

# Duke Med

ALUMNI NEWS

Fall 2017



## New Challenges, New Opportunities

Mary Klotman Takes Office  
as the New Dean of the  
School of Medicine

RESEARCHER LAWRENCE DAVID EXPLORES THE WORLD WITHIN US // MED STUDENTS EXPRESS THEMSELVES

## message from the dean

DEAR FRIENDS,

July 1, 2017, marked my official first day as dean. This would be a great honor for anyone, but as a quadruple “Dukie” it is particularly exciting for me. I was an undergraduate student at Duke, attended medical school, then completed my residency and a fellowship in infectious diseases here. Seven years ago, I returned to Duke to serve as chair of the Department of Medicine.

Dean Nancy Andrews led the school with distinction for the past decade, and I am grateful to her for laying a strong foundation for a successful future. Together with outstanding leaders in

the school and across campus, and with a community of exceptionally talented faculty, students, and staff, I have begun to develop road maps that will encourage innovation and partnership. Our mission is clear: deliver excellence in education, research, and patient care.

Biomedical research, like health care delivery, is at a critical tipping point. Rapid advances in technology and data science hold incredible promise for basic discovery and ultimately improvement in health. I am pleased that Duke is positioning itself to lead through this revolution.

One area in which we have actively been building strength across the continuum of basic and clinical research is data science. With the wealth of information now at our fingertips, we will need the right teams of scientists to truly harness this knowledge for the greatest impact. We have successfully recruited Rob Califf, MD, back to Duke from the FDA to lead a new center for health data science where basic and clinical

scientists will come together to find data-driven solutions that improve health and health care.

During my first few months, I will be working with faculty to develop short- and long-term goals that continue to support our bold ambitions as outlined in the school’s strategic plan developed last year: to be a destination of choice for the very best; to have a portfolio of world-class research; to have a campus that inspires and supports our faculty and students’ efforts; and to leverage our unique opportunities for collaboration across the university and health system.

There are abundant opportunities for growth and progress before us, and I am eager to develop the road map to guide us. Your partnership and support have been essential to our school’s success, and will be even more important in years to come. Thank you for your ongoing commitment to Duke’s future. I hope to see many of you at Medical Alumni Weekend this fall.

Sincerely,



**Mary E. Klotman, MD**

Dean, Duke University School of Medicine,  
Vice Chancellor for Health Affairs



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#### Editor

Dave Hart

#### Assistant Editor & Art Director

David Pickel

#### Contributing Writers

Bernadette Gillis, Dave Hart,  
Aliza Inbari, Jim Rogalski,  
Angela Spivey

#### Photography

Chris Hildreth, Ken Huth,  
Jared Lazarus, Les Todd,  
Duke Photography

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Please contact us at:  
*DukeMed Alumni News*  
710 W. Main Street, Suite 200  
Durham, NC 27701-3973  
919-385-3100  
[dukemed@dm.duke.edu](mailto:dukemed@dm.duke.edu)

**Your comments, ideas,  
and letters to the editor  
are welcome.**

**Mary E. Klotman, MD**  
Dean and Vice Chancellor for Health Affairs  
R.J. Reynolds Professor of Medicine  
Professor of Pathology  
Professor in Molecular Genetics and Microbiology  
Member, Duke Human Vaccine Institute

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**Adrian Hernandez, MD**  
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Planning and Chief of Staff

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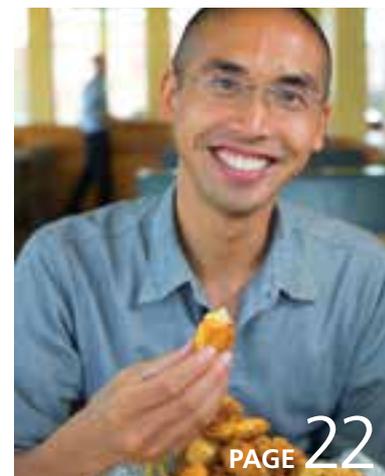
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**Judy Seidenstein**  
Associate Dean and  
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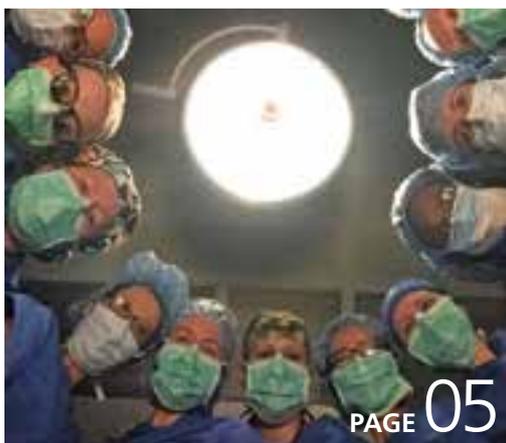
**Jill Boy**  
Associate Dean and  
Chief Communications Officer



