

INSIDE

2 A NEW ERA OF LEADERSHIP

Kevin Sowers is named president of the Johns Hopkins Health System and executive vice president of Johns Hopkins Medicine.

3 DOME GOES DIGITAL-ONLY

The flagship employee newsletter is about to become an exclusively online publication.

6 MEDICAL EDUCATION: 125 YEARS STRONG

The school of medicine continues to forge new paths in training physicians and scientists.

INSIGHT SPECIAL ISSUE

CELEBRATING INNOVATION

A roundup of discoveries from the school of medicine dating back to 1893.

Dome

A publication for the Johns Hopkins Medicine family

Volume 69 • Number 1 • Jan./Feb.. 2018



After her fellowship in pulmonary and critical care medicine, Cheilonda Johnson decided to stay at Johns Hopkins. She joined the faculty in 2014.

MIKE CIESIELSKI

Investments Add Diversity to Labs and Clinics

Johns Hopkins has new tools to recruit and retain underrepresented minorities on its faculty.



Learn more about the strategic priority for people at hopkinsmedicine.org/strategic_plan.

Pulmonologist Cheilonda Johnson is studying a lung disease that commonly afflicts African-American women.

Pediatric surgeon Alejandro Garcia helps Spanish-speaking parents ask the right questions when their children need surgery.

Erica Johnson, director of the internal medicine residency program at the Johns Hopkins Bayview Medical Center, is forging bonds of trust between the hospital and the people who live near it.

Adolescent medicine specialist Errol Fields is working to lower HIV rates among adolescent and young adult black men who have sex with men.

These faculty members were recruited with support from the Strategic Planning Recruitment and Retention Program, established by the dean's office in 2014 to increase the number of underrepresented minorities on the school of medicine faculty.

"When you have a diverse group at a table, solving problems, that's always better," says Janice Clements, vice dean for faculty and professor of molecular and comparative pathobiology. "You come up with diverse solutions, you think more broadly. It makes our thinking better."

The Association of American Medical Colleges (AAMC) defines underrepresented minorities in academic medicine as African-Americans, Hispanics, Pacific Islanders and Native Americans. In 2013, according to the AAMC, just 4.1 percent of the physician workforce was black or African-American, and 4.4 percent was Hispanic. Less than half of 1 percent was American Indian or Pacific Islander.

In 2016, 13.3 percent of the U.S. population were African-American, 17.8 percent was Hispanic or Latino and 1.3 percent was American Indian or Alaska Native, according to the U.S. census.

At Johns Hopkins, about 6 percent of the school of medicine's faculty comprises underrepresented minorities, mostly African-Americans and Hispanics, says Clements. Baltimore is 63 percent African-American and about 5 percent Hispanic or Latino, according to the census.

"We are competing to recruit underrepresented minorities for our faculty," Clements says. "If we want Hopkins to thrive and stay competitive as the best place to do medicine and science, we have to get the best people."

The Hopkins recruitment program allots \$250,000 per year to support the research efforts of new underrepresented minority faculty. The money is helpful,

(continued on page 4)

Toward More Personalized Learning

PAUL B. ROTHMAN, M.D.
DEAN OF THE MEDICAL FACULTY
CEO, JOHNS HOPKINS MEDICINE

Elon Musk, the tech visionary behind Tesla and SpaceX, once observed that the single most important factor in professional growth is to have “a feedback loop, where you’re constantly thinking about what you’ve done and how you could be doing it better.”

I suspect most of us would agree. Yet in medicine, as in other fields, concrete measures of performance can be elusive. For instance, patient surveys help us deliver more respectful and satisfying care, but because the evaluations are subjective, they do little to improve the technical quality of our care.

Musk’s quote holds especially true for trainees, who are still fine-tuning their skills. For medical residents, the accreditation council stresses the need for a steady stream of “formative evaluation feedback” in daily practice. Meanwhile, attending physicians are busier than ever with patient care, paperwork and various other tasks. In one study at Boston Children’s and Boston Medical Center, only 6 percent of residents reported that they had received feedback on every rotation.

In light of this, we in the school of medicine have been looking at new ways to provide more personalized instruction and performance assessment—not just in the clinic, but also for the learners in our graduate biomedical programs and preclerkship medical courses. Historically, medical schools have taken a one-size-fits-all approach to classroom instruction. We hand out a syllabus at the beginning of the semester, and all students follow along at the same pace. We evaluate their grasp of the material retrospectively, using broad assessments that lump students into pass or fail categories.

Now we are exploring more precise, data-driven modes of instruction. With the leadership of Roy Ziegelstein, vice dean for education; associate deans Peter Espenshade, Jessica Bienstock and Nancy Hueppchen; and Harry Goldberg, assistant dean and director of academic computing, we are looking at ways to implement what we call precision education. (See story on p. 6.)

Analogous to precision medicine, precision education allows us to optimize learning in a similar fashion. Moving forward, informatics will influence not only what we teach our students—competencies related to the use of big data and artificial intelligence—but also how we teach them. Precision education involves harnessing the power of information technology to provide learners with objective analysis of their progress and skills. In this system, we use learner data to shape the curriculum so that students can progress at their own pace, get individual remediation in an area that presents a challenge and even learn in their preferred modality. (After all, some students learn better through videos or interactive lectures than by reading textbooks.)

A recent experiment in our Department of Surgery illustrates the promise of this approach. Venous thromboembolism (VTE), which occurs when a blood clot forms in a deep vein, is a common, life-threatening complication following surgery. Depending on a patient’s risk factors, we take varying degrees of precaution, ordering anything from compression stockings to blood-thinning drugs. At Johns Hopkins, we began providing individualized feedback to surgery residents on how often they prescribed the appropriate VTE prophylaxis, based on the patient’s profile.

In this effort, led by health informatics expert Brandyn Lau and surgeon Elliott Haut, residents received an electronic scorecard detailing their performance and how it compared with that of other residents. Some low performers also got one-on-one coaching. In the wake of the intervention, there were no preventable complications among patients, and the number of patients getting appropriate interventions increased significantly.

Imagine if we could scale this “scorecard” model across all specialties for many common conditions and procedures.

Our trainees have a genuine appetite for self-improvement and for observations that can help them grow. They know that ongoing feedback is as essential to learning as any seminar, textbook or lab rotation. With that, it feels appropriate to end this column with a request for comment. If you have thoughts on the column or suggestions for future topics, please email deaneditorial@jhmi.edu.



