

## INSIDE

### 2 STEPPING OUT

Unified Steps walking tours of East Baltimore inspire community bonding—and exercise.

### 5 NURSE LEADER EMBRACES NEW ROLE

Deborah Baker, the first senior vice president for nursing for the Johns Hopkins Health System, discusses the field's challenges, rewards and recruitment efforts.

### 7 SUPPLY CHAIN INSTITUTE: CAREERS IN THE MAKING

A new partnership grooms students for potential careers at the hospital.

### INSIGHT

A new stethoscope to filter noise from pediatric lung sounds may provide better diagnoses.

# Dome

A publication for the Johns Hopkins Medicine family

Volume 67 • Number 11 • December 2016



**ONE DOCTOR, TWO ROLES:** Jason Vaught, like other physician-scientists, splits his time between lab and clinic.

## Guiding the Next Generation of Physician-Scientists

The new Physician-Scientist Training Program supports trainees and physicians whose work combines intensive research with clinical care.



Learn more about the strategic priority for education online at [hopkinsmedicine.org/strategic\\_plan](http://hopkinsmedicine.org/strategic_plan).

**J**ASON VAUGHT DELIVERED A BABY just a few hours earlier, and now he's in Robert Brodsky's hematology lab, preparing serum for experiments that could help other pregnant women and their babies.

The 34-year-old high-risk obstetrician and critical care doctor pauses from his pipetting to explain why he splits his time between the clinic, where he treats women with high-risk pregnancies, and Brodsky's lab, where he is studying a particularly serious pregnancy complication called HELLP syndrome.

"I'm a better maternal-fetal medicine clinician because of my lab work," he says. "And I'm a better researcher because I understand what's at stake."

Vaught is a physician-scientist, a term broadly defined as a person with an M.D. who devotes a substantial amount of time, usually around 70 percent, to biomedical research. Many, but not all, continue to work in clinical settings related to their research.

To encourage more physicians to pursue this important but arduous career path, the school of medicine created a new Physician-Scientist Training Program. The director is pathologist Kathleen Burns, who sees patients with blood disorders and studies the roles of repetitive DNA sequences in human disease. *(continued on page 4)*



# Looking Beyond the Affordable Care Act

RONALD R. PETERSON  
PRESIDENT, JOHNS HOPKINS  
HEALTH SYSTEM  
EXECUTIVE VICE PRESIDENT,  
JOHNS HOPKINS MEDICINE

**W**hile the rest of the country debates the future of the Affordable Care Act following the election, hospitals in Maryland are preparing for the second phase of the unique, five-year hospital payment agreement we have with the federal Centers for Medicare and Medicaid Services (CMS)—the folks who pay the bulk of our bills.



The state of Maryland has until the end of December 2016 to submit a proposal for a new comprehensive, Maryland-only CMS payment process that would take effect in 2019. We are actively working on the draft of this plan.

Maryland has operated a unique, highly effective, all-payer hospital payment system for nearly 40 years. In 1977, Maryland created what is now the country's only statewide Health Services Cost Review Commission (HSCRC), which sets uniform rates that every hospital must charge for services to all payers. In the other 49 states, the rates Medicare and Medicaid pay vary widely from what other insurers pay for exactly the same services.

Although this system worked well for many years, recently, CMS wanted Maryland to move to a system that rewarded value rather than volume. Instead of paying hospitals based on the number of patients they admit and how long these patients are hospitalized, the new waiver would concentrate on the overall, per-capita expenditures for hospital services, as well as on improvements in the quality of care provided and health outcomes for the general population.

Maryland wanted to make sure that our nearly four-decade-old, all-payer system didn't go away. The HSCRC, with the help of an advisory council on which I sit, devised a proposal to CMS to continue our waiver. We recommended that Maryland hospitals link the growth in our budgets to the long-term growth in the state economy and that the HSCRC reward hospitals for keeping people healthy, instead of paying us for the number of patients we admit.

In January 2014, CMS agreed to our proposal and gave Maryland a new, five-year waiver, creating what the federal government calls a "demonstration" because it is designed to demonstrate its effectiveness.

Over the past two years, the state's new CMS waiver has been successful. The all-payer hospital cost per capita in Maryland has risen at nearly half of the targeted annual increase. In addition, Medicare savings have reached nearly 75 percent of the overall five-year goal of \$330 million—in just the first two years. Quality measures have also exceeded the targets.

Although we're still refining our blueprint for a phase two plan to continue the waiver, its basic concepts are in place.

We propose developing a total cost-of-care model that focuses on the entire patient experience, inside the hospital and out.

We also want to coordinate or align the efforts and financial interests of all health care providers—hospitals, skilled nursing facilities, physicians—by providing incentives to slow the rate of cost increases and by providing care in the most appropriate setting.

In addition, we wish to ensure more patient-centered care, including a more well-defined program for primary care and for "dually eligible patients" who are eligible for both Medicare and Medicaid.

Finally, we want to make sure that this new model fairly recognizes the unique nature of the patients treated in academic medical systems, like Johns Hopkins, and that our culture of innovation and discovery continues to thrive.

We are proud in Maryland—and at Johns Hopkins—for long being a leader in curbing health care costs and advancing medical breakthroughs. We hope the new administration supports the adoption of phase two of our new CMS waiver to help us advance that tradition.