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Learn more about  
Health Data Science  
at Duke Health  
[healthdatascience.duke.edu](http://healthdatascience.duke.edu)

LES TODD

Califf is the new vice chancellor for Health Data Science at Duke Health and director of a newly created cross-campus center focused on integrated health data science. He also joined the senior management team for Verily Life Sciences, an Alphabet company. His time will be evenly split between his Duke and Verily responsibilities

“Dr. Califf is one of the most respected figures in academic medicine today and is widely regarded as a preeminent innovator in clinical evidence generation,” said A. Eugene Washington, MD, chancellor for health affairs at Duke University and president and chief executive officer of Duke University Health System. “His lifelong pursuit of effectively applying clinical data to improving health care and population

health uniquely qualifies him to lead these vitally important health data science endeavors at Duke.”

The cross-campus center that Califf leads will seek to advance and create inter-campus collaborations focused on science-driven research and innovation, while also amplifying Duke’s role in building a nationally regarded network for generating evidence to guide clinical treatment. The center will also work to develop a stronger presence and role for Duke in Silicon Valley and other areas known for data science innovation and excellence.

At Verily, Califf will provide guidance for transforming the growth in volume of health-related data into practical applications that will advance health and health care strategies and practice.

Califf has been a pioneer in the growing field of translational research. He received his undergraduate and medical degrees from Duke, joined the faculty in 1982, and served in numerous leadership roles at Duke University School of Medicine and Duke University Health System before joining the FDA in 2015. Califf was also a founding director of the Duke Clinical Research Institute (DCRI), now the largest and one of the most respected academic clinical research organizations in the world. He will maintain an appointment at DCRI.

## CALIFF TO HEAD HEALTH DATA SCIENCE INITIATIVES

**Robert M. Califf, T’73, MD’78, HS’78, ’80-’83**, who last January stepped down as commissioner of the U.S. Food and Drug Administration, has been named to new leadership roles at Duke Health, Duke University, and Verily Life Sciences.

## SOM CREATES DEPARTMENT OF POPULATION HEALTH SCIENCES

The School of Medicine last spring lost a center but gained a department, when the Duke University Board of Trustees approved the elevation of the former Center for Population Health Sciences to departmental status.

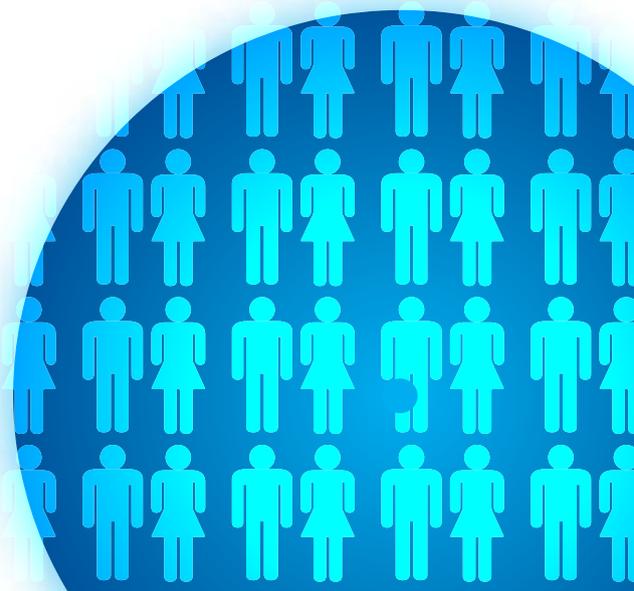
Lesley Curtis, PhD, who directed the center, is serving as interim chair of the new Department of Population Health Sciences until a permanent chair is named.