A New Era of Leadership

Kevin Sowers will become new health system president and executive vice president of Johns Hopkins Medicine.

Kevin W. Sowers, a distinguished clinician, educator and academic health care leader, has been appointed president of the Johns Hopkins Health System and executive vice president of Johns Hopkins Medicine. He will assume his new role on Feb. 1.

Sowers, 56, joins Johns Hopkins Medicine after 32 years with the Duke University Health System, where for the last eight years he has served as president and CEO of Duke University Hospital.

“Kevin is a visionary leader with a deep understanding of the role and responsibilities of academic and community health centers, as well as the challenges we face,” says Paul B. Rothman, dean of the medical faculty and CEO of Johns Hopkins Medicine. “With his experience leading a prestigious academic health center, his ability to forge strong collaborative relationships and his demonstrated knack for thriving in complex environments, Kevin will be instrumental in advancing our mission and reinforcing our commitment to the communities we serve.”

Sowers is the second person to hold this appointment. His predecessor, Ronald R. Peterson, retired last month after a 44-year career of leadership at Johns Hopkins.

As president of Johns Hopkins Health System and executive vice president of Johns Hopkins Medicine, Sowers will help Rothman oversee a system of six hospitals in Maryland, Washington, D.C., and Florida. Johns Hopkins Medicine also comprises several suburban health care and

surgery centers; more than 40 outpatient primary health care sites; a full-service home care provider; managed care plans; and hospital management, consulting and clinical education services around the world.

Prior to assuming his current position at Duke University Hospital, Sowers held numerous senior leadership positions across the Duke University Health System, including chief operating officer for Duke University Hospital and interim CEO for Durham Regional Hospital. He also held a variety of senior administrative roles overseeing the consolidation of Duke’s clinical lab services, emergency and trauma services, and managed care and patient care services.

Sowers began his career with Duke University Medical Center Hospital in 1985 as a staff nurse in oncology. For the next nine years, he held several nursing leadership positions, including nurse educator, director of medical oncology and nurse internships, and director of cancer care consortium/unit manager for hematology/oncology/GYN oncology.

Sowers earned his bachelor of science degree from Capital University School of Nursing and a master of science degree from Duke University School of Nursing. He has published extensively and speaks nationally and abroad on issues such as leadership, organizational change, mentorship and cancer care.



To read more, visit hopkinsmedicine.org/dome.

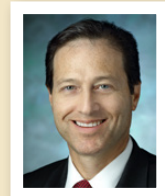
Making Work a Healthier Place

In 2017, Johns Hopkins Community Physicians added flyers about the warning signs of stroke and heart attack to all of its site break areas. Sibley Memorial Hospital opened a tranquility room to help relieve stress. Howard County General Hospital hosted sessions in the cafeteria on nutrition, physical activity and heart health. All these efforts are part of Johns Hopkins Medicine’s strategy to make the workplace healthier for employees.

Johns Hopkins uses the CDC Worksite Health ScoreCard, a measurement tool with 125 questions that assess how well each member organization is implementing resources, policies and programs to prevent heart disease, stroke and other chronic conditions. In its first year, 2016, Johns Hopkins Medicine scored 180 points out of 264, falling below the industry benchmark. Last year, entities across the enterprise improved their health programs, increasing their scores by 23 points and exceeding the benchmark.

“It’s not about the numbers; it’s about the

“You can’t under-represent the influence that the workday has on our health.”



—RICHARD SAFEER, MEDICAL DIRECTOR OF EMPLOYEE HEALTH AND WELLNESS FOR JOHNS HOPKINS HEALTHCARE

employer caring enough to help employees make healthier choices,” says Richard Safeer, medical director of employee health and wellness for Johns Hopkins HealthCare. “We spend most of our waking hours together at work. You can’t under-represent the influence that the workday has on our health.”

Dome Switching to Digital-Only Communications

New Website Coming March 1

This issue of the *Dome* newsletter for Johns Hopkins Medicine faculty and staff members is the last to appear in print.

Beginning March 1, we will launch a redesigned *Dome* website at hopkinsmedicine.org/Dome. To make it easy for you to keep up on the news, *Dome* articles will continue to appear in your inbox through the Inside Hopkins daily email.

You can look forward to more timely reporting on important events, institution-wide initiatives, biomedical discoveries and profiles of the people who

make Johns Hopkins Medicine the amazing place that it is.

Insight, the technology and innovation section of *Dome*, will continue to feature stories about new apps, devices and software developed by our faculty and staff.

Surveys show that *Dome* serves an important function in keeping the Johns Hopkins Medicine family informed and connected. We look forward to expanding our coverage and sharing information with you via the digital devices you use each day—phones, tablets and computers.



ANDRÉ DA LOBA

Seven Decades of Dome in Print

From wartime updates to award-winning chronicle of people, initiatives and events.

BORN OF THE UNIVERSAL wartime wish for news from home, what originally was called *Under the Dome* made its debut in January 1945.

Its birth was even heralded in *The Baltimore Sun* on Feb. 1, 1945, under the headline “Hospital Edits Service Paper.”

World War II still had eight horrific months to go—although few realized then that the Allies were close to victory.

“A new Baltimore publication with a global circulation went into the mails yesterday as the Johns Hopkins Hospital presented Vol. 1, No. 1 of *Under the Dome*, a news bulletin for staff members now serving in the armed forces,” *The Sun* reported.

Several thousand copies of the 8½ x 11, four-page *Under the Dome* were dispatched overseas and to stateside military camps in response to numerous requests from Johns Hopkins staff members for a news bulletin to keep them updated on developments in their departments, divisions, wards and offices. They also wanted to know how their colleagues were doing, wherever they were.

In a brief letter on page 2—entitled “Greetings!”—the hospital’s longtime director (the title then for hospital president) Winford Smith wrote, “Members of the staff have been writing personal letters trying to satisfy the desire for news. This has not been very satisfactory and there are many people who have not learned of events in which they would be greatly interested. We want everyone to know of these news items.”

He added that in the hospital, which was suffering wartime staff shortages, “Much has happened since Pearl Harbor.”

Some of the stories were of the same variety that modern *Dome* readers are familiar with: expansion and

improvement of facilities (“Harriet Lane Home Erects Premature Private Wards,” “Hospital Corridors Shine”—thanks to a new paint job), administrative issues (“Centralization of Medical Practice Studied”) and personnel changes (“Dr. Emmett Holt, Jr. Accepts New York Professorship”).