A group of Johns Hopkins Hospital employees recently took to the streets for a neighborhood walking tour. Participants included Johns Hopkins Hospital President Redonda G. Miller, far right.

## Striding Toward a Unified Future

**I**N THE SPIRIT OF IMPROVING THE CONNECTION BETWEEN THE JOHNS HOPKINS Hospital and its surrounding community, leaders on the East Baltimore campus have embarked on a series of Unified Steps walking tours.

The inaugural walk in October, pictured above, also served as an opportunity for employees to chat with Johns Hopkins executives while participating in a healthy activity. The event kicked off with a pep talk from Paul B. Rothman, dean of the medical faculty and CEO of Johns Hopkins Medicine, and stretches led by MaryEllen Elie, Healthy at Hopkins program director. Then, 110 participants set off at a brisk pace through the Cleaning, Active, Restoring, Efforts (C.A.R.E.) neighborhood, to the east of the Johns Hopkins campus.

The enthusiastic crowd included Redonda G. Miller, president of The Johns Hopkins Hospital; Tony Bridges, director of East Baltimore community affairs; and James Page, vice president of diversity and inclusion and chief diversity officer for Johns Hopkins Medicine. A second walk was held Nov. 21.

Learn more about the walking tours at [hokinsmedicine.org/dome](http://hokinsmedicine.org/dome).

**"IT'S REALLY IMPORTANT FOR OUR COMMUNITY TO SEE JOHNS HOPKINS OUTSIDE THE IVORY TOWER. WE NEED TO BE IN THE COMMUNITY."**

—JAMES PAGE  
CHIEF DIVERSITY OFFICER FOR  
JOHNS HOPKINS MEDICINE

## Dome Switching to Bimonthly Print Publication

More news to be published online.

**B**EGINNING IN JANUARY, *DOME* WILL SWITCH TO A BIMONTHLY PRODUCTION schedule to enable the editorial team to report on institutional news and events quickly and more frequently. Print issues will be produced every other month, with a special seventh edition of *Dome* in October devoted to Johns Hopkins Medicine's involvement in our communities.

This change in production will allow us to provide readers more stories in the Inside Hopkins daily email, on [hopkinsmedicine.org](http://hopkinsmedicine.org) and [insidehopkinsmedicine.org](http://insidehopkinsmedicine.org), and through social media.

As always, we welcome feedback and story suggestions. Please send them to *Dome*'s editor, Linell Smith, at [lsmit103@jhmi.edu](mailto:lsmit103@jhmi.edu).





# Ready for Their Close-Ups

Video history project introduces Johns Hopkins legends to broader audience.

**W**HEN JESSICA RUCK arrived at Johns Hopkins as a medical student in 2013, she couldn't name the quartet of Johns Hopkins' founding physicians depicted in John Singer Sargent's iconic 1906 painting, "The Four Doctors"—pathologist William Welch, surgeon William Halsted, internist William Osler or gynecologist Howard Kelly.

Many of her classmates couldn't either. Then, a lunchtime talk about Johns Hopkins Medicine artifacts by Ralph Hruban, director of the Department of Pathology, inspired Ruck to learn a lot more about the institution's illustrious past. Hruban suggested that creating a series of videos about the Big Four, and other key Johns Hopkins Medicine figures, would be a good way to make its rich history accessible to all.

In 2014, the medical student embarked on the history project, with help from Norman Barker, director of pathology photography and the Graphic Arts Laboratory, and Jon Christofersen, a medical photographer and videographer in the school of medicine.

Supported in part by the Johns Hopkins Medical and Surgical Association, the two-year effort has produced seven videos, ranging in length from six to

12 minutes. In addition to celebrating Welch, Halsted, Osler and Kelly, the videos document the exceptional efforts of Mary Elizabeth Garrett, the 19th-century philanthropist who donated the funds needed to open the school of medicine, provided that women were accepted on the same basis as men; Vivien Thomas, the African-American surgical technician whose brilliant research and surgical techniques helped make Johns Hopkins the birthplace of cardiac surgery in the 1940s; and John Shaw Billings, the former Civil War surgeon who masterfully designed and oversaw construction of the original Johns Hopkins Hospital.

On-camera presenters for the series are Hruban; John Cameron, former director of the Department of Surgery and a scholar of Halsted's work; Stephen Achuff, former head of adult cardiology clinical programs, who helped to create and preserve the Osler Textbook Room in the Billings Administration Building; and John Rock, former director of the Department of Gynecology and Obstetrics, who speaks about Kelly.

Others include historian Kathleen Waters Sander, who wrote a biography of Mary Elizabeth Garrett; Levi Watkins, the late Johns Hopkins cardiac surgeon, who knew Thomas well; and Neil Grauer, a senior writer for Johns Hopkins



Recent medical students gather below iconic portrait of Johns Hopkins founding physicians, featured in a new video series.

Medicine, who has written two books about its history and discusses Billings' remarkable achievements.

Ruck, who has completed her third year of medical school, is continuing to oversee the ongoing history project. Gary Lees, head of the Department of Art as Applied to Medicine, has recorded a video about Max Broedel, founder of the department, which was the first of its

kind in the country. A video on William Sidney Thayer, one of Osler's successors as physician-in-chief and head of the Department of Medicine, is also in the works.