The Department of Population Health Sciences will be characterized by a multidisciplinary focus on identifying the determinants of health;

## Department of Population Health Sciences Duke University School of Medicine

the use of data regarding environmental, social, physical, and genetic determinants of health to promote better health; and informing policies that shape access to, financing, and delivery of high quality health care.

The department’s strong connection to the Duke University Health System will enable a living laboratory for health services research, epidemiology, implementation science, and policy analysis. A key initiative within the department will be the development of education and training programs, including graduate degree programs in Population Health Sciences.





## DUKE HEALTH LAUNCHES NEW RESEARCH INITIATIVE

Hundreds of faculty, staff, students, and trainees gathered on Sept. 13 to launch Translating Duke Health. The multi-year, multidisciplinary program will focus on areas where Duke Health can make the most significant contributions to health and health care.

“We are here to talk about the power of Duke Health,” A. Eugene Washington, MD, Duke Chancellor for Health Affairs and President and CEO of Duke University Health System (DUHS), told a standing-room-only crowd in the Trent Semans Center Learning Hall. “This endeavor is very much about harnessing our many talents and our resources and seizing the opportunities available to us now to achieve our mission to improve the health of the communities we serve in our region, across the state, and around the world.”

Translating Duke Health is a direct outgrowth of Duke Health’s Advancing Health Together Strategic Planning Framework, launched in January 2016. Translating Duke Health will capitalize on Duke Health’s collective strengths in research, clinical care, and population health to address major health challenges by focusing on areas

where Duke Health can have the greatest impact on transformative treatments and prevention strategies. Translating Duke Health also will accelerate and enhance collaborations across Duke among the scientific, clinical, population health, big data science, and computing communities.

Translating Duke Health initially will focus on five opportunities selected by convening groups, which included representatives from across Duke:

- Preserving and restoring cardiovascular health
- Enhancing brain resilience and repair
- Ending disease where it begins
- Controlling the immune system
- Combating solid tumor brain metastases

 **Learn more about Translating Duke Health**  
[corporate.dukehealth.org/translating-duke-health-0](http://corporate.dukehealth.org/translating-duke-health-0)

## HERNANDEZ, SWAMY NAMED TO CLINICAL RESEARCH LEADERSHIP TEAM

Adrian Hernandez, MD, has been named the new vice dean for clinical research for the Duke University School of Medicine.

As vice dean for clinical research, Hernandez will have direct responsibility for advancing the school’s clinical research mission. Hernandez will work with leaders in human research, patient care delivery, information technology, and health data science within School of Medicine departments, and centers and institutes including the Duke Clinical Research Institute (DCRI), Clinical and Translational Science Institute, and Margolis Center for Health Policy, in order to advance health and execute a coordinated strategy in clinical research to evolve the model of care and improve out-



Adrian Hernandez



Geeta Swamy

comes. Hernandez is a professor of medicine in the Division of Cardiology.

As part of this new clinical research leadership team, Geeta Swamy, MD, associate professor of obstetrics and gynecology, member of the Duke Human Vaccine Institute, and associate dean for Regulatory Oversight & Research Initiatives in Clinical Research, was promoted to senior associate dean.

## DUKE JOINS WITH WAKEMED TO OFFER HEART, CANCER SERVICES

Duke Health and WakeMed Health & Hospitals have joined forces in a pair of innovative programs to deliver advanced heart and cancer care in Wake County, North Carolina.

Duke and WakeMed this year launched Heart Care Plus+ and Cancer Care Plus+. Both

### Heart Care Plus+

collaborations draw on existing programs within each institution to build synergies that will lead to improved care and convenience for patients. While the collaboration is not a merger—both institutions will continue to maintain their own identities and full independence—Duke Health and WakeMed can enhance patient care more effectively by working together than either partner could achieve alone.

Heart Care Plus+ joins Duke’s internationally recognized cardiology, cardiac surgery, and cardiovascular research programs together with the WakeMed Heart Center’s acclaimed clinical heart services.

Cancer Care Plus+ creates a programmatic cancer service throughout the WakeMed system that coordinates with Duke Cancer Institute locations in Wake County, anchored at Duke Raleigh Hospital. When fully deployed, this network of locations will provide a broad array of cancer care services consistent with Duke’s renowned cancer service and WakeMed’s oncology surgical platforms in Raleigh and Cary.