After the war ended in August 1945, *Under the Dome* continued in print until May 1946, when it no longer was deemed necessary. Six years later, however, in November 1952, it was revived as *News from Under the Dome*.

Thanks to an ongoing, exhaustive indexing of the publication by Linda Weisfeldt, a volunteer at the Alan Mason Chesney Medical Archives (and wife of former Department of Medicine director, cardiologist Myron “Mike” Weisfeldt), its evolution can be traced over the past 73 years.

Photograph illustrations were introduced around 1960.

In 1963, the title again became *Under the Dome*.

Early in 1972, it became *The Dome*.

In 1973, its size grew from 8½ x 11 to 11 x 17—although it remained a four-page publication.

In 1975, it was renamed simply *Dome*, and by 1976, it expanded to eight pages.

Color photographs first appeared in the summer 1989 issue, with pictures recording celebrations of the 100th anniversary of the opening of the hospital.

Improvements in design, layout, typography—and reporting—have been hallmarks of *Dome*. During the past two decades, it has won numerous national awards as the best newsletter of its kind.

As it now is transformed into an online-only publication, that tradition will continue.

—Neil A. Grauer



Read the inaugural January 1945 issue of *Under the Dome* and other issues from *Dome* in print online at hopkinsmedicine.org/dome.

Investments Add Diversity to Labs and Clinics

(continued from page 1)

recruits say, but so are the support and mentoring—essential components of the program.

“My decision to come to Hopkins was based on having a mentor, in my case pulmonologist Sonye Danoff, co-director of the Hopkins Interstitial Lung Disease Clinic,” says Cheilonda Johnson. “The strong research program here was also important to me, as well as the fact that I had research underway.”

Johnson graduated from the University of Pennsylvania medical school and trained at Massachusetts General Hospital. She joined the Hopkins faculty in 2014 after getting to know the institution through a fellowship in pulmonary and critical care medicine and a master’s degree from the Bloomberg School of Public Health.

Faculty members also say they chose Hopkins because they saw opportunities to make a difference in the clinic, lab and community.

Johnson, for example, says few people before her studied genetic links to autoimmune myositis interstitial lung disease. “I saw that people who were African-American had more initial lung disease, and it was more severe. I really wanted to understand what was driving that pattern.”



Alejandro Garcia

So far, the program has recruited or retained 14 faculty members, including Alejandro Garcia, hired in 2016. Garcia, who grew up north of New York City, went to Cornell University for undergraduate education and medical school, then completed a general surgery residency at the Columbia University Medical Center.

The recruitment and retention funding, he says, gives him time to study

how to reduce kidney damage in pediatric patients who use a heart-lung treatment called extracorporeal membrane oxygenation, or ECMO. “If you spend all your time operating, you don’t get the opportunity to advance the field to the next level,” he says.

He also likes educating and reassuring Spanish-speaking families whose children need surgery. “They feel a lot of pride to have someone who speaks Spanish, who looks like them—someone who can be their advocate,” he says of the parents who turn to him for advice.

Garcia spoke recently on a Spanish-language radio program in Washington, D.C., an appearance arranged by Centro SOL, the Johns Hopkins Bayview organization focused on improving Hispanic health and opportunity. “I never imagined being on the radio,” he said. “I’m excited at the potential to really have a meaningful impact not only with ECMO but with the Hispanic community in the area.”



Erica Johnson

Services Health Education Consortium. She was a U.S. Army major and infectious diseases physician at the San Antonio Military Medical Center when she joined Johns Hopkins. The recruitment and retention program made it possible by funding a portion of her salary, says Johnson.

As important, she says, were mentors and leadership who “made it very clear to me that not only did they want me to come here, but that once I got here I would be able to succeed.”

Growing up in West Baltimore and Woodlawn, Johnson was aware that the relationship between Johns Hopkins and city residents could be tense. She’s working to build trust as co-director of Medicine for the Greater Good, a program that requires internal medicine residents to bring health-enhancing programs to the community, such as teaching local civic and religious leaders about health issues such as diabetes and mental illness, so they can help the people they know.

Johnson is also making sure residents learn about social determinants of health, such as exposure to crime, transportation options and quality of education. Her research interests include health disparities in care and

how medical residents learn the standards and ethics that promote trust.

“One reason it’s important to have a diverse workforce is that the patients we take care of are very diverse,” she says. “Evidence suggests that a diverse workforce is one of the keys to eliminating disparities in health care.”

Adolescent medicine specialist Errol Fields agrees that his own perspective as a black gay man helps him in both his clinical and research work to understand health disparities affecting young black gay, bisexual and other men who have sex with men. He’s working on strategies to provide young men at risk for HIV access to the medication known as PrEP, or pre-exposure prophylaxis, and other services that could keep them from getting HIV and other sexually transmitted infections.

“Having people from diverse backgrounds—racial, socioeconomic, sexual and gender identity—on our research teams helps to inform the types of research questions we ask and improves our understanding of why some groups are disproportionately affected by diseases like HIV,” he says.

Fields, who joined the faculty in 2014, has an undergraduate degree from Harvard, a medical degree from the Johns Hopkins University School of Medicine, a Ph.D. from the Bloomberg School of Public Health and a master’s in public health from Columbia University.

After pediatric residency training at Boston Children’s Hospital and Boston Medical Center, he returned to Johns Hopkins to pursue a fellowship in adolescent medicine. The recruitment grant, which covered about a third of his salary, allowed him to continue his research until he won a career development award from the Centers for Disease Control and Prevention.

“I’m not going anywhere any time soon,” says Fields. “I’m pretty happy with my work here.”

—Karen Nitkin



Errol Fields

ALL PHOTOS BY MIKE CIESIELSKI



Jonathan Chrispin



Chiadi Ndumele

Endowed Professorship Supports Early-Career Faculty

Jonathan Chrispin’s Haiti-born parents were strict. Growing up in Queens and Long Island, New York, he and his sister were allowed to play video games only on weekends, and could watch only one television show, *Jeopardy*, because it was educational. They also weren’t allowed to use the word “can’t.”

“Since we were young, our parents told us there were no limitations on what we could do,” says Chrispin, now 34 and a cardiologist on the Johns Hopkins University School of Medicine faculty since July 2017. (His sister is a lawyer.)

He’s found the same combination of rigorous expectations and opportunity at Johns Hopkins, where he was recently named a Robert E. Meyerhoff

Assistant Professor. The five-year endowed seat “supports my research and gives me motivation,” says Chrispin, who studies the electrical system that controls the heart, including the mechanisms behind irregular heartbeats and sudden cardiac death.

