advanced Practice Professionals at St. Joseph Mercy Hospital in Ann Arbor, Mich. "I think it's important to help these students bridge this gap because they have a lot to offer," she says. "Many have developed a valuable skill set that can provide a wonderful foundation for a career in the healthcare professions."

As a former soldier, James P. McGinnis, MPAS, PA-C, visiting professor in the Department of Clinical Research and Leadership at SMHS, knows the daily difficulties that students like Wallace and Weaver face — the balancing act of



completing classwork alongside their military training and deployment cycle.

Retired after 26 years in the army, McGinnis teaches Special Forces medical sergeants, independent duty corpsmen, and independent duty medical technicians who are pursuing their clinical health sciences bachelor's degree. "Military students tend to approach learning with a high degree of focus, discipline, and work ethic," says McGinnis.

The biggest challenge these service members face is their deployment-related operational tempo. McGinnis can certainly relate. When he was an enlisted soldier in Special Forces, he was considered "highly deployed" if he was deployed more than 90 days per year. Today, it is not uncommon for conventional forces service members to deploy for a year or more at a time and to do that every other year.

For Jones, helping these service people complete their education is a way of giving back. "As an American citizen, I am indebted to them for their sacrifice for my freedom," she says. "As an educator, it is extremely rewarding for me to be a part of their experience." ■

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*Dr. Sidney Fu
George Washington Univ.
McCormick Genomics Ctr.*

DIALED IN

An FM Radio Opens the Door to a Once-Inconceivable Career in Medical Research for Sidney Fu

BY HELEN FIELDS

Sidney Fu wasn't just the first in his family to go to college. He was also the first in his whole town. Born the sixth of six children in a farming family in rural Shaanxi, China, he worked hard and found his way through middle school, high school, college, graduate school, and finally postdoctoral fellowships that brought him to the United States.

Today he is a professor of medicine and the associate director of genomic medicine at the George Washington University (GW) School of Medicine and Health Sciences (SMHS). He's a well-regarded basic scientist who applies his genetics knowledge to research on breast cancer, diabetes, heart disease, and other topics. He's also maintained his ties to China, going back frequently to visit family and collaborate with Chinese scientists on various research projects.

Now Fu's Chinese connections are part of a broader effort at GW, which is attempting to define itself as a global university. As that engagement takes shape across GW, SMHS is expanding its own international connections. That may mean research collaborations like Fu's, education exchanges, and deeper relationships with institutions on the other side of the Pacific.

Unlike some scientists, Fu was never driven by a childhood love of science or medicine. He wasn't even aware of science as a career. When he was in elementary school, he says, he thought, "I guess I could eventually be an elementary school teacher. That's all you can see — you don't know the outside world."

Times were tough in rural China in 1965. Fu's mother was not happy about having another mouth to feed. He grew up hearing family stories about how she tried to get rid of the pregnancy, but he didn't resent his parents. Instead, he felt that he had to make it up to them. "All you could do was just study hard," he says. "You feel like you've got to help your father, help your mother. They just got no help at all."

Many people in his village didn't even finish elementary school, but Fu kept going. One day in high school he heard that you could get English lessons on the radio. A radio cost about \$6, a fortune for his family. "My father thought about

it all night," Fu says. "Then he decided he was going to raise a female pig." He bought the pig, raised it, sold its four piglets, and gave Fu the profits for the radio — a battery-powered box that now sits on a shelf in his Maryland home.

That pig-funded radio deserves a lot of credit for his success, Fu says. English featured heavily on entrance exams. When it came time to apply to college, Fu put down schools where he could study teaching, agriculture, or forestry — "because that's all I knew about," he says. A teacher scolded him and told him to add medical school, which starts after high school in China.

Many other researchers have studied miRNA in breast cancer; the unique aspect of Fu's work is looking at microRNAs as a means of spotting breast cancer in its initial stages.

When the acceptance letter came, Fu was happy to have gotten into college — acceptance rates were around 3 or 4 percent in the early 1980s — but annoyed that he'd ended up with medical school. "My sister was like, yeah, that's not good, you have to help people to deliver babies," he says, laughing at the memory in his office on the GW campus.

He studied at Xi'an Medical University, in the capital of Shaanxi province. "I worked very hard. I never had the time to go to a party or anything like that," he says. After he graduated with his medical degree, he was assigned to work in the hospital at an automobile plant. A year and a half later, he persuaded his supervisors to let him apply for graduate school in genetics.

Fu came to the United States in 1994, for a postdoctoral fellowship at Johns Hopkins University. His postdoc included work on Fragile X syndrome and leukemia. In 1999 Fu's research led him to GW, where he began working on breast cancer.

About half a decade ago, Fu turned his focus to microRNA. These tiny pieces of RNA, also known as miRNA, don't code for proteins. They are part of the cell's regulatory machinery. They work by binding to messenger RNA, effectively shutting it down so it can't be used to build proteins.

Fu was inspired by the work of influential Ohio State University scientist Carlo Croce, who found microRNAs that were involved in the genesis of a particular kind of leukemia. Fu was working on the breast cancer gene BP1 at the time but had been looking for a different direction for his research. He decided to look into miRNA.

Many other researchers have studied miRNA in breast cancer; the unique aspect of Fu's work is looking at microRNAs as a means of spotting breast cancer in its initial stages.

Early detection is a thorny problem for breast cancer. Women who are diagnosed with ductal carcinoma in situ (DCIS), have an elevated risk of developing invasive breast

Fu applies his knowledge of genomics to many kinds of research, with people from many countries. The research on early detection of breast cancer is being done in collaboration with researchers in Saudi Arabia and China.

cancer. But for most women with DCIS, that won't happen. "It's in the milk duct. It's not going to affect you," Fu says. Those women could go without treatment — but right now there's no way to tell who needs treatment and who doesn't. Treatment options for DCIS include lumpectomy, mastectomy, and lumpectomy plus radiation.

Fu and his collaborators are using microarrays and deep sequencing to explore the microRNA profiles of women newly diagnosed with DCIS as well as samples that were preserved several years ago from other patients, whose subsequent health history is known to the researchers. They are hoping to find a microRNA signature that distinguishes women whose DCIS will stay in situ from those who are going to develop invasive cancer.

They're also working on an abnormal breast growth called atypical ductal hyperplasia, or ADH. Similarly, people with ADH have a higher risk of breast cancer, but they don't have breast cancer yet, and most will never get it. The research

is supported by the National Institutes of Health and the GW Katzen Cancer Research Center.

Fu hopes that in less than a decade, physicians will be able to offer a blood test that gives their patients better guidance on what a diagnosis with DCIS or ADH means for the long term. "We can help the physicians — they could say, 'We have 95, 96 percent confidence your ADH is just ADH' — and the patients can make much better informed decisions," he says.

Fu applies his knowledge of genomics to many kinds of research, with people from many countries. The research on early detection of breast cancer is being done in collaboration with researchers in Saudi Arabia and China.

Fu is also working on a project with Fred Brody, M.D., a bariatric surgeon at the George Washington University Hospital and professor of surgery at SMHS, on gastric bypass surgery and type 2 diabetes. For many patients, the symptoms of type 2 diabetes go away within a few days of the surgery. The researchers are trying to determine how that happens and whether there's a gene involved. If they find one, it could serve as a drug target, giving patients the same benefit without the surgery.

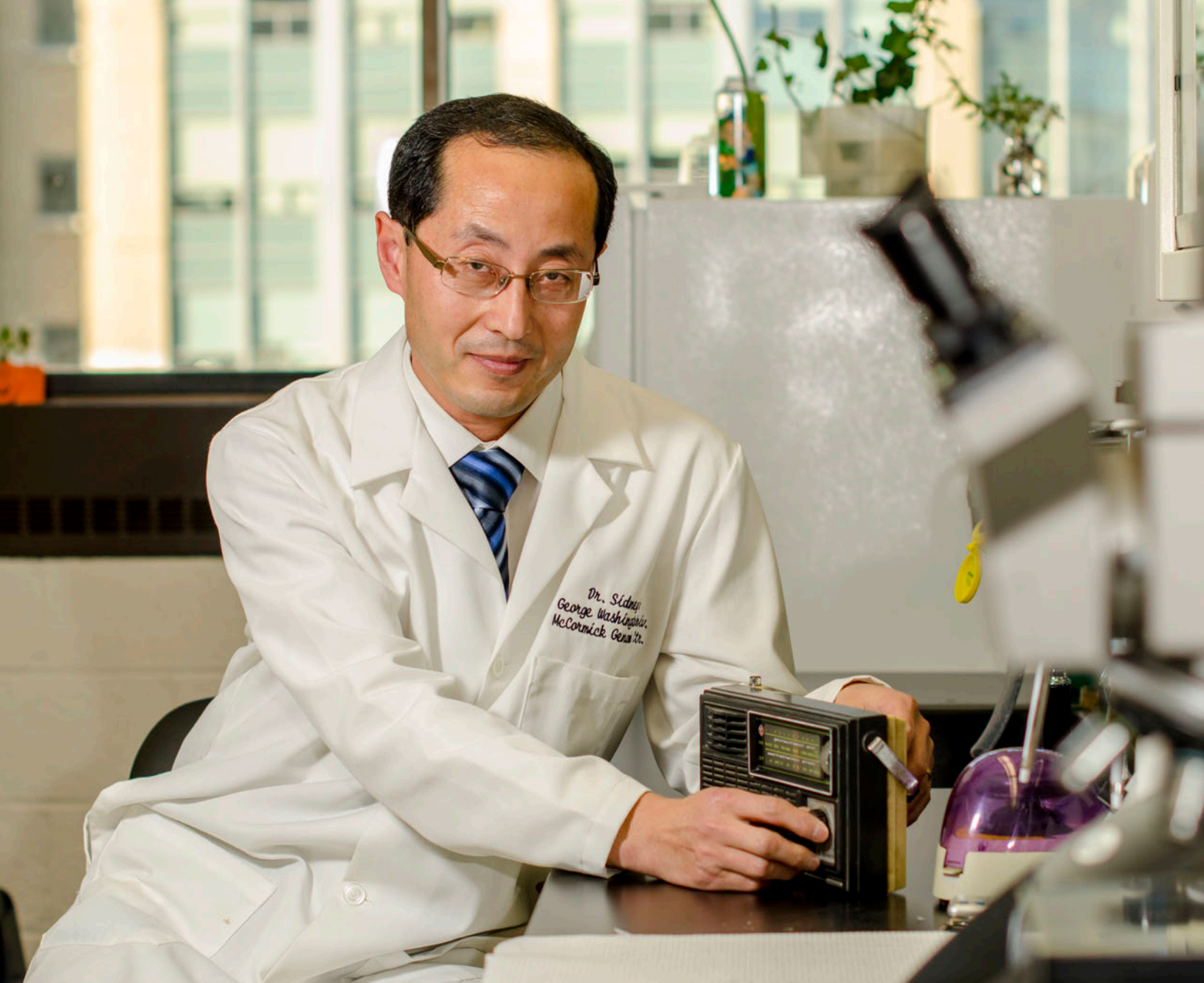
Another international collaboration for Fu is an aspirin study with scientists at Peking University in Beijing. They're hoping to determine why aspirin doesn't give cardiovascular benefits to some people who take it. After about five years of discussions on aspirin, an opportunity came up to apply for a grant from China's science and technology ministry; the researchers applied and the project was funded in April.

The global initiative involves all of GW — including SMHS, says Jeffrey S. Akman, M.D. '81, RESD '85, Walter A. Bloedorn Professor of Administrative Medicine, vice president for health affairs, and dean, SMHS. "The vision of the SMHS is very much linked to the university's vision, but it is also being driven by relationships that our faculty have," Akman says.

A few years ago, when Akman became interim dean, he and Fu had a series of conversations about Fu's research. They also talked about his relationships in China. Eventually, "I said, you know what, I want to go with you and learn about it," Akman says. "I want to see how we can evolve our creative vision as it relates to China."

In March 2013, they went on that trip. Akman and Vice President for Research Leo Chalupa, Ph.D., traveled with Fu to China. They went to several cities and visited many institutions, including hospitals led by Fu's medical school classmates and colleagues.