To see the videos: [bit.ly/Hopkinshistory](http://bit.ly/Hopkinshistory)

## BIOMEDICAL DISCOVERY

# A Faster Antidepressant?

Johns Hopkins study suggests chemical compound can boost moods quickly and safely.

**W**HEN PEOPLE SUFFERING from depression receive a prescription for antidepressants, they often assume they'll feel better quickly. But in reality, most antidepressants take a month or longer to kick in.

"There's a lag phase of four to eight weeks before there's any improvement," says Solomon Snyder, professor of neuroscience at the Johns Hopkins University School of Medicine. "For anyone who is seriously depressed or suicidal, that's a very long wait."

Snyder and other Johns Hopkins neuroscientists may have discovered a quick solution for depression. A chemical compound known as CPG3466B appears to boost the moods of mice in just a few hours, according to a study the team published in *Molecular Psychiatry*. Research associate Maged Harraz was the lead author; Snyder was a co-author.

CPG3466B mimics some of the effects

of ketamine, a powerful tranquilizer that can serve as an antidepressant in small doses. Developed in the 1960s, ketamine was used to anesthetize injured American soldiers during the Vietnam War and is still used to treat pain in emergency rooms and intensive care units.

Ketamine carries many risks—it can be disorienting, causing symptoms similar to schizophrenia. Known as "Special K" on the street, it's abused by those seeking a dreamlike high and dissociative state. Sexual predators slip the drug to potential victims, taking advantage of its power as a tranquilizer.

But in low doses, ketamine is also an effective—and rapid—antidepressant, elevating a patient's mood in a matter of minutes. And because it works on a different chemical pathway than most antidepressants, it can bring relief to those who don't get results from traditional antidepressants. Psychiatrists have experimented with giving intravenous infusions of the drug to those

with severe, persistent depression, but they are wary of the risks.

"There's a need for something similar," Snyder says.

The Johns Hopkins team studied the effects of ketamine on the brain, isolating the chemical pathway that it alters. They found that CPG3466B acts on a different spot within the same pathway. But unlike ketamine, the compound is safe and non-

addictive. CPG3466B was synthesized by a drug company years ago and tested in clinical trials for Lou Gehrig's disease and Alzheimer's. It didn't help these conditions, but it also did not harm subjects or appear to be addictive.

When school of medicine researchers gave the compound to mice, they found that it improved their performance in two tasks commonly used to measure depression. Compared with a control group, mice that took the compound swam longer after being plopped into a vat of cold water—showing that they were persistent. The compound also appeared to embolden mice to run into an unfamiliar, bright space to snatch a morsel of food. Treated mice hesitated less before running into the space than those in the control group.

Snyder is optimistic that a drug company will seize on his group's research and begin testing a version of the compound as a treatment for depression. He also hopes this research will lead to the discovery of other drugs that work along the same pathway—producing, one day, an entire class of safe and rapid antidepressants.

—Julie Scharper





# Guiding the Next Generation of Physician-Scientists

(continued from page 1)



**Robert Brodsky, left, is head of the physician-scientist pathway in the Osler Medical Residency Training Program and serves as a research mentor to Jason Vaught, right.**

Specifics for creating a community of physician-scientists at the school of medicine include helping trainees identify research mentors, providing funding for research projects and travel to conferences, helping residents and fellows apply for career development awards and research grants, and helping physicians focus their clinical training to allow for lab time during their residencies or fellowships.

## A Long-Standing Shortage

Concerns about the scarcity of physician-scientists have been voiced since at least the 1970s. In 2013, the National Institutes of Health (NIH) convened a work group to address the problem. The group's 2014 "Physician-Scientist Workforce Working Group Report" says barriers to this career path include cuts in NIH funding, lower compensation compared with clinical care and poor work/life balance as physician-scientists juggle lab time and clinic hours. The average age a physician-scientist receives a first independent research grant is 45. As a result, many who start on this road opt out.

According to the report, the number of physician-scientists receiving NIH funding has stagnated at roughly 9,000, representing a decreasing percentage of a growing biomedical workforce. Today, NIH-funded physician-scientists make up less than 2 percent of the nation's medical doctors.

"It's critical for the Johns Hopkins University School of Medicine to respond to these trends," says Burns. "The physician-scientist is at the core of who we are as an institution. And our combination of excellence in patient care and our innovation and collaboration in research make this a wonderful place for young physician-scientists to train today."

Physician-scientists drive major advances in medicine. Jonas Salk, for example, developed the polio vaccine. Alexander Fleming invented penicillin. And physician-scientists have a long history at Johns Hopkins, starting with William Osler, who created modern American medical education by insisting that students learn both at the bedside and in the lab.

The tradition continues today. Just this year, pediatrician Gregg Semenza won the 2016 Albert Lasker Basic Medical

Research Award for his research illuminating how cells respond to low oxygen levels.