The endowment, created in 2007 by local businessman and philanthropist Robert Meyerhoff, supports two school of medicine assistant professors at a time with funding of between \$37,000 and \$45,000 per year. It was created to recruit and retain minority faculty identified as future leaders. Also named in 2017 was Arthur Vaught, an assistant professor in maternal and fetal medicine who treats and studies high-risk pregnancies.

Chiadi Ndumele, who joined the school of medicine faculty in 2011, is completing his term as a Meyerhoff assistant professor. “It gave me time to put together an investigative agenda that would allow me to apply for other funding,” says Ndumele, who has since won funding from the Robert Wood Johnson Foundation and the National Institutes of Health to continue his studies of the links between obesity and heart disease.

“An endowed five-year professorship at this early stage of one’s career is an important sign,” he says. “It’s a vote of confidence in you and what you’re pursuing and it gives you room to develop your research platform.”

—Karen Nitkin

Legacy of Service

Eight recipients of the 2017 Martin Luther King Jr. Community Service Awards honored at Johns Hopkins' annual MLK commemoration on Jan. 19.

Renee Blanding
Vice President of Medical Affairs
Johns Hopkins Bayview Medical Center

As a young child, Renee Blanding cherished her visits to the library, where her brothers helped her select books, then read them to her. The vice president of medical affairs for Johns Hopkins Bayview Medical Center is now taking her "lifelong love" of reading into the classrooms of elementary schools in East Baltimore as part of the Readership to Leadership literacy program she launched in 2013. Working closely with schoolteachers and community liaisons, as well as colleagues from Bayview, she hopes to enrich the program with group mentoring and more staff volunteerism.

Darren Brownlee
Assistant Administrator
The Johns Hopkins Hospital

Five years ago, while serving with the National Association of Health Services Executives (NAHSE), Darren Brownlee responded to a call to mentor Baltimore youths through the Big Brothers Big Sisters of America program. An assistant administrator for the Department of Medicine and chairman's office, Brownlee has helped strengthen the confidence of his "little brother," now a high school sophomore. "I wanted to make an impact on those who may not have male figures in their life, especially black male role models," Brownlee says. "It was one of the best decisions I've made." As president of NAHSE's Baltimore chapter, he also increased the funding and participation for its paid summer internship program so that 12 competitively selected college interns could gain experience at local businesses and hospitals, including Johns Hopkins.

Ariel Hicks
Research Assistant
Johns Hopkins University School of Medicine

Ariel Hicks felt a "deep separation between neighborhoods" after she moved to Baltimore. A chance encounter with the founder of #popscope, a volunteer-run project that promotes public astronomy, provided her with a way to bring together people of different backgrounds and experiences. The research assistant for the school of medicine sets up her 90 millimeter Celestron refractor telescope in communities across the city, then invites people to take a peek at the moon, stars and planets. "You never know who you are going to meet," she says. "I'm focused on building relationships in the community." One day each month, Hicks also teaches kindergarten students in Southwest Baltimore how to grow and prepare healthy foods.

Carrie Holdren-Serrell
Clinical Scientist
The Johns Hopkins Hospital

A clinical scientist in the Mycology Laboratory, Carrie Holdren-Serrell organizes food and school-supply drives for her department, and uses her weekends and evenings for volunteer work, such as handing out food, clothing and toiletries to homeless people. As a volunteer for Hannah's Hope, a nonprofit named after a member of her church who fell victim to human trafficking, she speaks to community groups about the dangers of opioid addiction and human trafficking. Holdren-Serrell has also organized a teacher charity drive for City Springs Elementary/Middle School in East Baltimore (Johns Hopkins staff members donated more than 1,000 items and \$260 in cash) and coordinated a food drive that reaped 1,351 pounds



The 2017 Community Service Award winners are, from left: Edward McKay Jr., Darcenia McDowell, Juliet Robinson, Darren Brownlee, Renee Blanding, Carrie Holdren-Serrell, Rhonda Johnson, Ariel Hicks.

of food for the Maryland Food Bank.

Rhonda Johnson
Informatics Program Coordinator
The Johns Hopkins Hospital

Four years ago, Rhonda Johnson set out a box in the Johns Hopkins Hospital's gynecology and obstetrics department office for people to donate food. "Helping others is the right thing to do," says Johnson, a 32-year Johns Hopkins employee and clinical informatics coordinator. "Providing food is the least that we can do." Now she also collects disposable diapers, toys and toiletries. Last year's food drive provided more than 400 pounds of items to the Maryland Food Bank, and another department-wide effort collected clothing for women at the House of Ruth Maryland and the Center for Addiction and Pregnancy at Johns Hopkins Bayview Medical Center. Most recently, Johnson gathered donations for victims of hurricanes and floods in Texas, Florida and Puerto Rico.

Darcenia McDowell
Laboratory Service Technician
Johns Hopkins University School of Medicine

Darcenia McDowell, a lab service technician in the Department of Molecular Biology and Genetics, coordinates community outreach and volunteer activities, such as assisting at Johns Hopkins' commu-

nity science fair for elementary school students and the school of medicine's weeklong Fun with Science Summer Camp. She also helps with the Henrietta Lacks High School Day and annual symposium, and serves on a board that advises researchers how to get the community involved with clinical trials. Through her work with the Black Faculty and Staff Association, McDowell collects and distributes toiletry items for the homeless, school supplies for students and clothing for veterans.

Edward McKay Jr.
Surgical Technician
The Johns Hopkins Hospital

One day, while watching TV, a mentoring initiative for boys of color called My Brother's Keeper caught Edward McKay Jr.'s attention. Then-president Barack Obama was promoting the program, so McKay, a surgical technician at The Johns Hopkins Hospital, decided to email the White House about his desire to mentor a child of an incarcerated parent. The personal email response he got from Obama provided extra motivation to connect with My Brother's Keeper. For a year and a half, McKay has mentored a boy who is now 15. "I stay on him about grades and encourage him," McKay says. "We talk several times a week." McKay also speaks to students at local community colleges and events such as the Johns Hopkins Community Science Fair, sharing

tales of his career journey from housekeeper to surgical technician. "They think, 'If he can do it, I can do it,'" McKay says. "I say, 'It's OK to set goals and to want to better yourself.'"