"Sidney has really been particularly helpful to me in understanding the culture, in understanding the politics, and in being a trusted aide for me as we engage in China," Akman says. Fu can converse with doctors, scientists, and administrators without the barrier of an interpreter — and can



explain things about China that might seem mysterious to an outsider.

For example, in meetings at hospitals, the group around the table includes the CEO — and the hospital’s Communist Party chief. “It had never dawned on me that a hospital would have a party chief,” Akman says. Understanding the political structure is crucial to building relationships in China, Akman says, and Fu can help with that.

The SMHS plan for engaging with China is still evolving, Akman says, but it includes supporting faculty who want to collaborate with scientists and physicians in China and developing formal affiliations with hospitals and medical schools in China that could lead to faculty and student exchanges.

Akman would also like to develop a close relationship with a Chinese institution that could use some of SMHS’ expertise and capacity. It might be in genomics or

personalized medicine, or maybe helping to build a new hospital — or working to help develop the health care system there.

On that visit to China, the group even visited Fu’s hometown. When Fu was a child, his village was a three-hour drive from Xi’an. Now there’s a new road and the trip takes only about an hour. Fu’s mother died last year, but his siblings all gathered to meet him and his colleagues. Things have changed there. Coal, oil, and natural gas in the region have made people much wealthier. But it’s still rural.

“It was remarkable to see where this very successful faculty member at GW medical school came from — a rural village with dirt roads,” Akman says. “We saw the respect and the pride that they have in Sidney for becoming a member of the faculty of the George Washington University.” ■

GOING GLOBAL

After 20 Years, the Office of International Medicine Programs has Extended GW's Reach to Thousands Around the World

BY KRISTIN HUBING

In 2004, while wrapping up her final year of college as an international student at the University of Maryland, College Park, Hawaa Almansouri, who had come to the United States from the United Arab Emirates (UAE) four years prior for her undergraduate education, sent applications to 30 medical schools across the country.

Twenty-nine of the schools said “no,” adding only that they could not accept students without permanent residence. “They wouldn’t even look at my file,” says Almansouri. “It had nothing to do with my qualifications.” One school, however, offered her an interview — the George Washington University’s School of Medicine and Health Sciences (SMHS).

Today, nine years after SMHS’s Office of International Medicine Programs (IMP) invited her for that interview, Almansouri, M.D. ’08, RESD ’11, FEL ’13, is a proud three-time GW alumna working as an endocrinologist at Cleveland Clinic Abu Dhabi Hospital in her home country’s capital city. “IMP gave me the opportunity to get into the system,” says Almansouri, who values the flexibility to practice anywhere in the world that her SMHS education and training afford her.

This year marks IMP’s 20th anniversary, and Almansouri is just one of more than 10,000 GW and international faculty, staff, residents, fellows, and students who have benefitted from its 90 partnerships in more than 50 countries since its founding. “We’re changing lives by providing opportunities to students and professionals that they otherwise would never have,” says Huda Ayas, Ed.D. ’06, M.B.A. ’98, M.H.S.A. ’93, executive director of IMP.

In addition to the international M.D. program and the international residency and fellowship program in which Almansouri participated, IMP offers a medical research fellowship program, an international observership program, international clinical rotations for GW medical students, and continuing medical education for international faculty. Its two-fold mission, “to fly the GW flag around the world and bring the world to GW,” links helping to build capacity and improve the quality of health care abroad, with enhancing the cultural sensitivity of American medical providers.

Stanley Knoll, M.D., FACS, clinical professor of surgery at SMHS and medical director of IMP, has worked closely

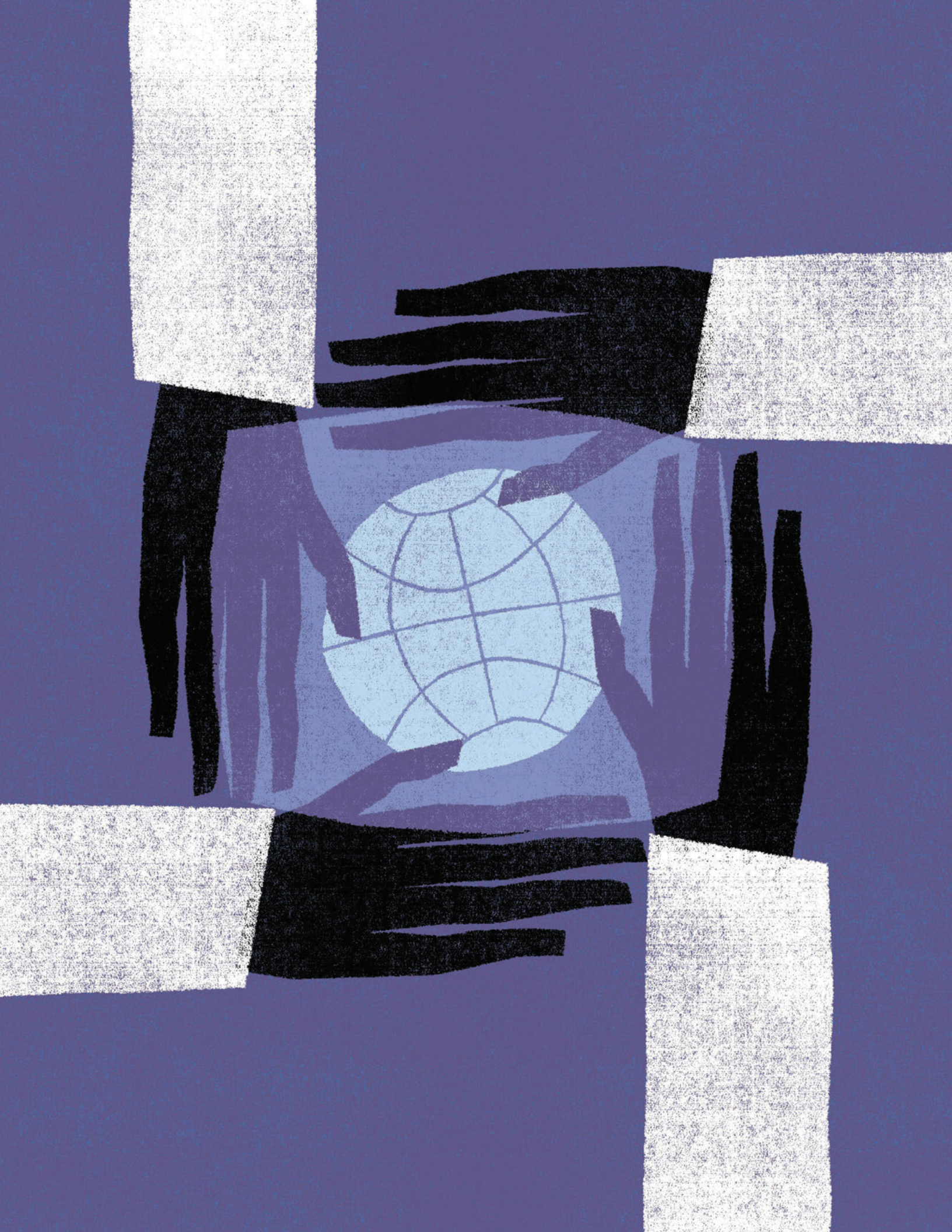
with Ayas since the program’s founding. He notes that the international students and residents who study and train at SMHS arrive with a great deal of medical knowledge. “We may not teach them more about a particular disease or medical procedure than they already know, but we teach them about the American medical education system and the American health care delivery system, which are both different than anywhere else in the world. And this can be just as important.”

On the other side of the equation, Ayas observes that “international experience allows physicians to become aware of their biases. While it’s difficult to measure, improved communication with patients who come from different backgrounds can improve health outcomes,” she says. “This makes them better physicians.” Knoll adds that the “faculty and student body of GW is far more diverse and internationally aware than ever before, and it’s been wonderful to participate in that process.”

FERTILE RESULTS FROM DESERT ROOTS

IMP’s roots lie in a partnership that was formed between GW and King Faisal Specialist Hospital and Research Center in Riyadh, Saudi Arabia in 1993. At the time, Ayas assisted with a needs assessment project that identified a shortage of qualified physicians in the Middle Eastern country. “We developed physician training programs and invited Saudi students to enroll in GW’s dual B.A./M.D. program,” recalls Ayas. “We also came up with a short-term solution that involved sending our own faculty to King Faisal Specialist Hospital to serve as practicing physicians for two years.”

The Saudi partnership has expanded over the past two decades to include affiliations with medical schools and hospitals across the kingdom, as well as with the Saudi Arabian Cultural Mission (SACM), located in Fairfax, Va., which implements national educational and training policies in an effort to meet the country’s goals of expanding health care capacity. Samar Al-Saggaf, MBBS, Ph.D., director of the department of medical and health science programs at SACM, calls the partnership “a vision of enhancement of our health care system and our health policies with well-trained alumni coming from GW.”



The long-term exchange of students and faculty, as well as the joint research efforts between GW and Saudi Arabia, have “made the impossible possible,” says Al-Saggaf, who was honored for her outstanding contribution, dedication, and leadership in medical education diplomacy at the IMP Annual Dinner in early October. Al-Saggaf remembers a time, not more than a decade ago, when just a few Saudi medical students would match with U.S. hospitals for their residency each year. By contrast, in 2013 alone, 93 Saudi students received residency matches. “This partnership has given our students the hands-on experience that makes them competitive candidates,” she says. “It gives them communication and research skills, and allows them to build relationships with U.S. doctors. IMP has done a tremendous job building this bridge.”

ENRICHING EXPERIENCES IN RESOURCE-POOR SETTINGS

Yushekia Hill, known to her friends as “Sheek,” is in her second year of the five-year M.D. program at SMHS. She is a participant in the Mentored Experience To Expand Opportunities in Research (METEOR) program, which encourages newly-admitted SMHS students from communities underrepresented in the medical profession to explore the possibility of a career in clinical or translational research by matching them with a mentor engaged in the field. While she has an interest in clinical research, especially within the African American community, Hill was undecided as to what her academic focus would be until summer of 2013 when a medical mission coordinated by IMP brought her to Haiti’s impoverished Central Plateau.

Since 2004, IMP has been organizing biannual trips to Haiti in partnership with Project Medishare, a non-profit organization dedicated to improving health care in the western hemisphere’s poorest nation. The week-long missions provide the opportunity for students from SMHS and GW’s School of Nursing and School of Public Health and Health Services to travel to the town of Thomonde to provide direct care in a resource-poor setting through Project Medishare’s mobile clinics.

The trips have historically been led by Jack Summer, M.D., FACP, RESD ’81, associate clinical professor of medicine at SMHS, and are now co-supervised by infectious disease specialist Marc Siegel, M.D., assistant professor of medicine at SMHS. In addition to providing invaluable experience diagnosing and treating diseases of poverty, students gain exposure to practicing medicine in an unfamiliar cultural setting, says Summer. “It’s important for students to see that what we think might be a goal for someone, might not be the goal they want for themselves,” he says. “It changes the way they see the world. It’s rewarding when a returned student

tells me what an eye-opener the trip has been for them, but even more so when they say ‘I’d like to continue doing this kind of work overseas or at a community health clinic in D.C.’”

Hill’s experience in Haiti — her first trip to the developing world — was exactly the sort that makes Summer smile.

“This partnership has given our students the hands-on experience that makes them competitive candidates. It gives them communication and research skills, and allows them to build relationships with U.S. doctors. IMP has done a tremendous job building this bridge.”

—Samar Al-Saggaf, MBBS, Ph.D.

“I came from a background where I didn’t have a lot,” she says. “But when you meet someone who has even less, you realize how much you take for granted.” Hill found herself particularly drawn to the OBGYN section of the mobile clinic, where she assessed the incoming pregnant women, taking vital signs and determining the reasons for their visit, before referring them to one of the physicians. Despite the exhausting days in Haiti — the team saw upwards of 150 patients on each of the five clinic days — Hill was energized by the experience and hopes that her future medical career will lead her abroad again. “Understanding the limited resources of my patients allows me to relate to them in a way that would be impossible otherwise,” she says. “The skill set I learned is universal.”