**“We believe this collaboration will result in synergies in treatment, leading to improved care, value, and convenience for heart patients in Wake County.”**

**William J. Fulkerson Jr., MD,**  
 Executive Vice President,  
 Duke University Health System

# A FIRM FOUNDATION



**Peter Kohler, MD'63, HS'64**, president emeritus of Oregon Health and Science University, traces many of the foundations of his life and career back to his time at Duke.

Rounds with Eugene Stead, MD, former chair of medicine, instilled in him curiosity and the need for intellectual rigor. Some of his medical school classmates are still his friends to this day. And a double date with classmates introduced

him to his future wife, a nursing student named Judy Baker.

When Judy was diagnosed with Graves' disease, William Anylan, MD, professor of surgery and later dean of the School of Medicine, removed her thyroid. "I watched the surgery from a viewing area," Kohler says. "Then I said, 'Well I need to learn more about this.' So I took an endocrine fellowship."

Kohler ended up pursuing endocrinolo-

gy, beginning a distinguished career that included service as dean of the University of Texas School of Medicine in San Antonio and vice chancellor of the University of Arkansas for Medical Sciences.

The Kohlers recently made a reunion gift to the Davison Club, becoming a member of the Innovators Society. "I wanted to give back because I really am grateful for the education that I have received at Duke," he says.



Reunion giving is just one way of providing critical support for medical education at Duke. To learn more, please contact Jason Bouck, director of Davison Club and Special Gifts, at **919-385-3162** or [jason.bouck@duke.edu](mailto:jason.bouck@duke.edu). Make your gift online at [gifts.duke.edu/daa](https://gifts.duke.edu/daa).

## MAPPING THE LANDSCAPE OF HUMAN HEALTH

Google has already mapped the earth. Now, with the School of Medicine's help, one of the internet giant's sister companies is planning to map human health.

Verily, a life sciences research and engineering organization formerly known as Google Life Sciences, has joined with the School of Medicine and Stanford Medicine to launch an ambitious research study designed to create a detailed portrait of health over time and across a large population.

The Project Baseline study is intended to collect and track health data from 10,000 volunteer participants and follow them for at least four years. The study is the first initiative of Project Baseline, an effort to develop a well-defined "baseline" of human health and generate a deep, broad repository of data to help researchers better understand health and disease and the transitions between them. That knowledge, project organizers say, will help researchers identify risk factors and develop new tools to better predict, prevent, and

treat disease.

"Through the Project Baseline study, we are aiming to engineer a true twenty-first century approach to health, in a preventive and personalized way," said Adrian F. Hernandez, MD, MHS, vice dean for clinical research and a member of Project Baseline's scientific executive committee. "Instead of having the annual physical exam that has not changed in decades, we're hoping to develop new platforms that will discover changes in health as they happen in meaningful and actionable ways. To do this successfully, we will partner with participants to learn and deliver the best approaches for every aspect of the study."

Duke will enroll approximately 1,000 participants at two loca-



tions in North Carolina. There are currently two additional enrollment sites in California. The Project Baseline study will collect data about each participant's sleep, diet, exercise and physical activity, cardiovascular function, genetic makeup, and other information.



Learn more about  
Project Baseline  
[projectbaseline.com](http://projectbaseline.com)

Members of Duke's Project Baseline team gather health data from participants enrolling in the study.



PHOTO BY AMY ALGER, MD

## SURGEONS RECREATE NEW YORKER COVER TO RAISE AWARENESS

One afternoon last spring, 17 surgeons in scrubs filed into Duke University Hospital's Operating Room 11. They were there to perform a rather unusual operation. They came from widely varied Duke surgical units, but they had one thing in common: they were all women.

The Duke team was part of a grassroots international social media campaign to raise awareness about women in surgery. The project, #NYerORCoverChallenge, launched by endocrine surgeon Susan Pitt at the University of Wisconsin-Madison, invited women surgeons to replicate the cover art, by artist Malike Favre, of *The New Yorker* magazine's annual health issue. Dozens of teams from around the world posted recreations.

**"Here at Duke, women surgeons constitute a large, vocal, and well-regarded part of the department, and I wanted us to be part of the movement."**

Oluwadamilola (Lola) Fayanju, MD

At Duke, Oluwadamilola (Lola) Fayanju, MD, MA, MPH, assistant professor of surgery; Gayle DiLalla, MD, assistant professor of surgery; and Megan Turner, MD, a general surgery resident, organized the effort.