## Empowering Physician-Scientists Across Departments

"The juxtaposition of science and medicine was the catalyst to help us become what we are," says Mark Anderson, director of the Department of Medicine. "But the physician-scientist pathway needs special care and feeding to really come to



**"THE PHYSICIAN-SCIENTIST IS AT THE CORE OF WHO WE ARE AS AN INSTITUTION."**

—KATHLEEN BURNS  
DIRECTOR, PHYSICIAN-SCIENTIST  
TRAINING PROGRAM

its full potential. We want to make sure we can deliver on this promise."

Departments, including those of Anesthesiology and Critical Care Medicine and of Gynecology and Obstetrics, are already supporting physician-scientists.

Vaught, for example, had no lab experience and no intention of becoming a researcher when he arrived at Johns Hopkins as a fellow in 2013. "I definitely started on a clinician track," he says. But his maternal and fetal medicine program encouraged a year of research and provided both time and financial support.

As with other physician-scientists, finding the right mentor was key. Vaught teamed with Brodsky, director of the Division of Hematology, who was recently named head of the physician-scientist pathway in the Osler Medical Residency Training Program.

Vaught wanted to learn more about HELLP syndrome, a life-threatening condition that affects about 1 percent of

pregnant women and develops after the 23rd week of pregnancy. HELLP stands for hemolysis (breakdown of red blood cells), elevated liver enzymes and low platelets count. The only treatment is immediate delivery, which can be dangerous for preterm infants.

Brodsky led development of a test that measures components of serum, a protein-rich liquid in blood. He used the test to diagnose a genetic blood-clotting disorder known as atypical hemolytic-uremic syndrome, which can occur at any age.

Vaught used the same test to study the serum of women with HELLP syndrome, finding evidence that the two conditions have similar biochemistries. His results, published in the May 2016 issue of *Experimental Hematology*, could lead to treatments that reduce preterm deliveries.

## The Best of Both Worlds

Brodsky remains a mentor to Vaught, who joined the faculty in July. "Our lab supports him, but he's running his investigations independently," says Brodsky, who is now helping Vaught apply for career development funding from NIH.

Landon King, executive vice dean for the school of medicine, knows from his own experience that the right mentor can inspire a lifelong pursuit of research. The pulmonologist had such a mentor while in medical school. As a result, "I became enthralled with the idea of being able to contribute to our knowledge of particular ideas or problems," says King, who studied water channels in the lungs at Johns Hopkins alongside 2003 Nobel laureate Peter Agre.

"We want our programs to increase the likelihood of people choosing careers in investigation in addition to taking care of patients," says King. "We want our folks to come out of their training with opportunities and tools to pursue their aspirations."

Vaught, chatting with Brodsky as he works, has those tools and opportunities—a lab and mentor that support him, and patients who inspire him. Imagining a brighter future for women with HELLP syndrome "makes it easy for me to skip lunch and do this," he says. "This is research I feel passionate about."

—Judy F. Minkove and Karen Nitkin

## A Sampling of Johns Hopkins Physician-Scientists

Physician-scientists earned medical degrees—and Ph.D.s in some cases—and devote much of their time to research. As the examples below show, they are central to the history and mission of Johns Hopkins Medicine.



**Arnall Patz,** ophthalmologist, won a Lasker Award in 1956 for his

research showing that high doses of oxygen could cause blindness in premature infants. The award was presented by Helen Keller, the deaf and blind activist and author.



**Victor McKusick,** internist, winner of the 1997 Lasker Award, founded the

Division of Medical Genetics in 1957 and led the world in searching for, mapping and identifying genes responsible for thousands of inherited conditions.



**Peter Agre,** hematologist, won the 2003 Nobel Prize in Chemistry

for discovering aquaporins, which are proteins that move water molecules through the cell membrane. He directs the Johns Hopkins Malaria Research Institute.



**Diane Griffin,** virologist, is a world leader in the study of viruses that cause

encephalitis and measles. Among her many honors, in 2004, she was elected to both the American Academy of Microbiology and the National Academy of Sciences.



**Bert Vogelstein,** pathologist, was in the first cohort of 11 winners of the

Breakthrough Prize in Life Sciences in 2013, which awarded him \$3 million to continue his work understanding cancer as a genetic disease.



Read about physician-scientist Rachel Damico at [hopkinsmedicine.org/dome](http://hopkinsmedicine.org/dome).



# Q&A with Deborah Baker

As the first senior vice president for nursing for the Johns Hopkins Health System, Deborah Baker is a nursing leader for all Johns Hopkins hospitals.

Baker, who started the job July 1, works with chief nursing officers across the enterprise on strategic planning and vision related to the care of patients and the shift toward a full-service, integrated health system.

It's difficult to imagine someone more qualified: Not only did Baker earn her undergraduate and graduate degrees at the Johns Hopkins University School of Nursing, she has held a variety of teaching and leadership roles since joining the staff of The Johns Hopkins Hospital as a clinical nurse in 1992.

One of her greatest challenges is helping Johns Hopkins hospitals hire and retain highly qualified nurses at a time when demand outpaces supply. The Bureau of Labor Statistics anticipates 1.2 million nursing vacancies between 2014 and 2022, and the National Center for Health Workforce Analysis predicts a 12,100-nurse shortfall in Maryland by 2025.

*Dome* spoke with Baker recently about the challenges and rewards of Johns Hopkins nursing, and her efforts to attract and keep nurses.