Juliet Robinson
Surgical Technician
The Johns Hopkins Hospital

Juliet Robinson recalls that many times her parents would share their food with neighbors, and take dinners to the sick and bereaved. "My mother did not let us eat until a plate was made for someone who said that they were hungry," Robinson says. "My parents taught us to give with your heart." Now she devotes much of her own spare time to helping people in her East Baltimore community. A surgical technician in the Johns Hopkins Hospital pediatric operating room, Robinson is also a member of the evangelism ministry of New Mt. Olive Baptist Church. Along with providing food, clothes and information about resources to those in need, she collects gently used pocketbooks and fills them with socks, toiletries and other personal items for a local women's shelter. She also fulfills requests for snacks and cash donations for a lodging facility that accommodates the families of surgical patients at The Johns Hopkins Hospital.

—Janet Anderson

Learn more about the MLK event at Hopkinsmedicine.org/dome



Martin Luther King Jr. Day of Service

Lend a hand preparing meals, painting murals, revitalizing community gardens and doing other good deeds at Johns Hopkins Medicine's inaugural MLK Day of Service on **Friday, Jan. 26, from 9 a.m. to 5 p.m.**

Johns Hopkins is partnering with more than 20 nonprofit organizations in the Baltimore-Washington and St. Peters-

burg, Florida, areas that need volunteers to help them support those in need. Sign up to volunteer for the task, time period

and organization of your choice on the Day of Service portal at tinyurl.com/JHMLKDay. The Office of Diversity and

Inclusion and the Office of Work, Life and Engagement are organizing the event.

Celebrating 125 Years of Medical Education at Johns Hopkins

'Precision education' continues tradition of innovative learning.

IN THE LATE 19TH CENTURY, MEDICAL education in the United States was similar to learning a trade like carpentry or masonry. Johns Hopkins, modeled after European graduate medical training, was the first scholarly medical center in America to base its education on scientific research and clinical observations at patients' bedsides.

While other U.S. medical training institutions required no previous college education for their students, the founders of the Johns Hopkins University School of Medicine directed that all applicants have a four-year baccalaureate degree, then undergo a rigorous four-year academic curriculum, marking a first for U.S. medical education.

Today, 125 years later, the institution continues to forge new paths in training physicians and scientists. This

CELEBRATING Johns Hopkins SCHOOL OF MEDICINE



1893

2018

WHERE TRADITION
MEETS INNOVATION

history of innovations will be celebrated throughout the year as the school of medicine commemorates its anniversary milestone with special events, lectures and other celebrations.

"The 125-year celebration prompts us to reflect on the history of our great institution and on the legacy we have inherited," says Roy Ziegelstein, cardiologist and vice dean for education at the school of medicine.

He points to the landmark 1910 report by Abraham Flexner that set standards that still exist. Flexner cited Johns Hopkins as "the model for medical education."

But Ziegelstein says the anniversary also offers a chance to "recognize our responsibility to continue as leaders in medical and graduate biomedical education in the future."

"The approach encourages students to learn important lessons about collaboration."

—HARRY GOLDBERG, BIOMEDICAL ENGINEER AND ASSISTANT DEAN OF THE JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE



An example of that leadership is an instructional theory that uses technology and data to customize learning for students. "Precision education" replaces one-size-fits-all lectures with a range of mix-and-match educational materials suited to trainees' backgrounds and learning styles.

Much as precision medicine allows physicians to improve patient care by personalizing treatment for patients with the same diagnosis, precision education seeks to tailor course material—and the form in which it is delivered—to individual students' knowledge and skill base.

Harry Goldberg, biomedical engineer and assistant dean of the Johns Hopkins University School of Medicine, says that the precision education approach enables a far more fluid and student-centric approach.

Goldberg and his team are designing a system where medical students can explore facets of particular subjects that interest them before, during and after traditional classroom lectures. An online

network of articles, videos, discussions and even notes from other students opens up new options for class preparation and engagement. He adds that not only can students assume greater control over their own learning, but that this approach allows courses to grow into dynamic collections of materials shared by faculty as well as students.

"The idea is that we are creating a community of learners, that we're all in this together," says Goldberg. "It's often more difficult for the expert to explain something to the person who is not the expert than it is for a colleague to explain it to that non-expert."

The approach encourages students to learn important lessons about collaboration, Goldberg says.

"Sometimes as instructors, we have a hard time explaining," he says, "whereas students can communicate with one another in a much different way."

Goldberg says precision education could prod medical students to explore areas they might not otherwise pursue.

"This has the potential to help students learn more about themselves," he says. "If a student takes an interest in a particular area, such as biomedical ethics, that may be something he or she could make a career of."

Khalil Ghanem is applying the precision education approach for the first time to his course this semester on Infectious Diseases and Microbiology. When the internal medicine and infectious diseases professor heard about precision education from Goldberg, he says he was immediately drawn to the concept.

He says that no matter how prepared and well-educated a first-year Johns Hopkins University medical student is when he or she first encounters the

material, that student faces a steep uphill climb to make the complex connections between microbes, the infections they cause and the epidemiology of disease.

Ghanem has established an online collection of information, compiled by instructors and students alike, that enables students to better make those connections. It is designed to grow from semester to semester.

Precision education also addresses the disparate experiences and interests that exist among students who come to medicine from different academic backgrounds.

"Currently, every student receives the same information regardless of their academic needs. Such standardization compromises our ability to enhance creativity, wonder and academic diversity of thought," Harry Goldberg says.

Precision education, he says, "is more than just a syllabus at the beginning of a semester. This is a scaffold where knowledge will be built."

—Patrick Smith

2017 Highlights from Around the Health System

The Johns Hopkins Hospital once again ranks #1 in Maryland and is #3 nationally out of nearly 5,000 hospitals in *U.S. News & World Report's* Best Hospitals list for 2017. This—coupled with the recent pediatric ranking in which *U.S. News* named **Johns Hopkins Children's Center** #5 nationally—makes Johns Hopkins the nation's top-ranked hospital combined for both adult and pediatric care. Of the 16 specialties ranked by *U.S. News*, The Johns Hopkins Hospital has 13 specialties among the top 10 with 10 in the top five.

Suburban Hospital breaks ground for a 300,000 square-foot clinical building featuring technological advances in surgery, conveniently located specialty physician offices and all private patient rooms. The hospital's new seven-level parking garage opens in August.

Sibley Memorial Hospital opens the Advanced Clinical Care Unit to provide care for complex medical and surgical patients who require specialized nursing assessments and care.