"Here at Duke, women surgeons constitute a large, vocal, and well-regarded part of the department, and I wanted us to be part of the movement," said Fayanju, who did her residency with Pitt at Washington University.

Amy Alger, MD, assistant professor of surgery, volunteered her smartphone, placing it on the floor and setting the camera timer.

According to Pitt, the Women of Duke Surgery photo featured more surgeons than any other image released in response to the hashtag challenge.

"From start to finish, getting this photo taken was a great experience," said Fayanju. "It gave many of us in different divisions and from different hospitals an opportunity to meet for the first time and to take pride in being pioneering women surgeons at Duke."

## FOR SOME, PREVENTIVE MASTECTOMY MAY NOT REDUCE RISK

Mutations in the BRCA gene correspond to a higher lifetime risk of breast and ovarian cancers, and many women who carry these mutations consider undergoing mastectomy as a preventive measure.

But new research from the Duke Cancer Institute finds that for many women with BRCA mutations who have already had ovarian cancer, prophylactic mastectomy does not produce a substantial survival gain. The researchers concluded that the benefit of risk-reducing mastectomy over screening alone largely depended on the patient's age at the time of her ovarian cancer diagnosis and time to mastectomy.

"Within the first five years, nobody benefited from risk-reducing mastectomy and after that threshold, survival gains were seen mostly in the youngest, healthiest ovarian cancer patients," said Charlotte Gamble, MD, the study's lead author and a resident physician at Duke University School of Medicine.

## ANTIBODIES HALT PLACENTAL TRANSMISSION OF CMV-LIKE VIRUS IN MONKEYS

Cytomegalovirus (CMV), one of the few viruses known to be transmitted through the mother's placenta to a fetus, infects nearly 1 million infants a year worldwide and is a leading cause of microcephaly, hearing and/or vision loss, and nervous system damage.

Now researchers from Duke University School of Medicine and Tulane National Primate Research Center have demonstrated a vaccine approach in monkeys that appears to be capable of protecting the animal's fetus from infection. The researchers, including co-senior author Sallie Permar, MD, PhD, professor of pediatrics at Duke and member of the Duke Human Vaccine Institute, found that giving rhesus monkeys antibodies specific to the rhesus form of CMV (RhCMV) before exposing them to RhCMV blocked transmission of the virus to their offspring.



Learn more about Pokémon improving health

[corporate.dukehealth.org/news-listing/pokemon-go-appears-encourage-sedentary-people-get-and-go](https://corporate.dukehealth.org/news-listing/pokemon-go-appears-encourage-sedentary-people-get-and-go)

## BETTER HEALTH THROUGH POKÉMON GO

Remember all those people you saw last year wandering around using their cell phones to hunt for virtual creatures only they could see? According to a Duke study, those folks were improving their health.

Duke researchers found that Pokémon Go, the smartphone game that swept the country and still numbers millions of users, promotes significant increases in physical activity, especially among people who otherwise tend to get little exercise.

The study, published in the *Journal of the American Heart Association*, tracked 167 Pokémon Go players before and after the game was released in July of 2016. Researchers found that participants walked an average of 2,000 more steps per day while playing the game. That's almost half a mile, especially beneficial to high-risk individuals who, with

more exercise, could decrease the risk of heart attack or stroke by an estimated 8 percent. Some players went much further, adding as much as 10,000 steps, or about four miles, to their daily activity.

Strikingly, the biggest increases in physical activity among Pokémon Go users came in those individuals with the most to gain by getting more exercise, such as those who were overweight, older, or most sedentary.

Ying Xian, MD, PhD, assistant professor of neurology and medicine, who wrote the study along with colleagues at the Duke Clinical Research Institute, said. "Even if marathon runners or regular joggers won't benefit much from Pokémon Go, the game provides an alternative way to engage people who live a sedentary lifestyle and otherwise would never participate in any traditional form of exercise."