Summer credits IMP with the strength of the ongoing partnership with Project Medishare. “They have poured their heart and soul into making these trips successful, even though it’s just one tiny aspect of what they do,” he says.

HELP FROM ABOVE

In addition to providing international experiences for GW students, and GW experiences for their counterparts abroad, IMP is dedicated to the growth of its continuing medical education program. In operation since 2004, the program keeps international health care professionals abreast of advances in medicine through courses that are developed, reviewed, and delivered by GW faculty who are experts in their individual clinical areas. Nearly 120 such courses, many of which are approved by the American Medical Association,



have taken place throughout the Middle East, Asia, and Central America, providing continuing medical education to more than 8,000 health care professionals.

In 2006, Jeffrey S. Akman, M.D. '81, RESD '85, Walter A. Bloedorn Professor of Administrative Medicine, vice president for health affairs, and dean of SMHS, participated in the continuing medical education program. As then chair of SMHS's Department of Psychiatry, Akman traveled to Kuwait, Oman, and the UAE, where he led a course that focused on diagnosing and managing depression in a primary care setting. "It presents a genuine challenge for physicians," explains Akman, "to identify and address a problem that is so common, but which carries a great deal of stigma for patients and their families." He recalls the experience as rewarding, and says that it "enhanced my cultural competence and my ability to relate to others."

Janan Sarkis, M.P.H., director of international programs for IMP, remains grateful for Akman's involvement with the department. "The support of leadership is essential to our growth," Sarkis says. "Dr. Akman has a global vision and has always encouraged us to move forward." This is especially important in this age of globalization, according to Sarkis. "If you're not reaching out internationally these days, then you're moving backwards. And we need to keep moving forwards," she says. Knoll adds that the support of SMHS leadership has

given IMP "the wherewithal to continue our growth and has really increased the dynamics of what we do."

In the coming years, Knoll envisions IMP expanding the number of countries with which it partners, the size of its staff, and the number of opportunities for faculty to go overseas. "This will lead to more potential for international collaboration, especially in terms of research," he says.

During a recent trip to Saudi Arabia, it was clear to Ayas that IMP has moved forward by leaps and bounds since its founding 20 years ago. "We met with 18 different medical institutions," Ayas recalls of the week-long trip, "and at each and every one we ran into GW alumni who are now serving in leadership positions in their country." Knoll, who accompanied Ayas on the trip, noted the resulting "tremendous goodwill that exists toward SMHS internationally." The GW flag is indeed flying high in Saudi Arabia, and in dozens of other countries globally. "This is exactly what we were trying to do," Ayas observes with a smile. "And we've done it." ■

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GLOBAL TRAINING GROUND

The Health Sciences program within GW's School of Medicine and Health Sciences serves as the training ground for the nation's next generation of Physical Therapists and Physician Assistants. From Ghana, to Rwanda, to Australia, and beyond, the work of these health care practitioners spans the globe.

BY KRISTIN HUBING



Margaret Plack, Ed.D., PT

POST-OP THERAPY IN WEST AFRICA

Tears of joy spilled from Ishmael's eyes as he stood silently in the doorway of his hospital room. These were his first steps since undergoing complex spinal surgery the previous day and, in fact, they were the first steps he had taken in years.

"How does a man from Sierra Leone, who has nothing, get lucky like this?"

he asked Margaret Plack, Ed.D., PT, professor of physical therapy at SMHS, who was providing post-operative physical therapy for the 39-year-old whose back was broken years before when he was thrown from a third-story window during the civil war in his native West African country.

Plack says that the answer to Ishmael's question is FOCOS, the Foundation of Orthopedics and Complex Spine. The Ghana-based non-profit performs corrective procedures, free of charge, for patients suffering from chronic disability due to orthopedic and other musculoskeletal disorders.

"In addition to bringing really exceptional medical personnel from across the globe to treat patients, FOCOS works on training folks from Ghana so that they are building their infrastructure," says Plack, who, along with her daughter, Leigh Ann Plack, PT, DPT, traveled to FOCOS' 50-bed orthopedic hospital in the capital city of Accra for a two-week volunteer opportunity in August 2013.

While in Ghana, Plack worked with patients immediately following surgery to mobilize them as quickly as possible. "The degree of spine curvature you see at the FOCOS Hospital in Ghana is just unbelievable," says Plack, who explains that tuberculosis, which remains prevalent throughout Africa, can eat away at bone and cause severe spinal collapse.

In addition to improving strength, endurance, and function, the PTs worked with patients on posture, balance, and body awareness — all of which are affected when a person's musculoskeletal alignment is altered. "There is also an education component for kids," says Plack, who taught patients as young as eight to sit up without twisting their spine. "It's incredible to see their resilience," she says.

The most rewarding aspects of the mission, according to Plack, were "the smiles, appreciation, resilience, functional gains, and the sense of community the children and adults developed as they progressed through the full continuum of care," from pre-op through rehabilitation. She plans to return to Ghana on future trips with FOCOS, and hopes that SMHS' physical therapy program will be able to develop an ongoing partnership with the organization. "I think it would be a wonderful inter-professional learning opportunity for all involved," Plack says.



Lisa Mustone Alexander, Ed.D. '03, M.P.H. '89, PA-C '79

RWANDA'S NEW CLASS OF CLINICAL OFFICERS

As a Fulbright Senior Specialist to the Rwandan Ministry of Education from 2009–10, Lisa Mustone Alexander, Ed.D. '03, M.P.H. '89, PA-C '79, assistant dean for community-based partnerships, interim chair and program director, Physician Assistant Program, conducted a feasibility

study to determine whether a PA model could meet Rwanda's extensive post-genocide health workforce needs. The study's promising results led Alexander to collaborate with ministry officials and faculty at the Kigali Health Institute to develop a curriculum to train a cadre of Clinical Officers (COs), the East African nation's equivalent to PAs.

Spring of 2013 marked the completion of the 150 members of the inaugural CO class' first year of study. "These students are remarkably enthusiastic to become part of something new," says Alexander, whose role as technical adviser to the program has continued since its implementation. As in many other African countries, the demand for education and job opportunities in Rwanda has skyrocketed due to the dramatic growth in the population under the age of 30. "The country is really at the next stage of the development of a new profession," Alexander says.

The students and faculty of SMHS' PA program collected nearly 1,000 pounds of books and instructional supplies that have been shipped to the Kigali Health Institute for use by the CO program. "Because GW's PA program is a legacy program — one of the first to come about as the profession was starting—we have a responsibility to be leaders at the forefront of the globalization of the PA profession," says Alexander.

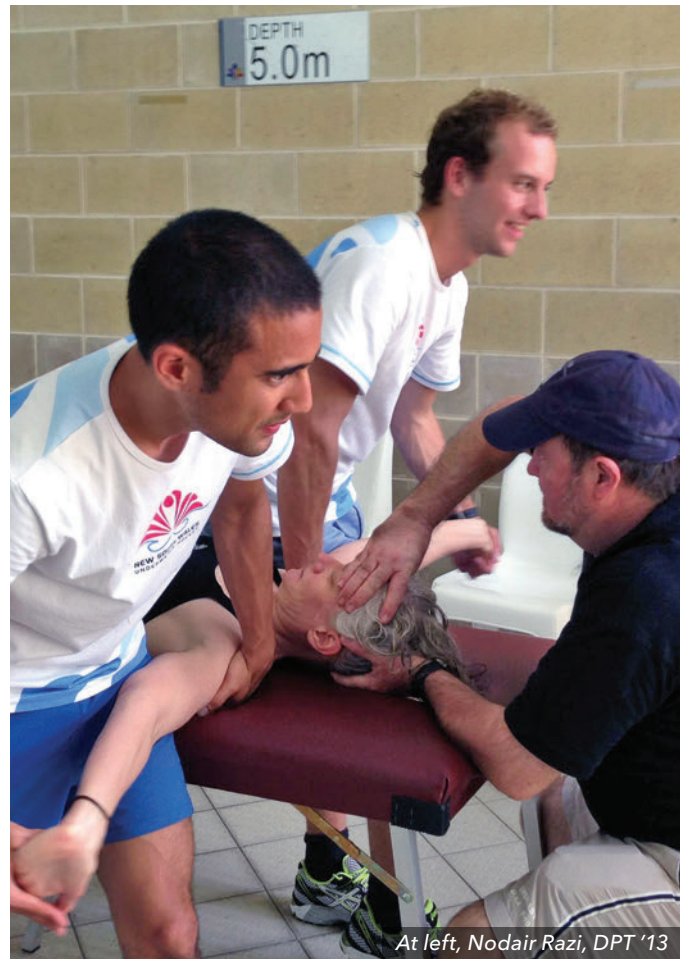
For the future, Alexander longs for the development of a month-long faculty exchange program. "Faculty from Rwanda would be able to learn from our community-based approaches and advanced technology, while faculty from the United States could be exposed to training students in a low-resource environment," she says. "This would give our faculty a better idea of how things are done in Rwanda, because we're mistaken if we think that we know how to do PA education to the exclusion of other models. There are tremendous faculty development opportunities on both sides of the equation."

INTERNING DOWN UNDER

For Nodair Razi, DPT '13, the opportunity to participate in a 14-week internship in Sydney, Australia during the final year of his physical therapy (PT) education at SMHS was an extension of the international experience he'd gained as a Peace Corps volunteer in Ethiopia years earlier. "It helped broaden my understanding of health needs around the world," said Razi, who worked at the private practice Hornsby Physiotherapy and Associates in Sydney from January through April, 2013.

While in Sydney, Razi supervised a group of six less-experienced PT students and honed his manual therapy skills on patients with chronic pain. He particularly valued the chance to work alongside and learn from other international students, such as friends he made from the Netherlands, Belgium, and India. "It was great to see how clinicians from other countries practice physical therapy. We tend to get caught up in the ethos of practice in the States," says Razi.

"We are really pleased to develop and foster these types of international relationships," says Joyce Maring, Ed.D., DPT program director, chair of physical therapy and health care sciences, and associate professor at SMHS. "The physical therapist is a member of the health service team across the globe. Our professional organization in the United States has



At left, Nodair Razi, DPT '13

adopted the vision statement that physical therapists transform society by optimizing movement to improve the human experience. That statement can be applied to our professional role in all countries and societies," Maring says. "Our experiences and understanding of how to positively impact the human experience is enriched by the opportunity to exercise that role in global contexts."

Part of Razi's interest in interning in Australia stemmed from the country's reputation for high research standards and liberal PT interventions. "It allowed me to practice more experimental, advanced manual therapy techniques," he says. "There doesn't seem to be as much defensive medicine as in the United States."

Razi is now bringing the lessons he learned in Sydney to his role as a physical therapist at Sports Therapy and Rehabilitation, a private practice in northwest Washington, D.C. where he sees 14 patients a day for a broad spectrum of therapy, including post-operative and chronic pain treatment. He hopes to practice abroad again in the future, perhaps in Cambodia where young landmine victims are in dire need of PT. "Honestly, I could see myself anywhere that I can make a difference," Razi says. ■

COMBAT FATIGUED

Reconstituting a Nation's Mental Health Capacity After Decades of War and Crisis Pushed the System to the Point of Collapse

BY KRISTIN HUBING

As he toured the 40-bed burn unit of a war trauma hospital in Erbil, the capital of the Kurdistan region of Iraq, Amir Afkhami noted something unusual. Nearly all of the unit's beds were occupied by women. Thinking it unlikely that so many women had encountered improvised explosive devices, Afkhami looked to the hospital's director for an explanation. Each of the women, the director told Afkhami, had attempted to commit suicide through self-immolation.

It was 2007 — the height of sectarian violence in civil war-torn Iraq. “You didn't have to be a psychiatrist to realize that what had led to these suicide attempts was major depression,” says Afkhami, M.D. '03, Ph.D., assistant professor of psychiatry and behavioral sciences and global health at GW's School of Medicine and Health Sciences (SMHS). “Many of the women struggled with issues of trauma that had gone untreated. Their burn issues were being addressed, but no one was addressing the underlying cause of their attempt — the underlying psychiatric illness.”