**Q: Recruitment and retention are ongoing issues. Why is it hard to find and then keep good nurses?**

**A:** Some of the reasons are related to demographics. Nurses in the baby boomer generation are retiring at a faster rate than new nursing graduates are entering the workforce. Nursing schools are graduating smaller classes because there just aren't enough faculty members. Meanwhile, an aging population means more people need health care. Nurse shortages in many care areas increase job stress and decrease job satisfaction.

The good news is that there's more interest in the nursing profession across genders and cultures than in the past. We recently held our first-ever systemwide job fair for Johns Hopkins nurses. It attracted nearly 400 attendees, far exceeding our expectations.

**Q: What changes have you seen in the profession of nursing?**

**A:** Health care has become more competitive as hospitals work to provide innovative, high-quality care for the lowest cost. Outcomes are more transparent, and it's easier to coordinate care across settings. Our patients and families are more informed. We partner with other clinicians to make sure we include patients and families in decision-making and have them present throughout the experience.

Nursing has led a lot of these efforts,

and there is a lot more we can do. I believe job stress will decrease in health care if we allow the collaboration with patients and families to replace the top-down model of care that was prominent for many years.

**Q: Is there also more partnership with the rest of the care team, including physicians?**

**A:** At Johns Hopkins, we've enjoyed a professional, collaborative relationship with physicians and other members of the care team for a very long time. As I learned as a nurse who trained at Johns Hopkins, you know a Johns Hopkins nurse because he or she always asks a lot of questions. That's what they're expected to do, and that sense of inquiry is valued. The emphasis on evidence-based practice and self-governance are very attractive to our nurses.

**Q: You recently commissioned the Urban Institute, the nonprofit organization that studies economic and social policy, to study nurse retention at The Johns Hopkins Hospital. What did you hope to learn?**

**A:** The question was, how do we keep what we value about Johns Hopkins nursing but make it better in the workplace and marketplace? In looking at our workforce challenges, we thought about



the things that retain staff members in any profession. It's usually feeling valued, work/life balance and salary.

We want to understand the expectations of nurses at The Johns Hopkins Hospital and how they change over the course of a career, from new nurses to veterans with decades of experience. The Urban Institute conducted surveys, interviews and focus groups. It surveyed our existing staff members, as well as staff members who had left and people who were offered but did not take positions here. It also spoke with some of our managers, executives and leadership.

We are now engaging with our nurse managers and staff members to design solutions based on what we learned.

**Q: What did the study find were the pluses for nurses of working at Johns Hopkins? Any drawbacks?**

**A:** The results revealed several areas of opportunity for nursing and hospital leadership, including compensation, scheduling and promotions. Nurses want support from administration and leadership, a collaborative environment, and opportunities to grow.

Job stress was consistently rated very high across all groupings of years of experience. We're not a factory. We see challenging cases and patients who need the specialized care only Johns Hopkins can deliver. Decisions have to be made quickly and with precision. Being a nurse means coming in every day and executing critical thinking. You have to be incredibly resilient. You have to be firm and lean in on your values, while also being able to bend as needs change.

**“YOU KNOW A JOHNS HOPKINS NURSE BECAUSE HE OR SHE ALWAYS ASKS A LOT OF QUESTIONS. THAT'S WHAT THEY'RE EXPECTED TO DO, AND THAT SENSE OF INQUIRY IS VALUED.”**

On the plus side, the employee benefits are a real strength, with a huge emphasis on education and training. You can develop and reinvent yourself if you take advantage of those opportunities. That might be important at certain stages of your career. At other times, tuition benefits for dependents might be important too.

However, our jobs are often very task heavy, which reduces opportunities for nurses to take advantage of professional development. We're working to fix this through creative scheduling and restructuring some of our workflows.

Beyond the benefits, people are our greatest asset. Nurses really value the expertise they see in their colleagues and the chance to develop and mentor those around them.

—Reported by Karen Nitkin

## IN BRIEF

### State of Johns Hopkins Medicine Address

Mark your calendars for the 2016 State of Johns Hopkins Medicine address, which takes place on **Thursday, Dec. 8, from noon to 1 p.m.** in Turner Auditorium on the East Baltimore campus. Paul Rothman, dean of the medical faculty and CEO of Johns Hopkins Medicine, will update employees on the enterprise's progress in innovating better care models, sustaining research excellence and enhancing the joy in medicine. All faculty members, staff members, students, residents and postdocs are invited to hear this annual presentation. You may view the event live from a computer or mobile device.



[bit.ly/stateofjhm](http://bit.ly/stateofjhm)





PHYSICIANS FROM ACROSS THE HEALTH SYSTEM ARE ALREADY COLLABORATING TO DETERMINE THE BEST PRODUCTS FOR JOHNS HOPKINS PATIENTS.

## Transforming Supply Chain Management for Health Care Providers

In a new company co-founded by the Johns Hopkins Health System, clinicians help determine best products and services.

**A** SUPPLY CHAIN MANAGEMENT ORGANIZATION founded last year by the Johns Hopkins Health System and Allegheny Health Network in Pennsylvania has already saved its members more than \$11 million, according to its executive director, Jeffrey Martin.