### Learn more about mastectomy research

[corporate.dukehealth.org/news-listing/risk-reducing-mastectomy-questioned-brca-mutation-carriers-prior-ovarian-cancer](https://corporate.dukehealth.org/news-listing/risk-reducing-mastectomy-questioned-brca-mutation-carriers-prior-ovarian-cancer)



### Learn more about placental transmission

[corporate.dukehealth.org/news-listing/antibodies-halt-placental-transmission-cmv-virus-monkeys](https://corporate.dukehealth.org/news-listing/antibodies-halt-placental-transmission-cmv-virus-monkeys)

## CHILDREN EXPOSED TO LEAD SUFFER EFFECTS DECADES LATER

People exposed to lead as children appear to suffer diminished intelligence and socioeconomic status decades later, according to Duke researchers.

The long-term study followed more than 550 people born in Dunedin, New Zealand, in 1972 and 1973. The subjects were tested for cognitive ability as children, and their blood lead levels were measured at age 11.

When they were again tested for cognitive ability at age 38, those who had higher childhood lead levels scored an average of 4.5 IQ points lower than their peers with lower lead levels. They also scored lower than they had as children. The higher their lead levels in childhood, the greater the loss of intellectual ability in adulthood.

On average, those subjects with higher childhood lead also worked in occupations with slightly lower educational requirements and income levels.

“The downward social mobility we see mirrors the trend in IQ,” said psychology graduate student Aaron Reuben, first author on the study. “The decline in occupational status is partially but significantly explained by the loss of IQ.”

## OUTLOOK BRIGHTENS FOR EXTREME PREEMIES

Babies born at just 22 to 24 weeks of pregnancy continue to have sobering outlooks — only about 1 in 3 survive.

But according to a study led by Duke Health and appearing in the *New England Journal of Medicine*, those rates are showing small but measurable improvement. Compared to extremely preterm babies born a decade earlier, the study found a larger percentage are developing into toddlers without signs of moderate or severe cognitive and motor delay.

Changes to prenatal care, including greater use of steroids in mothers at risk for preterm birth, could have contributed to increased survival and fewer signs of developmental delay in these infants, the authors said.

“The findings are encouraging,” said lead author **Noelle Younge, MD, HS’12-’16**, a neonatologist and assistant professor of pediatrics. “We see evidence of improvement over time. But we do need to keep an eye on the overall numbers, as a large percentage of infants born at this stage still do not survive. Those who survive without significant impairment at about age 2 are still at risk for numerous other challenges to their overall health.”



## CUTTING CALORIES MIGHT SLOW BIOLOGICAL AGING

Humans have always sought ways to forestall the inexorable process of aging. A new analysis by researchers at Duke suggests that one answer might be surprisingly simple: eat less.

Daniel Belsky, PhD, the study’s lead author and assistant professor of medicine at Duke University School of Medicine, and co-researchers analyzed data from a study conducted by the National Institute on Aging to explore the effects of calorie restriction.

The Duke researchers’ analysis indicated that caloric restriction did indeed slow the process of biological aging, the gradual deterioration of function over time. By one measure, participants in a normal-diet group saw their biological age increase an average of 0.71 years per 12-month follow-up. A calorie-restricted group, on the other hand, aged much more slowly, seeing their biological age increase only an average of 0.11 years in the same span.

“If we can intervene to slow the rate of biological aging, it may be possible to prevent or at least delay onset for many age-related diseases and disabilities,” said Belsky.



### Learn more about lead exposure

[today.duke.edu/2017/03/lead-exposure-childhood-linked-lower-iq-lower-status](http://today.duke.edu/2017/03/lead-exposure-childhood-linked-lower-iq-lower-status)



### Learn more about slowing biological aging

[corporate.dukehealth.org/news-listing/study-analysis-shows-cutting-calories-might-slow-biological-aging](http://corporate.dukehealth.org/news-listing/study-analysis-shows-cutting-calories-might-slow-biological-aging)

**Don't Miss Your Reunion!  
November 9-12**

# Medical Alumni Weekend 2017

# Duke

University School of Medicine

## *Weekend highlights include*

### **Thursday, Nov. 9**

Medical Alumni  
Association  
Awards Dinner

### **Friday, Nov. 10**

Half Century  
Society and Class of  
1967 Luncheon

4th Annual Women  
in Medicine Luncheon

CME Sessions

Welcome Reception

### **Saturday, Nov. 11**

Breakfast with  
Dean Klotman  
and President Price

Afternoon tours

Class of 1967  
Medallion Ceremony

Class Reunion Dinners,  
followed by dessert,  
drinks, and dancing



## **Make your plans now**

to return to campus, share  
medical school memories, and reconnect  
with classmates and friends.