MENTAL HEALTH IN A CONFLICT ZONE

Afkhami, whose family emigrated from Iran during his childhood, had always been interested in the history of medicine and public health in the Middle East. His academic focus on the ability of socioeconomic development to contribute to stability in the region found a practical outlet after the Sept. 11, 2001, terrorist attacks in the United States. Suddenly the topic of his dissertation had become the centerpiece of U.S. foreign policy.

Afkhami began making regular trips to Iraq in 2006 — a time when many of the institutions that had been put into place by the U.S. military at the start of Operation Iraqi Freedom in 2003 were beginning to collapse. “Nowhere was this sensed more than in the Iraqi Ministry of Health,” Afkhami recalls, which was then led by a political faction headed by Muqtada al-Sadr, a firebrand cleric who used the ministry as a bastion for paramilitary activity.

In addition to the United States' implicit moral responsibility to address the mental health needs of Iraqis, Afkhami recognized a national security aspect. “Several thousand

patients had been ‘liberated’ from Al Rashid psychiatric hospital in Baghdad, but many of them were vulnerable individuals with developmental disorders,” he says. “They had nowhere to go and they were extremely susceptible to being recruited as suicide bombers by a variety of nefarious organizations.”

In 2008, the same year that Afkhami joined the SMHS faculty, he was asked by the U.S. Embassy in Baghdad to develop a plan that would address Iraq's mental health issues while simultaneously playing a role in reconstruction and national reconciliation. The resulting plan to rebuild the country's psychiatric and psychosocial delivery capabilities formed the basis of the Iraq Mental Health Initiative (IMHI), a U.S. Department of State-funded program that trained nearly 30,000 physicians and paramedical professionals in just two years. “What we did in Iraq was fairly radical,” says Afkhami, “in part because there is a strong belief that you can't do much from a mental health perspective in an area that's an active conflict zone.”

The radical IMHI approach involved working within islands of stability, such as the northern Kurdish region, as well as integrating traditional faith healing and allopathic methods. Nationally televised round tables brought psychiatrists — of whom there were just 14 when Afkhami first came to Iraq — together with clerics to find commonalities with the goal of normalizing mental health care in Iraqi society. “No matter what we do in terms of capacity building, training, and educating, if we don't destigmatize mental health [issues] in society, we aren't addressing the real barriers to getting patients into care,” he says.

FAR-REACHING EFFECTS

Immediately next door to Afkhami's office on GW's Foggy Bottom campus sits Allen R. Dyer, M.D., Ph.D., professor of psychiatry and behavioral sciences at SMHS. Although their paths didn't cross at GW until Dyer joined the faculty in 2012, he had been working with Iraqi physicians since 2001 and had made nine trips to Iraq by the time he came to GW. Prior to his appointment at SMHS, he served as senior health advisor to the International Medical Corps, based in Washington D.C. and Baghdad, and was involved in



Amir Afkhami, M.D. '03, Ph.D., center, in the Kurdistan region of Iraq.

implementing many of the programs Afkhami designed. “This is a very forward-thinking strategy for a country like Iraq, where there simply aren’t enough mental health providers and where so many people experienced the ongoing stress and trauma of war,” Dyer says. “Integration of mental health and primary care was a key component of the program, and we are able to provide a series of continuing medical education and professional development programs to physicians, nurses, and psychologists, who were eager to learn new skills to better help the patients they serve.” A major component of the implementation was the region-wide distribution of 15,000 copies of Arabic and Kurdish manuals authored by Afkhami on basic mental health topics, such as diagnosis and treatment of depression, bipolar illness, and schizophrenia.

Afkhami cites the impact of the patient-centered approach to care advocated by the IMHI as one of its greatest accomplishments. “There were so few psychiatrists in Iraq at the time that the vast majority of individuals we trained were general practitioners or in various subspecialties. So when we were teaching patient-centered care, we were not only affecting psychiatric care, but also affecting medical care on a broader level that transcended psychiatry as a field,” he says.

CHANGE COMES FROM WITHIN ... OUR BORDERS

Beyond the successes of the IMHI, Afkhami’s efforts to promote mental health as a tool for resolving other societal issues have just begun. Cognizant of the difficulty of persuading U.S. citizens of the merits of increasing mental health care capacity abroad when the country’s own system is struggling, Afkhami decided to turn his attention back to the United States. “If you think about it in terms of trauma exposure, some of the barriers to mental health care in our own backyard are comparable to [those of] wartime Iraq,” he said.

Recently, Afkhami was chosen to join six other exceptional health professionals as a 2013–14 Robert Wood Johnson Foundation Health Policy Fellow. During this prestigious one-year fellowship, which began in September 2013, Afkhami will gain front-line experience in federal health policy-making with the National Academy of Sciences’ Institute of Medicine.

“We’re at a critical juncture in our own health care policy history,” says Afkhami, referring to the rollout of the Affordable Care Act. “My experiences abroad have informed the way I think about the significant barriers to health care here in the United States, and I’m excited to bring some of my perspectives from the global arena to the local arena.” ■



A CLEAR VISION

SEE International, the Organization Built by GW Alumnus Harry Brown, M.D. '59, Offers the Opportunity to View the World through Fresh Eyes

BY KRISTIN HUBING

Around 11 o'clock on Sunday mornings, an ophthalmologist from Noor Eye Hospital in the Afghan capital would drive 15 kilometers to Kabul International Airport. There, he would stand on a balcony and peer through binoculars into the cockpit of the Ariana Afghan Airlines plane that had just landed on the runway. If the co-pilot held up a white Styrofoam box with a red label reading Fragile: Human Eyes, the physician would phone the hospital to tell staffers they could begin prepping patients for corneal transplants. Thanks

to regular donations from Moorfields Eye Hospital in London, the patients were about to receive sight-restoring surgery that some had been awaiting for years, if not their entire lives.

Harry S. Brown, M.D., an ophthalmologist and 1959 graduate of the George Washington University School of Medicine and Health Sciences (SMHS), was among the physicians at Noor Eye Hospital awaiting those phone calls in 1970. "It blew my mind that there was an eye hospital in a Christian country, the Lions Club of London, and a national airline taking vital human tissue to a Muslim country to give

the poorest of the poor a chance at restored sight,” recalls Brown.

At the time, Brown was in the midst of a yearlong, around-the-world trip during which he performed and oversaw dozens of cataract surgeries each month. He traveled to St. John Eye Hospital in Johannesburg, South Africa; a rural eye clinic in India’s Gujarat state; and nearly 10 other developing countries — all with his wife, his mother, and four young children in tow.

“My motivation was not religious at all, but strictly humanitarian,” says Brown, who founded the nonprofit organization Surgical Eye Expeditions (SEE) International in 1974. The organization, which provides sustainable medical, surgical, and educational services through volunteer ophthalmic surgeons, has examined more than 3 million patients in 75 countries in the nearly 40 years since its founding.

Brown, who operated an ophthalmic practice in Santa Barbara, Calif., until his retirement in 1992, says that his 1970 worldwide journey inspired him to establish SEE International. “If you want to set up a sight-saving program, an attack on surgically correctable blindness is the most productive endeavor for an eye surgeon,” says Brown. “It’s a safe, predictable, and life-enhancing procedure.” He notes that cataract surgery is one of the most common procedures performed on the human body and that the developing world is home to 90 percent of the roughly 30 million people worldwide who are blind as a result of cataracts.

“By restoring a patient’s vision, we enable that person to go back to work and become more productive,” says Brown, who notes that cataracts often develop earlier in patients in the developing world — at age 40 or 50 instead of 70 or 80, as in the Western world. “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,” he says.

SEEING BEYOND OUR BORDERS

Brown is grateful to SMHS for providing him with a strong medical education and his drive to make a difference in the world. “The training I received at GW was invaluable for undertaking this sort of work away from modern hospitals. It allowed me to handle general medical problems as they came up, and gave me confidence in taking my family around the world to developing countries at the time,” he says.

Brown’s ties to GW remain strong. For more than 20 years, the SMHS Department of Ophthalmology has sent senior residents on week-long SEE International trips as a part of their training. Sanjeev Grewal, M.D., associate professor

of ophthalmology at SMHS and director of the ophthalmology residency program, says that residents benefit from the international experience on many levels. “In addition to traveling and performing the procedures, they see all that goes into putting together an excursion abroad: how to get the credentials to practice medicine internationally, how to get equipment through customs, and so on.”

Brown emphasizes the importance of the educational exchange that occurs between the host doctor and the visiting doctor on SEE International trips. “The host doctor is exposed to the latest techniques and instruments, and the visiting doctor experiences challenges they wouldn’t come across at home. The surgeons, the nurses, the technicians — everyone is exposed to new concepts, challenges, and solutions,” Brown says.

When he founded SEE International, Brown’s thought was to offer busy clinical ophthalmic surgeons the opportu-

“We’ve been given the gift of being able to restore sight ... It’s important that we use our abilities to their fullest.”

—Harry Brown, M.D. '59

nity to periodically participate in eye surgery clinics around the world under the direction of local physicians. But he also considers it an ophthalmologist’s responsibility to give back to society. “We’ve been given the gift of being able to restore sight — no one can do that but the eye surgeon. It’s important that we use our abilities to their fullest,” he says.

In the eyes of Solomon Guramatunhu, M.D., Zimbabwe’s leading ophthalmologist, Brown and his organization have been tremendously successful on this front. Guramatunhu, who has been working in partnership with Brown since 1989, credits SEE International with the development of modern ophthalmology in Zimbabwe. “It used to be the case that anyone with money went to South Africa for eye surgery. SEE International has trained ophthalmologists from as far away as Ghana, Congo, Namibia, Zambia, Uganda, and Malawi right here in Harare.”

Guramatunhu praises Brown’s generosity and believes that his dedication is at the heart of SEE International’s success. “Dr. Harry Brown represents the best of America,” Guramatunhu says. “He understands human nature and respects everyone. With him, the future is bright.”

The more than 400,000 patients who have had their vision restored through surgery by ophthalmologists working with SEE International are likely to agree with Guramatunhu; the future is bright. ■



The Power of Global Partnerships

BY LAURA OTTO

Practicing medicine — specifically the diagnosis and treatment of patients with mental disorders — was always part of Michael D. Morse’s plan. It wasn’t until he journeyed to Jerusalem between college and medical school, however, that he witnessed how his passion for psychiatry and global health could have a real impact on physicians and patients in the Middle East. For Michael Morse, M.D., M.P.A., a third-year psychiatric resident at the GW’s School of Medicine and Health Sciences (SMHS), the desire to improve the overall well-being of Palestinians was personal.

As an adherent of Orthodox Judaism, Morse had a vested interest in learning how he could help establish clinical partnerships with medical professionals in the region to provide better clinical care. “I wanted to see how a more self-sufficient system that provides high-quality care could advance justice and peace in the distressed region,” he says.

During his visit, Morse forged relationships with several Palestinian physicians and health care providers at Birzeit University in Palestine.

Faced with a number of obstacles, such as a lack of physician training opportunities, traveling restrictions for Palestinians in the West Bank and abroad, and a dearth of financial resources devoted to mental health research and care, Morse knew he had to garner support from outside the region to further develop the area’s medical and mental health sectors.

Inspired by what he had learned from his counterparts in Jerusalem, Morse entered Harvard Medical School in 2005. While at Harvard, he also earned a master’s degree in public administration at the Kennedy School of Government.

Through a former GW medical school student enrolled at the Kennedy School of Government, Morse met the clinician who would turn his idea into a reality. James Griffith, M.D., chair of the Psychiatry & Behavioral Sciences Department at SMHS, shared Morse’s vision of creating a robust residency program that would better equip future clinicians with the right knowledge, tools, and mentorship to be effective global health psychiatrists. “With courage, humility, and dogged persistence, Michael has opened doors in the West Bank and Gaza, and showed how building mental health services can further the cause of peace,” says Griffith.

“Every aspect of my residency training at GW has taught me how to be a better clinician in ways that are relevant to my global health work,” says Morse.