In October, the new company introduced its name, Nobilant, and a website that targets national and regional audiences. Nobilant's goal is to help Johns Hopkins and other hospitals and health systems save money on supplies, capital items and services that will ensure the best possible outcomes for their patients. So far, some of its contracts that contribute to member savings include those for hospital beds, elevator maintenance and home medical equipment.

The company operates by leveraging the collective purchasing volume of its member hospitals and health systems, as well as the expertise of its members' clinicians, to get the best possible price for top-quality supplies.

Perhaps its most distinctive characteristic is that it gives clinicians a key voice in the sourcing process. "Clinicians increasingly care more and more about the decisions being made regarding what supplies they can have. They want to be part of picking out the right product that has the best patient and financial outcomes," says Kurt Heyssel, the health system's senior director of supply chain management. "Nobilant will consult with physicians and clinicians first, and then find savings on what they say is best for their patients."

Physicians from across the health system are already collaborating to determine the best products for Johns Hopkins patients. Their commitment to use certain products gives purchasing department staff members an advantage in negotiating contracts with suppliers.

Nobilant has formed two hubs: the Mid-Atlantic Hub—with Anne Arundel Medical Center, Greater Baltimore Medical Center, Trivergent Health Alliance in western Maryland and the Johns Hopkins Health System as members—and the Pittsburgh Hub, with Allegheny Health Network and Highmark Health as members.

Each hub has several committees—including laboratory, pharmacy, value analysis, facilities and supply chain—made up of clinicians and key stakeholders from each of its member hospitals and health care systems. Committees meet on a regular basis to analyze new products on the market and to discuss contracts, best practices and how to use products most effectively.

Member hospitals and health systems agree to purchase 85 percent of supplies through Nobilant contracts. They also pre-commit purchasing volume to new sourcing initiatives for products and services. Such guarantees allow the company's purchasing staff to negotiate with suppliers for lower pricing on quality supplies, says Martin.



To learn more, visit [nobilant.com](http://nobilant.com).



Nobilant

### Creating a Brand

Nobilant's logo is a teal twist on the infinity symbol, meant to represent the endless possibilities and tailored contracting solutions it can provide to its members. The overall brand identity emphasizes the collaboration of its members' clinicians and staff members to secure the lowest prices for the products that ensure the best possible outcomes for patients.

The name Nobilant was inspired by a Baltimore newspaper article published when The Johns Hopkins Hospital opened in 1889. In describing the hospital's mission to treat any patient, regardless of his or her ability to pay, the article stated: "Its aim is noble."

## BIOMEDICAL DISCOVERY

### What Mosquito Brains Can Tell Us

**A** NEW STUDY BY JOHNS HOPKINS RESEARCHERS suggests that a specialized area of the mosquito brain mixes tastes with smells to create unique and preferred flavors. The findings advance the possibility, they say, of identifying a substance that makes "human flavor" repulsive to the malaria-bearing species of mosquitoes, so instead of feasting on us, they keep the disease to themselves, potentially saving an estimated 450,000 lives a year worldwide.

"All mosquitoes, including the one that transmits malaria, use their sense of smell to find a host for a

blood meal. Our goal is to let the mosquitoes tell us what smells they find repulsive and use those to keep them from biting us," says neuroscientist Christopher Potter.

He adds that it is likely that insect repellents identified using malaria-bearing mosquitoes as a guide might also work against mosquitoes carrying Zika virus.

This work was supported by grants from the Johns Hopkins Medicine Discovery Fund, the Johns Hopkins Malaria Research Institute, and the National Institute of Allergy and Infectious Diseases.





# Supply Chain Institute Provides Career Hope for Its Grads

Johns Hopkins, Baltimore City Community College partnership is inspiring students.

**S**HAUNTIL JOHNSON ASKED IF SHE could deliver a few brief remarks before the end of her graduation ceremony recently. Stylishly dressed in skinny black pants, purple knee-high boots and a sleeveless top—a departure from her attire as a student forklift driver—she leaned into the microphone and spoke confidently to the 50 or so people gathered in the small auditorium.

“I just wanted to say that the people in this program have become very special to me, and I appreciate every one of them.”

Johnson, 23, and eight of her classmates from the Supply Chain Institute’s eight-week training course stood on The Johns Hopkins Hospital’s Chevy Chase Bank Auditorium stage, posing for photos and clutching their completion certificates. The group had successfully completed the course dedicated to the ins and outs of warehouse supply chain. They were now certified in occupational health and safety, forklift driving, and warehouse logistics.

The course is a job training partnership between Baltimore City Community College and The Johns Hopkins Hospital. Students 18 to 25 spend two months learning the complexities of the different disciplines of the hospital supply chain. The program was established for Baltimore high school graduates interested in the field of large-scale shipping, receiving and distribution operations. Graduation from the institute is intended to serve as the first step on a career path, rather than mere training for an entry-level job.

Everything The Johns Hopkins Hospital uses—supplies, equipment, food—comes to a 22-bay loading dock on trucks from vendors and distributors around the country. Each step of the complicated process, from warehouse inventory management to ordering the sup-



The third class of the Supply Chain Institute had its graduation ceremony recently. Left to right, instructor Prince Frimpong, instructor Bert Bolar, Raquel Burke, Omar Smith, Kelis Hamilton, D’Angelo Johnson, Ieshia Hogan (and, at bottom, her son), administrator Todd Sabin, Katria Mooring, Shauntil Johnson, Rob King and Jerard Willis.