The Johns Hopkins Hospital opens the John G. Bartlett Specialty Practice for patients with infectious diseases. The facility includes more than two dozen exam rooms and co-locates much-needed services for patients with a range of infectious diseases, including infections obtained after transplantation or from medical devices, HIV and viral hepatitis.

Johns Hopkins US Family Health Plan expands into Northern Virginia. Through a network agreement with the Inova Health System and Signature Partners, Johns Hopkins US Family Health Plan (USFHP) offers coverage to more than 100,000 potential new members in the Washington, D.C., and Northern Virginia region. **Johns Hopkins HealthCare** provides health care services for USFHP.

Johns Hopkins All Children's Hospital's LifeLine, the critical care transport team, marks its 40th anniversary. The team transports approximately 1,300 neonatal and pediatric patients each year aboard the LifeLine helicopter, fixed-wing transport or one of four specially equipped ambulances.

Johns Hopkins Home Care Group achieves HomeCare Elite status for the fifth straight year and for the first time with Top 500 status (designated to 500 out of over 15,000 Medicare-certified agencies in the country).

The Center for Bariatric Surgery at Johns Hopkins Bayview Medical Center marks the 20th anniversary of the first bariatric surgery performed there and its 5,000th bariatric case. Also, the Armstrong Institute for Patient Safety and Quality expands to the Johns Hopkins Bayview campus.

For the first time, **Johns Hopkins International** presents *A Woman's Journey*—an award-winning health education conference—to women at Johns Hopkins Aramco Healthcare and Saudi Aramco. More than 450 participants attend sessions held in Dharan on managing stress, aging well and maintaining good digestive health.

Party Like It's 1893

A Year of Celebration

When The Johns Hopkins University opened the doors to its school of medicine in 1893, there were no balloons, no galas, no grand opening ceremonies. The founders worried that the academic rigor they built into the school might scare off potential medical students.

Instead, it changed the way students become physicians and scientists.

During a yearlong observation of a century-and-a-quarter of excellence in academic medicine, the Johns Hopkins community will celebrate its role in changing the way medicine is taught.

Without revealing any spoilers, here are a few highlights of the 2018 celebration:

- Banners above the streets around the hospital and medical campus
- A special website full of history, milestones and upcoming events
- A new executive leadership program for women faculty
- A pop-up museum with an interactive history of medicine at Johns Hopkins
- Special events for students, faculty, staff, alumni and guests
- A neighborhood celebration with the East Baltimore community

The first event celebrating the 125th anniversary of the school of medicine took

place on January 10, when the School of Medicine Boardroom in the Miller Research Building was named for philanthropist and women's rights activist Mary Elizabeth Garrett.

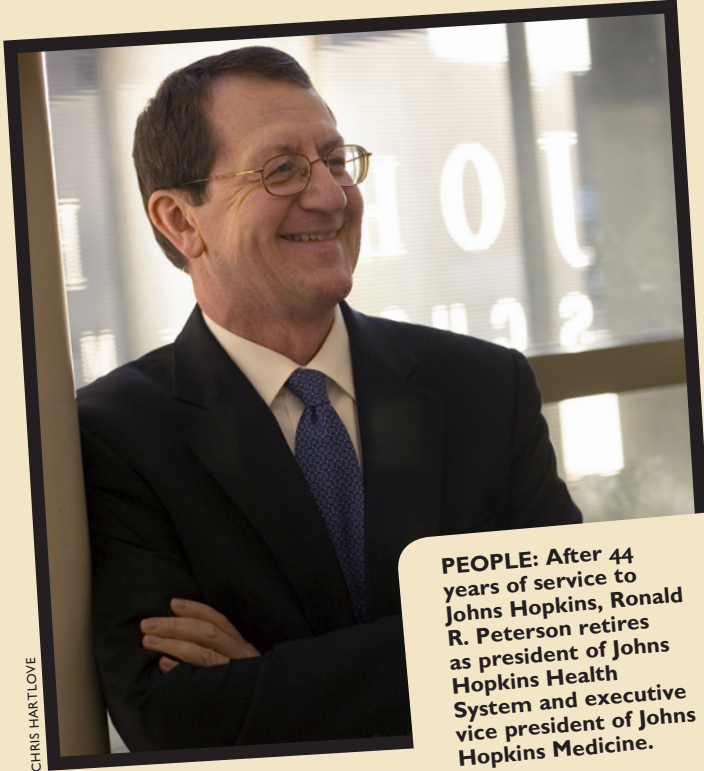
Garrett provided the bulk of the medical school's funding at its 1893 launch. Her gift came with a few key stipulations, including an insistence that women be eligible for admission to the school on equal footing with men.

A replica of the John Singer Sargent portrait of Garrett will forever hang in the room where the institution's governing body meets.



Year in Review 2017

Highlights from stories about strategic priorities at Johns Hopkins Medicine



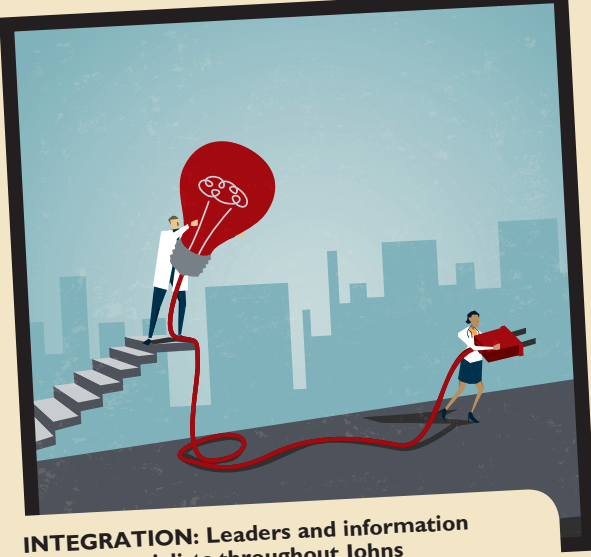
CHRIS HARTLOVE

PEOPLE: After 44 years of service to Johns Hopkins, Ronald R. Peterson retires as president of Johns Hopkins Health System and executive vice president of Johns Hopkins Medicine.



MIKE CIESIELSKI

COMMUNITY OUTREACH: Faith and Food, a free nutrition education program provided by the Johns Hopkins Office of Community Health, teaches members of African-American churches to improve their health by connecting their faith with their cultural heritage.



ISTOCK

INTEGRATION: Leaders and information system specialists throughout Johns Hopkins Medicine participate in an enterprise-wide simulation of a technology outage. Led by the Office of Critical Event Preparedness and Response (CEPAR), the Office of Emergency Management and the Department of Clinical Informatics, the disaster drill helps the organization prepare for a system-wide power failure.