In 2008, Morse created the Palestinian Medical Education Initiative (PMED), an apolitical, nonprofit non-governmental organization that brings together Palestinian health sector leaders and international medical professionals, including faculty and trainees from SMHS, as well as Harvard and Manchester Universities. The initiative promotes the development of a self-sufficient, high-quality Palestinian health care system and reinforces bridges of cooperation and mutual understanding between Palestinians and the international community.

Morse, along with El Sarraj and Elizabeth Berger M.D., a clinical faculty member in the Psychiatry Department at SMHS, lead the initiative.

Today, PMED has contributed to psychiatric emergency medicine training, improved school-based mental health services in Gaza, and strengthened the cultural competency of Jerusalem-based healthcare providers.

For Morse, the most rewarding part of his work in the Middle East is the relationships or more importantly, the friendships he has formed with his Palestinian colleagues, as well as his mentors at GW. “The opportunity to work on projects that move Palestinian health and well-being forward is the most fulfilling part of my global health work.” ■



Patient-in-Training

BY LAURA OTTO

It was the first semester of Kathryn Tapper's sophomore year when it began. Each morning started with the same overwhelming sense of exhaustion. Sleepless nights were followed by constant nausea for Tapper, who at the time was studying chemistry and dance at Emory University in Atlanta. "I thought maybe I wasn't eating right," recalls Tapper, a native of Jamaica. "The cuisine there is very different, and I thought my body was still adjusting." She adds, "I just didn't feel like myself."

The university nurse told Tapper to return in a week for a follow-up if her symptoms persisted. Continuing to feel worse, Tapper underwent a series of blood tests. "I was actually singing in my school's choir when a staff member pulled me aside and told me to report to the nurse's office right away because my test results were in," she remembers. The nurse told Tapper to go to the emergency room immediately. Tests revealed that Tapper had Stage IV chronic kidney disease (CKD), also known as end-stage renal disease. "I was in complete shock," Tapper says.

Tapper's condition is characterized by the progressive loss of renal function over a period of months or years. More than 20 million American adults, or one in 10, have some level

of CKD, according to the Centers for Disease Control and Prevention.

For Tapper, now a fourth-year medical student at the GW School of Medicine and Health Sciences (SMHS), practicing medicine means more than just prescribing antibiotics or administering tests; it's about treating patients with compassion and motivating them to live a healthier lifestyle.

"Being on dialysis, you have to be very organized," she says. There are two forms of dialysis — hemodialysis, in which patients are connected to a machine that removes excess waste products such as creatinine and urea from the blood, and peritoneal dialysis, in which an infusion of electrolytes is used to flush out excess waste using the peritoneum in the abdomen. Hemodialysis is done three times a week in a dialysis clinic, whereas peritoneal dialysis can be performed daily at home. "Peritoneal dialysis is the one I do because it offers me more flexibility," says Tapper.

Tapper, who arrived at GW in 2009, says her experiences as a patient diagnosed with a chronic illness have influenced how she wants to practice medicine and treat her future patients. "I see things through the patient's eyes even more now," she says. "I'm just more compassionate in that sense. I go the extra mile because I can understand where patients are coming from."

Yolanda Haywood, M.D., dean of diversity and associate dean for student and curricular affairs at SMHS, describes Tapper as a composed, mature student who consistently wears a welcoming smile. "I'm certain she will be a strong patient advocate, and I don't think anything will deter her from becoming an exceptional physician," says Haywood.

Tapper plans to practice family medicine after graduation. There are a few things she can see herself doing in the future: helping underserved communities, practicing holistically, and educating her patients.

Tapper is high on the transplant waiting list due to her age, her overall health, and the length of time she has accumulated on the list. The average wait time to receive a transplant varies by state, and multiple factors need to be considered to determine whether a patient is a candidate for transplantation, says Tapper. Those who do not meet the requirements can continue on their dialysis regimen for long-term health maintenance.

"I'm not waiting around desperately for a transplant because I could be hoping and waiting for something that never happens," insists Tapper. She says her time is better spent with her family and pursuing her career as a family medicine physician. ■



Diane P. Luckmann, M.D. '59, with Frank Miller, M.D. '48, B.S. '43, during a visit to campus for her 50th Reunion in 2009.

A Reinforced Foundation

Gift from Diane P. Luckmann, M.D. '59, Puts Pathology and Academic Excellence at the Forefront

BY THOMAS KOHOUT

“If you know pathology, you know medicine,” says Diane P. Luckmann, M.D. '59. There is a bit more to it than that, she admits, only slightly stepping back from the medical education axiom that has guided her career. But for Dr. Luckmann, pathology — and the professor who first introduced her to the foundational subject — laid the groundwork for everything that followed and taught her to think like a doctor.

“Before I went to medical school I didn't realize the significance of pathology. I thought it was just dealing with cadavers,” recalls the board-certified anesthesiologist and family medicine practitioner, who also practiced emergency medicine and pain management during her extensive career. “By the time I finished the course with Dr. Frank Miller, I realized how incredibly important it was for everything else.”

If the George Washington University School of Medicine and Health Sciences (SMHS) were known for just two things, Dr. Luckmann believes outstanding instruction and an emphasis on pathology would top the list. For her and countless others who have traveled the halls of SMHS, Dr. Frank Miller, a double alumnus, M.D. '48 and B.S. '43, and Professor Emeritus of Pathology, exemplified both of those criteria and served as the basis for their evolution as physicians.

This lasting influence led Dr. Luckmann to make a significant bequest in honor of Dr. Miller, who passed away in April 2013. She completed the endowment for the Dr. Frank N. Miller Endowed Professorship with a substantial gift with the goal of cementing GW's reputation as a medical education authority.

Dr. Miller served the SMHS community for more than 40 years, shaping the future careers of generations of medical students, including Dr. Luckmann. His dedication and influence earned him GW's Distinguished Teacher Award in 1998. In his role as dean of Students and Curricular Affairs from 1966 to 1973, Dr. Miller paved the way for women to enter medical school, markedly increasing female enrollment at SMHS during those years. His ability to connect with students and mentor residents and fellows led Dr. Miller to become

“My enthusiasm for teaching is inspired not only by the incredibly well-chosen and talented pupils, but by the outstanding physicians who taught me at GW in the 1950s. When I was a student, GW had many outstanding physicians at SMHS, and throughout my career I've tried to draw upon what I considered to be the best skills that each possessed. But my base, without question, was Dr. Frank Miller.”

—Diane P. Luckmann, M.D. '59

GW's first recipient of the “Golden Apple” award. By his retirement in 1985, Dr. Miller had earned seven such prizes — an unprecedented total at the time.

“As a professor, mentor, and friend, Dr. Miller was one of the most beloved faculty members in the history of the

school,” said Jeffrey S. Akman, M.D. ’81, RESD ’85, Walter A. Bloedorn Professor of Administrative Medicine, vice president for health affairs, and dean of SMHS. “Thanks to Dr. Diane Luckmann’s generous gift, his legacy will live on through the Dr. Frank N. Miller Endowed Professorship, supporting the school’s tradition of distinguished teaching in the allied health fields.”

Dr. Miller not only influenced Dr. Luckmann’s foundational understanding of medicine, but also served as her model for effective instruction — from the way he organized his materials to the way he articulated his lectures. Dr. Luckmann, who served on the faculty of the University of Tennessee and the University of California San Francisco, considered Dr. Miller an academic archetype. “I’ve never had a professor prepare so well for a class. He had a reason for every single thing he did,” recalls Dr. Luckmann. Like Dr. Miller, who worked in radio before his medical career, Dr. Luckmann came to medicine with a broadcasting background, having been a TV producer for KPIX in San Francisco. “I still script out my lectures the same way he did,” she says.

“My enthusiasm for teaching is inspired not only by the incredibly well-chosen and talented pupils, but by the outstanding physicians who taught me at GW in the 1950s,” says Dr. Luckmann. “When I was a student, GW had many outstanding physicians at SMHS, and throughout my career I’ve tried to draw upon what I considered to be the best skills that each possessed. But my base, without question, was Dr. Frank Miller.”

Maintaining that foundation of excellence is what Dr. Luckmann hopes the Dr. Frank N. Miller Endowed Professorship will ensure for future generations of GW physicians.

Breaking Barriers in the Name of Research

Within most successful researchers there lies a stubborn streak, a flicker of perseverance that lights the way past personal and professional setbacks en route to the next big idea. So it was for Jean L. Fourcroy, M.D., Ph.D., RESD ’79, M.P.H., who, at 32 years of age, with four small children, returned to school and completed her bachelor’s degree. By the late 1970s, having already earned a master’s degree in biological sciences, an M.D., and a Ph.D. in anatomy, Fourcroy became the first woman to be admitted to GW’s School of Medicine and Health Sciences (SMHS) Department of Urology residency program. In 1981, Fourcroy would become only the fifth woman in the country to earn board certification in urology.

In recognition of her fierce determination and her guidance as a role model for women entering the field of urology, SMHS has created the Jean L. Fourcroy, M.D., Research Award, which is funded by a generous gift from Fourcroy and her husband, Armin Behr.

“It is an honor to follow in the footsteps of such a tremendous pioneer and scientist,” says Tiffany Sotelo, M.D. ’01, assistant professor of urology at SMHS, who will oversee the award. “We are proud to help her legacy live on forever.”

“I hope it will encourage more residents to take an interest in research, and more faculty and others to be supportive,” says Fourcroy of the award.

The award will support research, scholarship, and publishing expenses for female urology residents and female medical students interested in studying urology at SMHS. An award will be presented each year to a female urology resident or student who best exemplifies the devotion to patient care and commitment to research demonstrated by Fourcroy throughout her career.

“Nationwide, nearly 80 percent of urology residents are men,” says Thomas Jarrett, M.D., chair of the department of urology at SMHS. According to the Association of American Medical Colleges, fewer than 10 percent of practicing urologists in 2010 were women. “Here at GW, on the other hand, over the past five years more than half of our residents have been women.” It’s a statistic, says Jarrett, that the department is proud of, and, with the help of this gift, it’s a trend he hopes will continue for years to come. ■



Jean L. Fourcroy, M.D., Ph.D.,
RESD '79, M.P.H.

James Griffith, M.D., to Lead Department of Psychiatry and Behavioral Sciences

James L. Griffith, M.D., was named the Leon M. Yochelson Professor and chair of the Department of Psychiatry and Behavioral Sciences in October 2013. Griffith has served as the interim chair of this department since 2011.

“As the former chair of the Department of Psychiatry and Behavioral Sciences, I am pleased that Dr. Griffith has taken on this role, because he possesses a clear vision for the continued success of the department,” said Jeffrey S. Akman, M.D. ’81, RESD ’85, Walter A. Bloedorn Professor of Administrative Medicine, vice president for health affairs, and dean of SMHS. “Under his leadership, the department has flourished and has become a destination for physicians who want to train in the area of global psychiatry.”

Griffith is also a professor of neurology at GW and serves as a psychiatric consultant for Northern Virginia Family Services in the Program for Survivors of Torture and Severe Trauma.

As chair Griffith will oversee a department that has achieved a high level of recognition for its innovations in medical student education and a psychiatry residency that is regarded as one of the top programs in the nation.

“I am honored to serve as chair of the department,” said Griffith. “Our GW psychiatry program has long stood as a beacon for humanism in the profession, treating patients with scientific evidence-based principles, but within the family, community, and cultural contexts of their lives. As chair, I aim for our department to provide national leadership in creating effective and efficient treatment methods that can be portable across different clinical problems, in different clinical encounters, and with different patient populations. We will need to accomplish this for the psychiatrists we train to possess skill sets necessary for future work in primary care settings, medical homes, and community health centers over the coming decade.” ■

Brem Honored for Advocacy Efforts to Fight Breast Cancer

Rachel Brem, M.D., professor of radiology at GW’s School of Medicine and Health Sciences, and vice chair of radiology and director of the Breast Imaging and Intervention Center at the GW Medical Faculty Associates, received the Hope Award at the 5th Annual Tigerlily Foundation’s EmPower Ball during Breast Cancer Awareness Month. A pioneer in breast cancer



research, Brem was honored for her efforts to raise awareness about breast cancer detection and prevention.