**“THANK YOU FOR SEEING SOMETHING IN OUR CITY’S YOUNG PEOPLE.”**

—SHAUNTIL JOHNSON, 2016 SUPPLY CHAIN INSTITUTE GRADUATE

plies to quality assurance to distribution, falls to the supply chain team.

The ceremony included graduates from the two previous classes as well as students in the current Supply Chain Institute class. So far, 28 students have graduated.

Desmond Jackson, director of patient accounts for the Johns Hopkins Health System, one of the architects of the course, says that the classes continue to draw students and, with each cohort, the course runs smoother. “It’s great that we’ve been able to get behind

this project and that it’s up and running,” he says. Thus far, Johns Hopkins has hired two of the graduates but is interviewing more in the coming weeks.

Johnson, who lives in the Curtis Bay section of Baltimore, expressed gratitude to the program’s instructors and administrators. “Thank you for seeing something in our city’s young people,” she said. “We’re not bad. So many of us are just looking for a chance, something to grab onto. This class has been that for me.”

She said she’s putting her supply chain experience to work right away as a temporary employee in Sephora’s cosmetics warehouse. Five days a week, she rides a company shuttle from Curtis Bay to Aberdeen. But she has her sights set firmly on Johns Hopkins for full-time employment.

“That’s what I really want,” she says.

—Patrick Smith

## PATIENT- AND FAMILY-CENTERED CARE



# On the Road to Serve the Community

New mobile clinic provides consistent health care to underserved patients in East Baltimore.

**I**T’S BAAAAACK! JOHNS HOPKINS BAYVIEW MEDICAL Center’s Care-A-Van, the 40-foot mobile clinic that delivers quality medical care to a diverse population, returned last month to the streets of Baltimore.

Barriers such as language, lack of transportation and lack of financial resources hinder many Baltimore

residents from receiving proper health care. Since June 2000, the Care-A-Van has been taking care of the health needs of underserved people at no cost to them. Services—including tuberculosis testing, blood pressure checks, pregnancy testing and immunizations—are targeted to uninsured children and families who do not have a regular source of medical care.

After serving the community for many years, the original Care-A-Van needed to be replaced. The new van, made possible by a donation from the France-Merrick Foundation, features two patient exam rooms, an intake area, lab/work area, bathroom and patient waiting area. It allows Johns Hopkins Bayview to expand its reach into local neighborhoods.



**New Johns Hopkins Medicine Senior VP of Human Resources**



**Inez Stewart, M.Ed.**, has been appointed senior vice president of human resources for Johns Hopkins Medicine. Stewart has more than 30 years of experience in human resources management and will help recruit, develop and support Johns Hopkins employees while fostering the highest quality of patient care. Previously, she was vice president and chief human resources officer at Boston Children's Hospital.

**New Division Chief for Cardiac Surgery**



**Jennifer Lawton, M.D.**, has been appointed professor and chief of the Johns Hopkins Division of Cardiac Surgery for Johns Hopkins Medicine. The first woman to serve in this role, she remains director of the Cardiac Surgery Research Laboratory and program director for the cardiothoracic fellowship training program. Lawton has spent much of her career raising awareness of heart disease as the leading cause of death for adult women in the United States. She specializes in a variation of coronary artery bypass graft surgery, which has been shown to have better results for women postoperatively.

**New Executive VP and COO of The Johns Hopkins Hospital**



**Charles Reuland, Sc.D., M.H.S.**, executive vice president and chief operating officer for Johns Hopkins Bayview Medical Center, has been appointed executive vice president and chief operating officer for The Johns Hopkins Hospital. In this new, expanded role, Reuland will provide operational leadership on both campuses and spearhead the integration of activities needed to create a virtual "one hospital, two campus" model wherever appropriate.

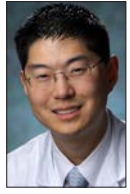
**Research Leadership Appointment**



**Randall Reed, Ph.D.**, professor of molecular biology and genetics, has been appointed assistant dean for research. In his new position, Reed, a member of the Johns Hopkins faculty since 1984 and a Howard Hughes Medical Institute investigator for his first 22 years here, will focus primarily on research integrity, including

new programs to enhance rigor in methodology and reproducibility in results. Reed's own major research focus is on the mechanisms of olfactory signal transduction and neuroregeneration.

**Outstanding Patient Care**



**Michael Lim, M.D.**, director of brain tumor immunotherapy, and **Christopher Wolfgang, M.D., Ph.D.**, director of hepatobiliary and pancreatic surgery, have both received \$10,000 service excellence awards for outstanding patient care from the Healthnetwork



Foundation. The foundation is a nonprofit that connects business leaders with leading hospitals throughout the country. Its awards are presented annually to 10 physicians nationwide who have been nominated by grateful former patients for their high levels of integrity and compassionate care.

**JOHNS HOPKINS HEALTH SYSTEM**

**Alan Cyphers** has been named senior director of compensation. With more than 20 years' experience in managing employee compensation positions, he will continue the development of the strategic direction of the health system compensation programs.