ALLYN DIVITO

EDUCATION: The first cohort graduates from the Johns Hopkins All Children's Hospital residency program. The new training model gives young doctors more time to learn about patients, diseases and systems.

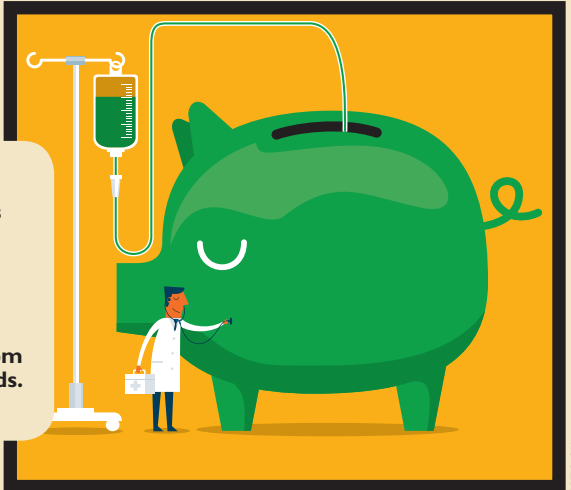


BIOMEDICAL DISCOVERY: Scientists at Johns Hopkins Medicine and its Bloomberg-Kimmel Institute for Cancer Immunotherapy find that half of patients with 12 kinds of cancer that have so-called "mismatch repair" genetic defects respond to an immunotherapy drug called pembrolizumab (Keytruda). Their research leads the U.S. Food and Drug Administration to approve expanded use of pembrolizumab for these patients and heralds a successful example of personalized medicine combining genetics and immunotherapy.



MIKE CIESIELSKI

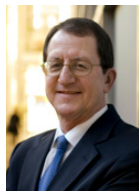
PATIENT- AND FAMILY-CENTERED CARE: Johns Hopkins is changing the way it cares for adolescents and young adults. New research and treatments for diseases increasingly recognize that this age group has physical and emotional characteristics that differ from those of young children or older adults.



ISTOCK

PERFORMANCE: Johns Hopkins Medicine saves \$2.4 million by reducing unnecessary blood transfusions across the health system, thanks to efforts by the system's Blood Management Program using data acquired from the Epic electronic health records.

Peterson Accolades



Ronald R. Peterson, who retired Jan. 1 as president of The Johns Hopkins Hospital and executive vice president of Johns Hopkins Medicine, has been named president emeritus of the Johns Hopkins Health System (JHHS) in a joint resolution by the JHHS board of trustees and the board of trustees of Johns Hopkins Medicine. In addition, Peterson, a 1970 graduate of the Krieger School of Arts & Sciences, has received an alumni association 2017 Heritage Award in honor of his 44 years of service to the Johns Hopkins medical institutions.

Office of Johns Hopkins Physicians Appointments

Jonathan Efron, M.D., professor, executive vice director of the Department of Surgery, chief of the Ravitch Division of Gastrointestinal Surgery and chief of surgery for Johns Hopkins Community Physicians, has been appointed senior vice president of the Johns Hopkins Medicine Office of Johns Hopkins Physicians (OJHP). He will succeed cardiac surgeon **William Baumgartner, M.D.**, who is retiring from the OJHP role but will remain vice dean for clinical affairs for the school of medicine.



Baligh Yehia, M.D., M.P.P., M.Sc., associate professor of medicine, has been named interim medical director for community care in the OJHP and the Division of Infectious Diseases in the Department of Medicine. Previously, he served at the U.S. Department of Veterans Affairs as the deputy undersecretary for health for community care and chief executive of community care.

National Academy of Medicine Honors

Mark Anderson, M.D., Ph.D., professor and director of the Department of Medicine; **Tina Cheng, M.D., M.P.H.**, professor and director of the Department of Pediatrics; and **Rachel Green, Ph.D.**, professor of molecular biology and genetics, an investigator at the Howard Hughes Medical Institute and a Bloomberg Distinguished Professor, have been elected to the National Academy of Medicine (NAM). Also elected were **Felicia Hill-Briggs, Ph.D.**, professor of medicine and physical medicine and rehabilitation; **Martin Pomper, M.D., Ph.D.**, professor of radiology; **Robert Siliciano, M.D., Ph.D.**, professor of medicine and an investigator at the Howard Hughes Medical Institute; and **Suzanne Topalian, M.D.**, professor of surgery and oncology and associate director of the Bloomberg-Kimmel Institute for Cancer Immunotherapy. **Ruth Faden, Ph.D.**, professor of biomedical ethics and founder of the Berman Institute of Bioethics, has received the NAM's 2017 Adam Yarmolinsky Medal for her exceptional service to the academy in its efforts to improve health and advance science.

American Neurological Association Appointments

Justin McArthur, M.D., M.P.H., professor of neurology, pathology, medicine and epidemiology, and director of the Department

of Neurology, has been named president-elect of the American Neurological Association. **Rebecca Gottesman, M.D., Ph.D.**, professor of neurology, was named secretary of the 142-year-old organization, and **Ahmet Hoke, M.D., Ph.D.**, professor and director of the Neuromuscular Division, has been named to the association's board of directors.

Komen Grants

Ben Ho Park, M.D., Ph.D., professor of oncology, has received a \$600,000 research grant from the Susan G. Komen Breast Cancer Foundation to design a treatment strategy to target abnormal proteins found only in cancer cells, which result in a mutation in a specific gene called SF3B1. **Antonio Wolff, M.D.**, professor of oncology, has received a \$200,000 research grant from the foundation to run a pilot clinical trial aimed at improving communications between breast cancer patients, caregivers and physicians in an outpatient setting.

Damon Runyon Award

Evan Worden, Ph.D., a post-doctoral fellow in biophysics and biochemistry, has received a four-year, \$231,000 award from the Damon Runyon Cancer Research Foundation to fund his innovative scientific inquiries into ways to prevent, diagnose and treat cancer. Worden and his sponsor, **Cynthia Wolberger, Ph.D.**, professor of biophysics and biophysical chemistry, are examining how the decision to "turn on" or "turn off" genes is determined by the chemical modification of histone proteins, which can cause a variety of cancers.

Diversity Distinction



James Page, M.B.A., vice president and chief diversity officer for Johns Hopkins Medicine, has received the 2018 Diversity Leader Award from the *Profiles in Diversity Journal*.