A lifelong breast cancer advocate, Brem has dedicated her medical career to defeating the disease. Founded in 2005, the Brem Foundation seeks to advance practices for patient care through early diagnosis, education, research, and

community outreach; serving residents in the Washington, D.C. area.

The Tigerlily Foundation is a nationwide breast cancer foundation that educates young women around the world about breast cancer; and empowering them to be their own best advocates. ■

Exporting Health One Unit at a Time

The World Health Organization reports that environmental risk factors can account for more than one-third of today’s global disease burden. This alarming reality inspired Salma Kikwete, the First Lady of Tanzania, to seek the support and expertise of Jerome Paulson, M.D., professor of pediatrics at GW’s School of Medicine and Health Sciences and professor of environmental and occupational health at GW’s School of Public Health and Health Services. In partnership with Kikwete’s Wanawake Na Maendeleo (WAMA) Foundation and the Muhimbili University of Health and Allied Sciences in Dar es Salaam, Paulson and his colleagues at Children’s National Health System are implementing a pediatric environmental health specialty unit in the under-resourced East African nation.

According to Paulson, such units require limited technology and are relatively inexpensive, which allows them to be easily exported overseas. “Tanzania is at a point now where they understand some of the acute illness problems that they have to deal with and can begin to be concerned about childhood exposures that can have significant outcomes in

cognitive development and fertility,” he says. Environmental health concerns in Tanzania include the effects of mercury exposure during the artisanal gold mining process and polluted runoff from the use of agricultural pesticides.

Development is underway for a train-the-trainer program that will educate a small cadre of children’s health providers and pediatricians in Dar es Salaam on the basic concepts of environmental health by early 2014. That cadre and other future trainees will, in turn, perform week-long trainings throughout Tanzania. Paulson hopes that within four to five years the Tanzanian pediatric environmental health specialty unit will be able to serve other countries in the region as well. ■

SMHS Resident Receives 2013 AΩA Postgraduate Award



Victoria Mui, M.D., Ph.D.

News that Victoria Mui, M.D., was recently selected to receive a 2013 Alpha Omega Alpha (AΩA) Postgraduate Award was a proud moment for the a PGY3 resident in the Obstetrics and Gynecology Residency Program at GW’s School of Medicine and Health Sciences (SMHS). But the announcement might be even better news for expectant mothers in rural Guatemala. For Mui, having her application approved by the AΩA means the opportunity to pursue a project that she is extremely passionate about. “I’m incredibly grateful for the chance to carry out my research initiatives,” Mui says. Her project is titled “Implementation of a Teaching Program for Midwives in Rural Guatemala and Its Impact on Postgraduate Global Health Education,” and

focuses on identifying Parteras, Spanish for untrained birth attendants or midwives, in Santiago Atitlan, a small town in south-central Guatemala wedged between two volcanos along the bay of Lago Atitlan. Mui is creating a formal training program that addresses three specific obstetrical emergencies: pre-eclampsia, infection, and postpartum hemorrhage.

Mui, who is one of nine applicants to receive this honor, will create a “Midwives’ Toolkit,” which includes the necessary medications and tools to assist in the management of home birth emergencies. The implementation of her project will be incorporated into the residency training program as a global health elective for her colleagues, who will continue this project in the coming years.

In the coming months, with the support of Holy Cross Hospital in Silver Spring, Md., Mui will travel to Santiago Atitlan. There, she will volunteer at El Hospitalito Atitlan for three weeks. “I will be working on call in a hospital-based clinic, covering labor and delivery,” Mui explained. During this time, Mui will be working on her AΩA project. “I think this opportunity will be a great start to a lifetime of doing something I love,” she added. ■

Linking Inflammation to Cardiovascular Illness

Dominic Raj, M.D., director of the division of nephrology and professor of medicine at the School of Medicine and Health Sciences, recently received two multi-million dollar UO-1 grants from the National Institutes of Health, to examine the role of gut microbiome on inflammation and cardiovascular disease in patients with Chronic Kidney Disease (CKD).

“Traditional cardio-protective interventions have had minimal success in patients with kidney disease” said Raj. “This research is focused on finding a safe and effective treatment that reduces inflammation and prolongs survival of these patients.”

His first UO-1 project, titled “Anti-inflammatory Therapy in Diabetic CKD,” will examine the effect of two anti-inflammatory therapies on slowing progression of atherosclerosis and protein-energy wasting in hemodialysis patients. His second UO-1 project, titled “Gut Microbiota and Atherosclerosis in ESRD,” will explore the effect of two novel anti-inflammatory therapies on slowing progression of atherosclerosis and left ventricular hypertrophy in patients with CKD. ■

Manipulating the Hook

Hookworm, a parasitic worm that wreaks havoc in people living in regions with poor sanitary conditions, is especially destructive in children and pregnant women. Over the next two years, John Hawdon, Ph.D., associate professor in the Department of Microbiology, Immunology, and Tropical Medicine at GW's School of Medicine and Health Sciences, will work to develop techniques to manipulate hookworm DNA through a \$407,233 grant from the National Institute of Allergy and Infectious Diseases.

"Genetically manipulating the parasite will allow us to do things like determine gene function and find what genes are important for this parasite to survive to ultimately use them as drug targets," said Hawdon.

This grant titled, "Developing Tools for Genetic Manipulation of Hookworms" will also allow Hawdon to learn more about how hookworm survives inside its host. Because hookworm needs a host to live, researchers have been unable to develop basic techniques for research until recently. ■



Intellectual Disability and Autism

As part of a national focus to better understand child health and development, Chiara Manzini, Ph.D., assistant professor of pharmacology and physiology at GW's School of Medicine and Health Sciences, was awarded a \$747,000 grant to research the

causes of severe intellectual disability and autism.

"We are exploring the function of the gene and of the mutation that causes disease, both using cell-based systems, analysis of neurons generated from animal models, and studying the behavior in mouse models to better understand the pathogenesis of the disease," said Manzini. "This gene regulates multiple signaling mechanisms inside the cells and we are hoping to understand these mechanisms first, to then figure out ways to modulate them to have an impact on the disease."

The grant, which started as a career development grant during Manzini's post doctorate career, was given by the Eunice Kennedy Shriver National Institute of Child Health & Human Development for her project, titled "Intracellular signaling in the development of human cognitive function." ■

New Regulatory Autism Gene Identified



Valerie Hu, Ph.D.

A new study by Valerie Hu, Ph.D., professor of biochemistry and molecular medicine at GW's School of Medicine and Health Sciences, reports that RORA, a novel candidate gene for autism discovered by her group in a 2010 study, regulates a large number of other genes associated with autism.

"We are focusing on this gene, in part, because this gene can act as a master regulator of other genes," said Hu, whose study was published in the journal *Molecular Autism*. "Called nuclear hormone receptors, they are capable of activating or suppressing other genes in the genome. The question was which specific genes are regulated by RORA."

Hu and co-author, Tewart Sarachana, Ph.D., a former doctoral student in the molecular medicine doctoral program at SMHS, found that RORA encodes a protein that can regulate the expression of more than 2,500 other genes. Of these 2,500 genes, many are known to be involved in neuronal development and functions, and 426 of RORA's gene targets are already listed in AutismKB, a database of known autism candidate genes. ■

Paramjit T. Joshi, Honored by the American Psychiatric Association

Paramjit T. Joshi, M.D., professor of psychiatry and behavioral sciences at GW's School of Medicine and Health Sciences, chair of the division of behavioral medicine and director of the psychiatry and psychology programs at Children's National Health System, received a special presidential commendation from the American Psychiatric Association (APA).

"With this award, we recognize Dr. Joshi's long-standing contributions to psychiatric medicine, education and research and her international leadership on the mental health of children and adolescents," said APA President Dilip V. Jeste, M.D., director of the Sam and Rose Stein Institute for Research on Aging at the University of California, San Diego.

Over the past 25 years, Joshi has developed expertise in the psychological effects on children of trauma, crisis, and violence. She is called upon to consult internationally in developing research and outreach programs to train and build capacity for mental health services in war torn countries such as Croatia, Bosnia, Herzegovina, Iraq, and Eritrea. ■

Maring Appointed Chair of Physical Therapy and Health Care Sciences

Joyce Maring, DPT, Ed.D., was named the chair of the Department of Physical Therapy (PT) and Health Care Sciences at the GW School of Medicine and Health Sciences (SMHS), a role which she has served in the interim capacity for more than two years. She also serves as the program director for the PT program and as an associate professor of physical therapy and health care sciences. Maring joined the SMHS faculty in 2005.

"I am thrilled that Dr. Maring accepted this role," said Joe Bocchino, Ed.D., senior associate dean for health sciences at SMHS. "Because of her commitment to the school, she has helped to make GW a highly sought after destination for aspiring physical therapists."

As chair of the department, Maring will continue to oversee the day-to-day programmatic activities of the PT program as it continues to ascend in national prominence. She will continue to provide strategic leadership for the Health Care Sciences component of the department, which will be home to new and innovative academic

programs providing the school with additional sources of student recruitment and program expansion. ■



Joyce Maring, DPT, Ed.D.

Ozgur Ekmekci, Ed.D., Named Interim Chair of Clinical Research and Leadership

Ozgur Ekmekci, Ed.D., associate professor of clinical research and leadership at GW's School of Medicine and Health Sciences, has been tapped to serve as the new interim chair of the Department of Clinical Research and Leadership.

In this position, Ekmekci will focus on managing and growing collaborative relationships with national partners within the scope of the educational programs offered in the Clinical Management and Leadership Department.

He will also provide leadership for the CRL faculty and staff, providing oversight and guidance as they promote research and enhance innovative distance education teaching strategies. ■

Visual Alertness in Cortical Networks

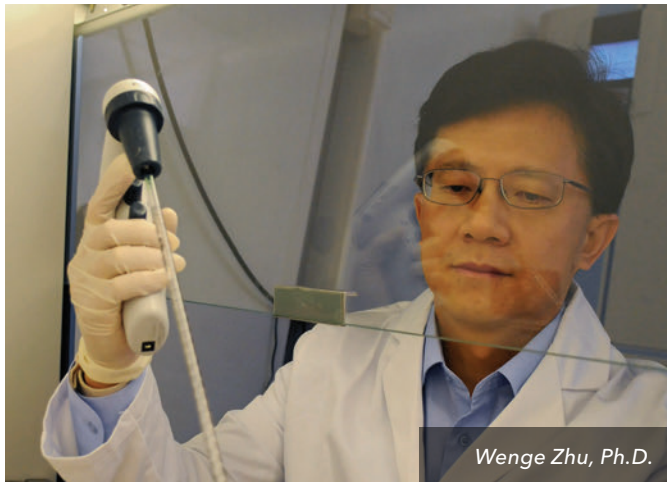
Matthew Colonnese, Ph.D., assistant professor of pharmacology and physiology at GW's School of Medicine and Health Sciences, received a grant from the National Eye Institute to study developmental origins of wakefulness in the cerebral cortex. His project will investigate how circuit properties and computational structures change in the cerebral cortex — the region of the brain responsible for cognition and perception — between the fetal and postnatal periods.

"The fetal brain appears to be incapable of processing

sensory information until just before birth – we are studying the mechanism of this critical shift,” said Colonnese.

This research can help to better understand the critical developmental checkpoints that determine if an infant will develop a healthy, functional brain. ■

Fix the Helix



Wenge Zhu, Ph.D.

New research may lead scientists to identify a pathway to regulate DNA damage repair in cancer cells, providing a new way to help cancer patients who are drug resistant. Chemotherapy and radiation therapy are used to kill cancer cells by causing irreparable DNA damage. However, some cancer patients fail to respond to the treatments due to their highly active DNA damage repair systems. Their bodies are able to repair the damage caused by chemotherapy and radiation, allowing their cancer cells to live on.

Wenge Zhu, Ph.D., assistant professor of biochemistry and molecular medicine at GW’s School of Medicine and Health Sciences, received a \$720,000 Research Scholar Grant from the American Cancer Society to study the mechanism by which multiple genes regulate DNA damage repair in cancer cells.