**EAST BALTIMORE**



**Patrick Byrne, M.D.**, professor of otolaryngology—head and neck surgery and director of the Division of Facial Plastic and Reconstructive Surgery, is among the eight inaugural recipients of a RealSelf Fellowship to provide medical care and training in highly underserved communities worldwide. The fellowship will help fund an upcoming trip Byrne has scheduled to Nicaragua to treat children who have suffered disfiguring burns.



**Cynthia Sears, M.D.**, professor of medicine and oncology, and currently vice president of the Infectious Diseases Society of America (IDSA), has been chosen to become its president in 2018. The 9,000-member IDSA, founded in 1963, is considered to be the most prestigious infectious diseases organization in the world. Sears, a 25-year veteran of the Johns Hopkins faculty, is an internationally recognized expert in foodborne and intestinal infections.



**LIGHTING THE WAY:** A dazzling display of more than 100 oversized animated and stationary holiday light creations—made up of some 250,000 LED colorful bulbs—awaits visitors to Howard County General Hospital's Symphony of Lights. Now in its 22nd year, the popular holiday drive-through course in Merriweather Park at Symphony Woods has attracted nearly 2 million people since 1995. Proceeds from the event in Columbia, Maryland, have raised more than \$7.5 million to benefit the hospital. New elements this year include a laser light show, 3-D holiday video (projected 50 feet high at Merriweather Post Pavilion) and an outdoor skating rink. Learn more about the event—and how one Howard County General employee and his wife have found a novel way to build on their family's traditional pilgrimage to the Symphony of Lights—at [hopkinsmedicine.org/dome](http://hopkinsmedicine.org/dome).

**Johns Hopkins Medicine Town Meeting**  
Noon to 1 p.m.  
Hurd Hall

**Johns Hopkins Medicine Town Hall Meeting on Dec. 13**

Plan to view or attend the final Town Hall Meeting of 2016 on **Tuesday, Dec. 13, from noon to 1 p.m.** in The Johns Hopkins Hospital's Hurd Hall. Paul B. Rothman, dean of the medical faculty and chief executive officer of Johns Hopkins Medicine, and Ronald R. Peterson, president of the Johns Hopkins Health System and executive vice president of Johns Hopkins Medicine, will share updates on the Strategic Plan. You will also find out the latest efforts regarding patient- and family-centered care.

Watch the simulcast: [bitly/JHMTownmtg](http://bitly/JHMTownmtg)

**HOWARD COUNTY GENERAL HOSPITAL**



**Elizabeth Edsall Kromm, Ph.D.**, has been appointed the inaugural vice president of population health and advancement. The new position reflects the hospital's evolving focus on keeping the community healthy by building partnerships and developing new initiatives. Previously, Edsall Kromm was senior director of population health and community relations. Prior to joining Howard County General, she was policy director for the Howard County government.

**JOHNS HOPKINS MEDICINE INTERNATIONAL**



**Soraia Angiuoli, M.H.A.**, has been named director of business growth and relationship development for the patient services division. Previously, she was director of the national capital region, where she led efforts to increase the integrated patient programs at Sibley Memorial Hospital and Suburban Hospital.



**Tina Tolson, R.N., M.S.N.**, has been appointed director of operations for the patient services division. A 17-year veteran of Johns Hopkins nursing, Tolson will implement initiatives to engage employees, develop leaders and advance patient care.

**Dome**

Published 10 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  
Neil A. Grauer, Judy F. Minkove,  
Karen Nitkin, Julie Scharper,  
Linell Smith, Patrick Smith*

*Copy Editors  
Abbey Becker  
Judy F. Minkove*

*Designer  
Max Boam*

*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: [lsmit103@jhmi.edu](mailto:lsmit103@jhmi.edu)

Read *Dome* online at [hopkinsmedicine.org/news/publications/dome](http://hopkinsmedicine.org/news/publications/dome)

For *Insight*  
Email letters, news and story ideas to:  
[insighteditor@jhmi.edu](mailto:insighteditor@jhmi.edu)

© 2016 The Johns Hopkins University and The Johns Hopkins Health System Corporation.

**MLK Jr. Commemoration**

Johns Hopkins' 35th Martin Luther King Jr. Commemoration will take place on **Friday, Jan. 13, 2017, from noon to 1:30 p.m.** in Turner Auditorium on the East Baltimore campus. A keynote speaker will address the theme "Moving Forward Together." As always, Unified Voices, a choir of local residents and Johns Hopkins employees, will sing spirituals, and recipients of the 2016 MLK Jr. Community Service Awards will be recognized. Learn more about the event at [insidehopkinsmedicine.org/mlk](http://insidehopkinsmedicine.org/mlk).



**Follow Johns Hopkins Medicine**

**Facebook:** [facebook.com/JohnsHopkinsMedicine](http://facebook.com/JohnsHopkinsMedicine)

**Twitter:** [twitter.com/HopkinsMedicine](http://twitter.com/HopkinsMedicine)

**YouTube:** [youtube.com/user/JohnsHopkinsMedicine](http://youtube.com/user/JohnsHopkinsMedicine)