To register, go to [medalumni.duke.edu](http://medalumni.duke.edu)

Hotel rooms are available at our host  
hotel, the Washington Duke Inn, for a  
discounted rate. These rooms are available  
on a first-come, first-served basis.

**Washington Duke Inn**  
**(919) 490-0999**

**Group code 430489**

**Questions?**

**Brenda Rimmer 919-385-3177**

# CAMPAIGN RAISES \$1.4 BILLION FOR DUKE HEALTH

Duke Forward, the largest fundraising campaign in Duke University history, concluded in June with \$3.85 billion raised, including \$1.4 billion raised by Duke Health for health care, research, and education.

The comprehensive seven-year campaign touched virtually every corner of the university and health system, including all 10 graduate and undergraduate schools, along with athletics, libraries, and a vast range of programs and initiatives.

Duke Health was the single largest fundraising area within the Duke Forward campaign. Record

improve lives across the world.”

Highlights of the campaign’s impacts in health care include:

- **Adding more than 1 million square feet** for clinical care, research, and education, including the Duke Cancer Center, Duke Medicine Pavilion, Hudson Building at Duke Eye Center, Mary Duke Biddle Trent Semans Center for Health Education, and the School of Nursing’s Christine Siegler Pearson Building.

“We are deeply grateful for the alumni, patients, friends, faculty, staff and others who showed their extraordinary support for Duke during this campaign.”

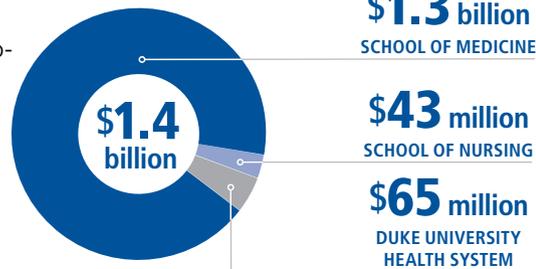
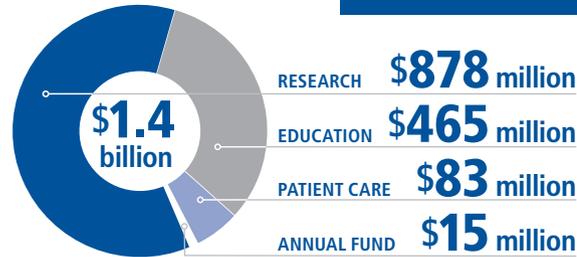
A. Eugene Washington

giving propelled the Duke Health campaign past its \$1.2 billion goal.

Of the \$1.4 billion raised, \$1.3 billion supports the School of Medicine, funding financial aid, faculty positions, and a range of expansions and enhancements in research, education, and patient care.

“We are deeply grateful for the alumni, patients, friends, faculty, staff, and others who showed their extraordinary support for Duke during this campaign,” said A. Eugene Washington, MD, chancellor for health affairs at Duke University and president and CEO of Duke University Health System. “These resources will empower our people to seize this golden moment in the world of health to advance knowledge and

- **Increasing faculty and student support** to enhance educational and research opportunities.
- **Making significant investments in basic and clinical research**, notably in the areas of cancer, cardiology, neurobiology and neurodegenerative diseases, ophthalmology, and cellular therapies to develop new treatments for a number of conditions, including autism.
- **Creating the new Urbaniak Sports Sciences Institute and the new Duke-Margolis Center for Health Policy.**



TOTAL RAISED DURING THE CAMPAIGN FOR DUKE UNIVERSITY  
**\$3.85 billion**

**\$1.4 BILLION**  
 TOTAL RAISED DURING THE CAMPAIGN FOR DUKE HEALTH

**\$1.2 billion**  
 GOAL FOR DUKE HEALTH



**162,000**  
 donors to the campaign



**4,953**  
 School of Medicine alumni donors



**1 million**  
 square feet of new space for clinical care and education

**370**  
 new planned gifts totaling  
**\$106 million**

# the ART of medicine



*Lauren Sweet*

IN ONE CORNER OF THE SIXTH FLOOR of the Trent Semans Center stands a small structure, like a voting booth, entirely draped in blue fabric. Open the flap and step inside, and you find yourself—a real-time video of your own face plays on a screen in front of you. Upon that is superimposed an interactive image of a brain scan that journeys through the various layers of the brain as you move your head forward and back.