“If we understand the DNA damage repair pathway, we can find ways to inhibit repair activity and work on finding a solution to this type of drug resistance problem,” said Zhu.

Zhu hopes his five-year study, titled “The Role of And-1 in DNA Damage Repair,” not only expands our understanding of cancer formation, but also opens new avenues for the development of therapeutic strategy for cancer treatment.

“Once we understand DNA damage repair in cancer cells, then we can design strategies to talk to this pathway for cancer therapy,” said Zhu. “In the future, we may even be able to use small molecules to target these genes to treat cancer.”

Translational Cancer Research Grants

Aiming to accelerate the pace of collaborative clinical and translational research investigations to reduce cancer mortality rates and improve treatment options, George Washington University’s Cyrus and Myrtle Katzen Cancer Research Center awarded more than \$500,000 to 12 university researchers. Now in its fourth year, the Katzen Center boosts GW’s cancer research efforts by awarding pilot grants to many of the university’s most promising investigators.

Robert Hawley, Ph.D., professor and chair of the department of anatomy and regenerative biology at SMHS, along with Imad Tabbara, M.D., professor of medicine at SMHS, will use their \$100,000 grant to focus on multiple myeloma. The two will work to develop a test that could be used to determine whether the cancer cells that survive the newest treatment option for multiple myeloma patients exhibit a so-called “multidrug-resistant phenotype.”

With their grant, totaling more than \$80,000, Samir Agarwal, M.D., assistant professor of surgery at SMHS; and Norman Lee, Ph.D., professor of pharmacology and physiology at SMHS, will sequence the transcriptome (RNA that codes for proteins) and microRNAs (molecules that regulate gene expression) of cancer specimens. “We believe that African American cancers have a set of alternatively spliced mRNAs not found in Caucasian American cancers,” said Lee, adding that the implication is that African American cancers is a more aggressive cancer.

Rachel Brem, M.D., professor of radiology at SMHS, and vice chair of radiology and director of the Breast Imaging and Intervention Center at the MFA, will work with Sidney Fu, M.D., Ph.D., research professor of medicine and of Microbiology, Immunology, and Tropical Medicine, and associate director of the Division of Genomic Medicine at SMHS, and use their \$100,000 grant for breast cancer research. “The goal of this research is to utilize molecular markers to identify which high-risk lesions found at minimally invasive breast biopsy is associated with cancer,” she said.

Ajit Kumar, Ph.D., professor of biochemistry and molecular medicine at SMHS and Patricia Latham, M.D., professor of pathology at SMHS, will use their \$80,000 grant from the Katzen Cancer Research Center to identify mRNA markers for Hepatitis C virus infection associated liver cancer, hepatocellular carcinoma.

With their \$60,000 grant, Jonathan Sherman, M.D., assistant professor of neurosurgery at SMHS, and director of surgical neuro-oncology, and of stereotactic radiosurgery at the MFA; and Michael Keidar, Ph.D., associate professor

of engineering and applied science at the GW School of Engineering and Applied Science, proposed a program that introduces cold atmospheric plasma technology in the treatment of malignant brain tumors.

Kausik Sarkar, Ph.D., associate professor of engineering and applied science at SEAS; and Reza Taheri, M.D., Ph.D., assistant professor of radiology at SMHS, will use their \$80,000 to conduct research using microbubble-based ultrasound contrast agents to diagnose thyroid cancer. ■

Christina M. Puchalski Elected to AAHPM Board of Directors



Christina M. Puchalski, M.D. '94, RESD '97

Christina M. Puchalski, M.D. '94, RESD '97, founder and director of GW's Institute for Spirituality and Health, and associate professor of medicine, at the George Washington University School of Medicine and Health Sciences, was elected to a director-at-large position on the American Academy of Hospice and Palliative Medicine Board of Directors.

The organization is dedicated to expanding access of patients and families to high quality palliative care, and advancing the discipline of hospice and palliative medicine, through professional education and training, development of a specialist workforce, support for clinical practice standards, research and public policy.

Puchalski officially begins her three-year term in March of next year. ■

One More Mountain

Allen R. Dyer, M.D., Ph.D., professor of psychiatry and behavioral sciences at School of Medicine and Health Sciences, published "One More Mountain to Climb: What My Illness Taught Me About Health." The book chronicles Dyer's battle with multiple myeloma, a virulent blood cancer, for which he received a bone marrow transplant in 1998.

"The sudden transition from physician to patient challenged everything I previously thought I understood about illness," said Dyer. "It opened a whole new understanding, which has led to taking on new challenges in dealing with trauma and resilience, global disaster response, global and mental health, and cancer survivorship."

Proceeds from the sale of the will be donated to The Willowcliff Foundation, which was founded in 2003 to support world citizenship and global stewardship. ■

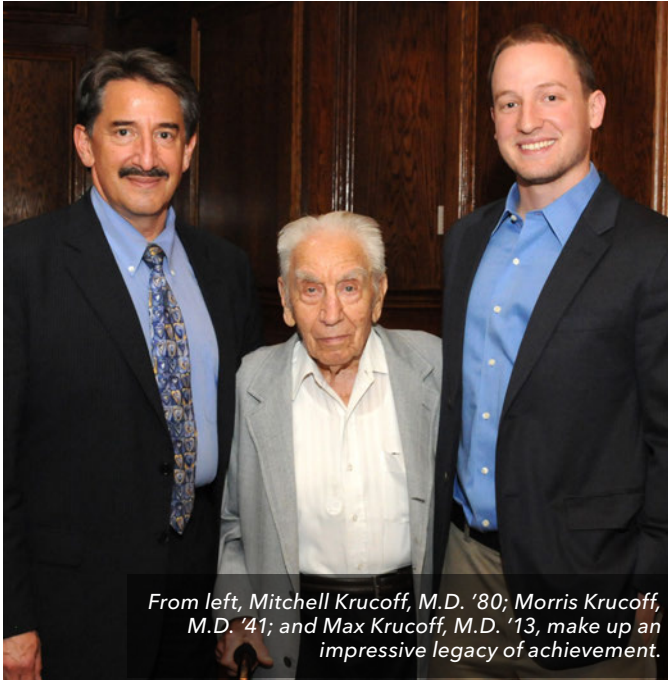
mHealth and Diabetes Care

Richard Katz, M.D., Bloedorn Professor of Cardiology and professor of medicine at GW's School of Medicine and Health Sciences, received an award from the Patient-Centered Outcomes Research Institute for a three-year project to study the combined use of mobile phones and community health to enhance patient management of chronic disease.

Katz and his team will follow 200 diabetes patients with Medicaid insurance in the Washington, D.C., area for one year. One group will use the diabetes cell phone system, a second group will be assigned a community health worker, and the third group will have both.

"This new chronic care model has the potential to modernize the traditional doctor-patient relationship, improve health and reduce medical costs," said Katz. ■





From left, Mitchell Krucoff, M.D. '80; Morris Krucoff, M.D. '41; and Max Krucoff, M.D. '13, make up an impressive legacy of achievement.

An Alpha-Only Family

For Morris Krucoff, M.D. '41, the discovery of penicillin was the miracle of modern medicine he had hoped for. As an ear, nose, and throat surgeon, Morris often treated those suffering from infections with painful, sometimes life-threatening surgery. With the advent of penicillin, a small pill cured the infection and helped his patients avoid surgery and its risks altogether. His son, Mitchell Krucoff, M.D. '80, grew up with penicillin, but as a cardiologist participated in the first days of plain balloon angioplasty and coronary stents saving lives during heart attacks and, sometimes, to avoid risks of heart surgery. Now Mitchell's son, Morris' grandson, Max Krucoff, M.D. '13, is looking forward to the miracles of modern medicine he'll provide neurosurgical patients as a recent graduate of the George Washington University (GW) School of Medicine and Health Sciences (SMHS), following in the footsteps of his father and grandfather.

While there may have been some reminiscing about medical history witnessed by the Krucoff family during graduation weekend, the three generations of Krucoffs gathered May 16 for a different reason: to welcome Max to the Alpha Omega Alpha (ΑΩΑ) Honor Medical Society.

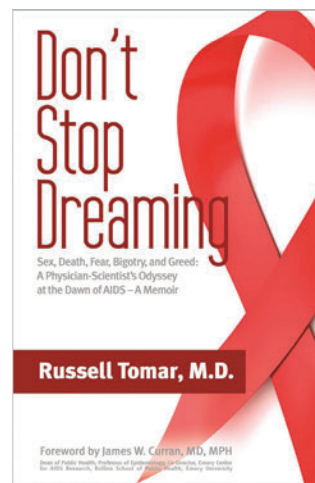
"This is a real homecoming for Mitch, and for us," said GW ΑΩΑ Chapter Councilor Alan Wasserman, M.D., Eugene Meyer Professor of Medicine and chairman of the department of medicine at GW SMHS, while introducing him during a special GW ΑΩΑ sponsored Internal Medicine Grand Rounds lecture earlier that day.

The lecture, titled "Music, Imagery, Touch, & Prayer as Adjuncts to Interventional Cardiovascular Care: The MANTRA Study Project 1993-2013," focused on Mitch's research of intangible human healing capacities, such as prayer. He encouraged those in attendance to think about what physicians should be praying for in regards to the future of healthcare — their own "miracle of modern medicine," technological or otherwise. ■

Elected to Lead

Dennis Dimitri, M.D. '79, was elected as vice president of the Massachusetts Medical Society. Dimitri, a clinical associate professor and vice chair of the Department of Family Medicine and Community Health at University of Massachusetts Memorial Medical Center and Medical School, will serve a one-year term representing nearly 24,000 physicians and medical students in the Commonwealth.

In his role as vice president, Dimitri will oversee all clinical services delivered in the department while still maintaining his own clinical practice of family medicine. He is a fellow of the American Academy of Family Physicians and a past president of the Massachusetts Academy of Family Physicians (MassAFP). In 2013 Dimitri was named Family Physician of The Year by MassAFP, the academy's highest honor. ■



A Witness to the Epidemic

Russell Tomar, M.D. '63, B.A. '59, published the book "Don't Stop Dreaming: Sex, Death, Fear, Bigotry, and Greed: A Physician-Scientist's Odyssey at the Dawn of AIDS," about caring for the desperately ill and desperately seeking a cure for HIV/AIDS. In his memoir, Tomar chronicles

his conflicts with leaders who are unwilling or unable to take action as international HIV/AIDS epidemic unfolded, offering insight into the struggle between fact and ignorance, compassion and bigotry, fear and courage. ■

1940s

PAUL SPRAY, M.D. '44, received the Mayo Clinic Alumni Association Humanitarian Award for his service through volunteerism and contributions to underserved populations.

1960s

PETER GREENBERG, M.D. '63, has been named Professor Emeritus of Medicine, hematology division of the Stanford School of Medicine Stanford Cancer Institute.

1970s

GEORGE A. TAYLOR, M.D., '78, B.S. '74, has been inducted as a Fellow in the American College of Radiology.

FRED KOHANNA, M.D. '78, M.B.A., FACOEM, was named corporate medical director for AllOne Health Resources, an occupational health, wellness, and compliance organization.

FRED LOUGH, M.D. '75, has joined the faculty of the Department of Surgery at the Uniformed Service University of Health Sciences.

DARRELL RIGEL, M.D. '78, has been appointed chief medical advisor to the board of directors of MELA Sciences, a medical device company focused on the design, development of non-invasive melanoma examination tools.

JOHN TRIMBATH, PA '79, received the President's Award at American Academy of Physician Assistant's 41st Annual Physician Assistant Conference in Washington, D.C.

1980s

BARBARA LEE BASS, M.D., RESD '86, FACS, chair of the Department of Surgery at Houston Methodist Hospital and the John F. and Carolyn Bookout Distinguished Endowed Chair of Surgery, received the Distinguished Service Award from the Board of Regents of the American College of Surgeons.

CHRISTOPHER DUPUIS, M.D. '85, RESD '90, recently joined Keokuk Area Hospital as an orthopaedic surgeon specializing in joint replacement surgery, fracture care, sports medicine, hand surgery, work related injuries, and general orthopaedics and trauma care.