EAST BALTIMORE



Namandje Bum-pus, Ph.D., associate professor of medicine, pharmacology and molecular sciences, won a 2017 Leading Women Award from The *Daily Record* newspaper. Leading Women awards recognize Maryland women age 40 and under for professional and community achievement.

John Cameron, M.D., distinguished service professor of surgery and professor of oncology, has received a 2017 Giants of Cancer Care Award from the Oncology Specialty group, which reports on every aspect of oncology. Cameron, director of the Department of Surgery from 1984 to 2003, was the world's leading pancreatic cancer surgeon.



James Ficke, M.D., professor and director of the Department of Orthopaedic Surgery, and orthopaedist-in-chief of The Johns Hopkins Hospital, has been elected to the board of directors of the National Trauma Institute.



STAMPING OUT ALZHEIMER'S DISEASE: Maryland Congressman Elijah Cummings, left, joined more than 200 people recently at Johns Hopkins Bayview Medical Center for the unveiling of a new U.S. postal stamp intended to raise funds for Alzheimer's disease (AD) research. The stamp costs 60 cents, which includes the rate of first-class, single-piece postage, plus an amount to fund AD research at the National Institutes of Health. The idea for the stamp came from Kathy Siggins of Mt. Airy, Maryland, whose late husband was treated for AD at Johns Hopkins Bayview. It took Siggins and other stamp advocates 17 years of campaigning to win approval for this "semipostal" stamp, a special type of fundraising stamp to advance causes that the U.S. Postal Service considers to be "in the national public interest and appropriate." More than 5.3 million Americans age 65 and older are estimated to have AD, which causes memory loss and debilitating symptoms. To read more, visit hopkinsmedicine.org/dome.



Carol Greider, Ph.D., professor and director of the Department of Molecular Biology and Genetics, has received an Outstanding Investigator Award from the National Cancer Institute, providing up to \$600,000 per year to fund cancer research projects with unusual potential. A 2009 Nobel Prize-winner for groundbreaking research on what makes cells age, Greider has also received a 2017 Alma Dea Morani, M.D., Renaissance Woman Award from the Foundation for the History of Women in Medicine.

Gerald Hart, Ph.D., professor and director of the Department of Biological Chemistry, has received the American Society for Biochemistry and Molecular Biology's 2018 Herbert Tabor Research Award. Hart also has been named president-elect of the society.

Lauren Jansson, M.D., associate professor of pediatrics, has received a five-year, \$3 million research grant from the National Institutes of Health and National Institute on Drug Abuse to explore the effects on fetuses and infants of buprenorphine-naloxone, a drug used to treat opioid dependency during pregnancy.

David Newman-Toker, M.D., Ph.D., professor of neurology, ophthalmology and otolaryngology, director of the Division of Neuro-Visual & Vestibular Disorders, and director of the Armstrong Institute for Patient Safety and Quality's Center for Diagnostic Excellence brain injury outcomes clinical trials unit, has been elected president-elect of the Society to Improve Diagnosis in Medicine.

Kathleen Schwarz, M.D., professor of pediatrics, has received the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition's 2017 Shwachman Award for lifelong scientific and educational contributions in the field of pediatric gastroenterology, hepatology and nutrition.



Paul Sponseller, M.D., professor of orthopaedic surgery and chief of the Division of Pediatric Orthopaedics, has been named vice president of the Scoliosis Research Society.

HOWARD COUNTY GENERAL HOSPITAL

Claro Pio Roda has been named vice president of finance/chief financial officer. A 23-year veteran of Johns Hopkins, he most recently served as senior director of finance for Johns Hopkins Medicine, overseeing initiatives that led to \$50 million in performance improvement savings.

SIBLEY MEMORIAL HOSPITAL

Pouneh Razavi, M.D., has been named director of community breast imaging. She will oversee breast imaging at Sibley's Sullivan Breast Center and at Johns Hopkins Medical Imaging in Bethesda.

Erica Richards, M.D., Ph.D., assistant professor of psychiatry and behavioral sciences at the school of medicine, has been named chair and medical director of the Department of Psychiatry and Behavioral Health. Previously an assistant professor of psychiatry at Georgetown University, Richards completed an internship in psychiatry and internal medicine at Johns Hopkins Bayview Medical Center, a residency in psychiatry and behavioral sciences at The Johns Hopkins Hospital, and a clinical research fellowship at the National Institute of Mental Health.

JOHNS HOPKINS MEDICINE INTERNATIONAL



Lindsay Roylance Rothstein, M.A., director of marketing and communications, has been promoted to senior director. She will continue to lead integrated marketing, branding and strategic communications, while assuming responsibility for international patient acquisition strategy in collaboration with colleagues across Johns Hopkins Medicine.

Dome

Published seven times a year for members of the Johns Hopkins Medicine family by Marketing and Communications.

The Johns Hopkins University School of Medicine
The Johns Hopkins Hospital
Johns Hopkins Bayview Medical Center
Howard County General Hospital
Johns Hopkins HealthCare
Johns Hopkins Home Care Group
Johns Hopkins Community Physicians
Sibley Memorial Hospital
Suburban Hospital
Johns Hopkins All Children's Hospital

Editor
 Linell Smith

Contributing Writers
 Janet Anderson, Neil A. Grauer, Judy F. Minkove, Karen Nitkin, Linell Smith, Patrick Smith

Copy Editors
 Victoria Banks, Ron Hube, Justin Kovalsky, Judy F. Minkove

Graphic Designers
 Kristen Caudill, Abby Ferretti, Rachel Sweeney

Photographer
 Keith Weller

Dalal Haldeman, Ph.D., M.B.A.
Senior Vice President,
Johns Hopkins Medicine
Marketing and Communications

Send letters, news and story ideas to:
 Editor, *Dome*
 Johns Hopkins Medicine
 Marketing and Communications
 901 S. Bond St., Suite 550
 Baltimore, MD 21231
 Phone: 410-502-9602
 Email: lsm1103@jhmi.edu

Read *Dome* online at hopkinsmedicine.org/dome

For *Insight*
 Email letters, news and story ideas to:
insighteditor@jhmi.edu

© 2018 The Johns Hopkins University and The Johns Hopkins Health System Corporation.

Follow Johns Hopkins Medicine

Facebook:
facebook.com/JohnsHopkinsMedicine

Twitter:
twitter.com/HopkinsMedicine

YouTube:
youtube.com/user/JohnsHopkinsMedicine

HANNAH CLOSE