RONALD LEWIS, M.D. '80, was recently appointed to the Medical Board of California by Governor Edmund G. Brown Jr. Lewis has been a physician and surgeon with the California Department of Corrections at Ironwood State Prison since 2008. He also has been an assistant clinical professor at the University of California, San Diego Department of Medicine, since 2000.

ROBERTA LEE, M.D. '85, has been named vice chair of the Department of Integrative Medicine at Beth Israel Hospital.

SUZANNE M. SLONIM, M.D. '89, has been inducted as a Fellow in the American College of Radiology.

1990s

NANCY GREENGOLD, M.D. '91, has been appointed vice president of clinical integration at Huntington Memorial Hospital.

PROSPERO GOGO, M.D. '97, has been named associate professor of medicine, cardiovascular medicine, Department of Medicine at the University of Vermont and is also the associate program director, University of Vermont Interventional Cardiology Fellowship. Gogo also serves as Governor-elect of the Vermont Chapter of the American College of Cardiology.

NEEPA SHAH, M.D. '97, recently joined USMD Affiliates Services, a physician-led integrated health care system. Shah will practice internal medicine at the Plano North Clinic.

2000s

DEBORAH BEAR, M.D. '10, M.P.H. '10, joined the pediatric hospitalist program at Calvert Memorial Hospital in Prince Frederick, Maryland.

MARK R. GREENWOOD, M.D. '00, was named medical director for Intermountain Medical Group's central rural region, in Richfield, Utah.

JASON KOFINAS, M.D. '09, received the 2012–13 American Congress of Obstetricians and Gynecologists /Bayer Healthcare Research Grant for Contraception Research for his project titled "Social Media as a Technique for Effective Contraceptive Counseling as Compared to Standard Counseling Techniques." Kofinas also completed his residency in 2013 at New York Presbyterian-Cornell.

ADNAN HUSSAIN, M.D. '13, received the American College of Emergency Physicians Medical Student Award. The award is intended to recognize students who excel in compassionate care of patients, professional behavior, and service to the community and/or specialty. Hussain served as the SMHS Student Council President in 2011–12 and 2012–13.

JOANNE KELLIE, M.S. '13, has been awarded the recognition of a Certified Professional in Healthcare Quality, as well as a Certified Professional in Patient Safety.

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In Memoriam



ROSEMARIE MADDI, M.D. '75, died Oct. 21, 2013 after an 8-year battle with Alzheimer's disease. A native of Binghamton, NY, Maddi served as chief of cardiac anesthesia at Brigham and Women's Hospital in Boston, was the primary anesthesiologist for New England's first heart transplant in February 1984, and was the anesthesiologist for the first bypass

operation performed in China when a Brigham teaching team operated on several senior officials.

Her teaching career included serving as an assistant professor of anesthesiology at Harvard University School of Medicine, in addition to eight visiting professorships at major hospitals around the world including Moscow, Beijing, and Bethesda Naval Hospital in Washington, D.C. Maddi served as chair, vice-chair, and president of the Massachusetts Society of Anesthesiologists.

MELVIN G. ALPER, M.D., clinical professor of ophthalmology and neurosurgery, past chair of ophthalmology, died Feb. 23, 2013. Over his 41-year career, Alper specialized in neuro-ophthalmology and orbital disease. From 1946 to 1948, he served as a flight surgeon in the U.S. Air Force, a past president of the Washington Academy of Ophthalmology, and a member of the board of directors of the International Society of Neuro-Ophthalmology.

ALBERT H. VAN NIEUWENHUIZE, M.D. '68, of Huntington Beach, Calif., passed away on July 4, 2013. "Dr. Van," as he was known to both patients and colleagues, practiced as a urologist for 30 years in southern California. Early in his career, Nieuwenhuize served as a flight surgeon in the U.S. Air Force, and was stationed in Saigon during the Vietnam War.

GERALD ALBERT WILLIAMS, M.D. '49, of Harrisonburg, VA, passed away June 20, 2013. He served as the chief of endocrinology and chief of nuclear medicine at the University of Illinois and the West Side Veterans Administration in Chicago from 1959 to 1986. In his retirement, Williams was active in land conservation in the Shenandoah Valley.

Alumni

MARCOS ENRIQUE AMONGERO, M.D. '89
 RAYMOND F. CHINN, M.D. '39, RESD '41, A.A. '35
 JOHN GLENN CUMMING III, M.D. '75, RESD '79
 MARY LOUISE GALANES, B.S. '96
 ROBERT L. GREENLEE, M.D. '49
 WILLIAM G. GRUNDON, M.D. '60

MANUEL P. LANDMAN, M.D. '41, B.S. '33
 ROSEMARIE MADDI, M.D. '75
 WILLIAM D. MINARD JR., M.D. '55
 MICHAEL B. PIPKIN JR., M.D. '93, B.S. '84
 JOEL SILIDKER, M.D. '79, B.S. '74
 WALTER VICTOR VIEWEG, M.D. '65
 MARY BLAKELY WINBURN, RESD '71

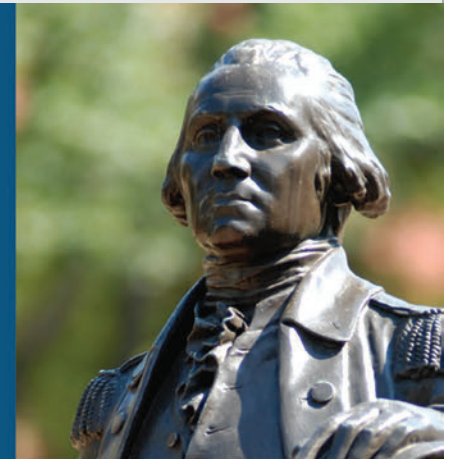
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Advancing a Global Mission



These are exciting times here at GW's School of Medicine and Health Sciences (SMHS). This past October, the SMHS community gathered to celebrate the installation of Jeffrey S. Akman, M.D. '81, RESD '85, as the Walter A. Bloedorn Professor of Administrative Medicine. This was a momentous occasion for GW, officially marking his deanship at SMHS. Currently, our thoughts are preoccupied with our game plan for a university-wide campaign, which will carry

us into our Bicentennial with renewed energy and the resources to achieve our ambitious goals.

Building a culture of rigorous philanthropy will be our highest priority during the campaign. Our task will be to translate our successes as a center for academic medicine into lively and invigorated private investment. The more we can communicate stories of our extraordinary level of instruction, the high quality of our clinical care, and our innovative research, the more donors will be inspired to advance our mission.

As we embark on this campaign to position SMHS among the world's outstanding educational institutions, it is important to note that our goal is not fundraising. The support we receive from our alumni and friends enhances such vital areas as scholarships and faculty endowments, which in turn drive our ability to train the next-generation of physicians, heal our patients with efficient and effective treatments, and make stunning new discoveries that benefit populations around the world. Our mission is making a difference both locally and internationally. Ultimately, our goal is the betterment of mankind.

We are assembling a cadre of volunteers and advocates to assist with our networking efforts and spread our message here in Washington, D.C. and in other parts of the country. We want to remain in touch with you as well during this time. We invite you to stay involved in the SMHS community, give us your ideas, and see how this campaign will build our success.

Sincerely,

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

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

Dean's Council Members

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CARLOS DIAZ, M.D. '72, Internal Medicine, U.S. Navy, Pensacola, FL

STUART KASSAN, M.D. '72, Rheumatology, Colorado Arthritis Associates, Denver, CO

KERRY KUHN, M.D. '73, RESD '77, BA '70, Obstetrics/Gynecology, Coral Springs, FL

GERALD S. LAZARUS, M.D. '63, Dermatology, Department of Dermatology, Johns Hopkins Bayview Medical Center, Baltimore, MD

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LARA S. OBOLER, M.D. '95, Cardiology, Lenox Hill Heart & Vascular Institute, New York, NY

JOHN C. PAN, M.D. '70, RESD '74, Obstetrics/Gynecology, Center for Integrative Medicine, Bethesda, MD

RICHARD POPIEL, M.D. '81, M.B.A., Internal Medicine, Regence BlueCross BlueShield, Portland, OR

MARK A. REILEY, M.D. '79, Orthopedic Surgery, SI-BONE, Inc., Cupertino, CA

RAKESH C. SAHNI, M.D., Cardiology, Maryland Cardiology Associates, Greenbelt, MD

DEBORAH S. SARNOFF, M.D. '80, Dermatology, Cosmetique Dermatology, Laser & Plastic Surgery, Glen Cove, NY

MARK W. SURREY, M.D. '72, Obstetrics/Gynecology, Southern California Reproductive Center, Beverly Hills, CA

ALLAN B. WEINGOLD, M.D., DR.SC.ED. (HON.) '98, Obstetrics/Gynecology, Washington, DC

ART B. WONG, M.D. '67, Emergency Medicine, San Francisco, CA

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

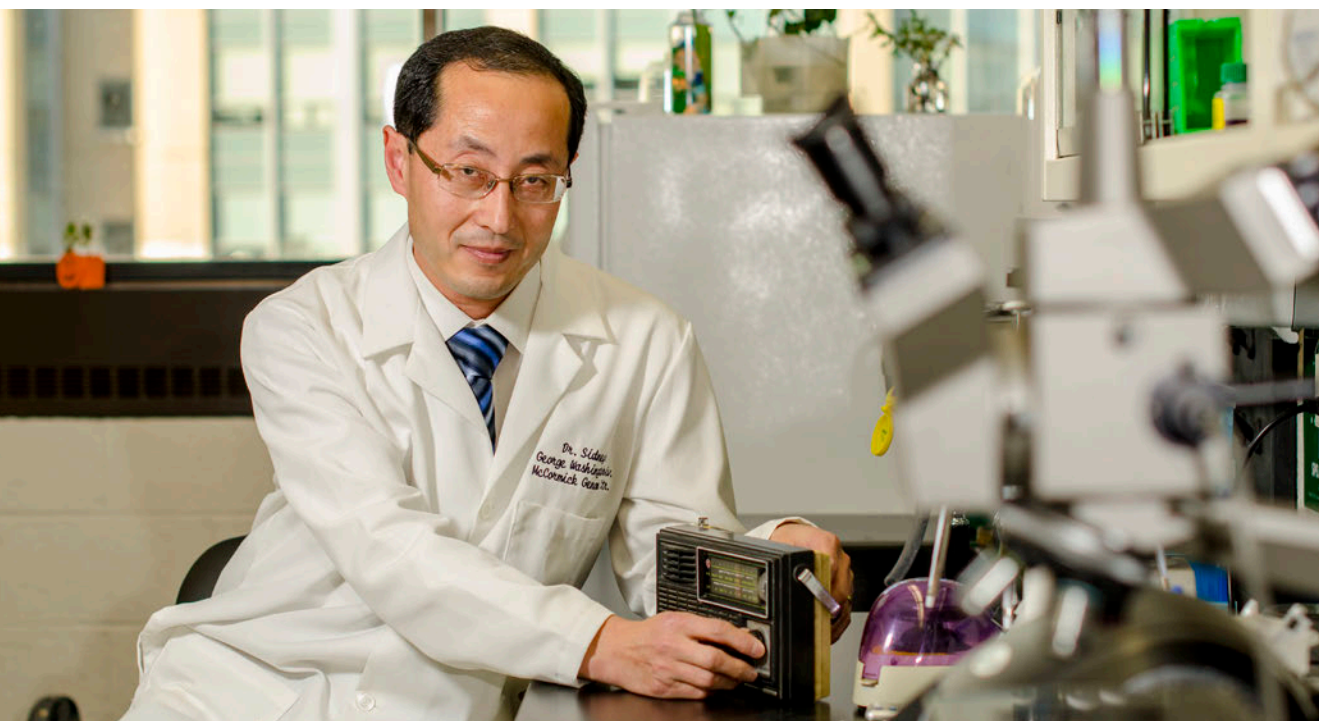
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Language lessons over the radio served as the pathway to basic science success for breast cancer researcher Sidney Fu. Read more on page 18.