It's when you put on the headphones that the experience becomes truly unnerving. Voices — guttural, derisive, mocking, — whisper insistently. Some are too vague to make out. Others are clearer, thick with contempt. "You're stupid, so stupid...pointless...disgusting," one murmurs. "She knows," warns another.

"They all know. They see you..."

Most people flee after a minute or two. People

New program offers  
medical students  
a way to bridge  
health care  
and the  
humanities

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*By Dave Hart*



*Sruti Pisharody*



*Charis Spears*



*Safa Kaleem*



*Shan McBurney-Lin*



Alex Hish, right, and his community partner, Ned Arnett, each wrote original poetry for the Scopes Exhibition.



Sarah Alkilyany created a screen print art installation evoking various stages of her community partner's life.

with the auditory hallucinations that sometimes accompany schizophrenia don't have that option, says Lauren Sweet, the second-year medical student who conceived and constructed the interactive art installation.

"I tried to make a construct of auditory hallucinations," says Sweet. "Here, you experience it only as long as you choose to. For people who have these hallucinations as a result of mental illness, there is no escape. I hope it will help people think about how disabling mental illness can be."

Sweet created the piece as part of the first annual Scopes Medicine and Art Exhibition, a new initiative that invites first-year medical students to use artistic media to reflect on their experience working with a community partner who has a chronic health condition.

All first-year students participate in the community partner program, an adjunct to the clinical skills curriculum. Each student meets several times over the course of the year with their community partner, and, traditionally, then writes an essay reflecting on the experience. The Scopes exhibition, which opened with a reception at the Trent Semans Center in August, offers an alternative to the essay requirement and, more importantly, represents an effort to integrate the arts and humanities into medical education.

"There's a desire among a lot of people to do more to bridge the health care side at Duke with the humanities and arts," says Maya Tal-

bott, who conceived and organized the Scopes program along with fellow third-year medical students Leonid Aksenov and Ashley Adams.

"The goal of the community partner program is to foster the patient-practitioner relationship and help students understand the experience of living with chronic disease. After doing that and writing the traditional essay, we thought it would be an interesting idea to offer the option of another approach."

#### SEEING PATIENTS AS PEOPLE

Sweet, whose community partner had schizophrenia, was one of seven students who embraced the new opportunity.

"Initially I thought, 'Well, that should be easier than writing an essay,'" Sweet says. "Wrong."

Alex Hish had no such illusions. He wrote and presented three poems based on his meetings with his community partner, a man named Ned Arnett, who, it turned out, also writes poetry. Arnett even had several poems included in the exhibition.

"It is more work," says Hish.

"But I learned so much. It forced me to think harder about

my community partner and to observe more deeply. It gets at the parts of the experience that you don't necessarily get in the day-to-day workings of medicine. It's about what's going on in his mind more than what's going on in his body."

Shan McBurney-Lin also worked with Arnett and wrote poetry for the exhibition. Art re-

quires close observation and empathy, she says, and developing those skills is essential in the practice of medicine.

"At the end of the day, what people want is to feel respected, listened to, and cared for," says McBurney-Lin. "They want to feel like they matter as individuals. I think programs like this can encourage that."

Charis Spears wrote and performed an original song, *Invisible Injury*, based on her community partner's experience with brain trauma. She tried to express her partner's determination to be seen not as someone who was ill, but as someone in the process of healing.

"I went into medicine because I love people," says Spears. "It was so meaningful for me to try to understand her experience through her eyes. I hope that as I go forward, I will always think about patients as deeply as I thought about her and her story. I hope I always think of them as whole people, with their own backgrounds, families, and life experiences."

Safa Kaleem's acrylic landscape, *Path to the Sea*, serves as a metaphorical exploration of her community partner's experience living with Crohn's disease. Every element in the painting reflects an aspect of that experience: the cobblestone path resembles the cobbled look the disease produces on the lining of the intestine; trees in both spring and fall foliage symbolize the omnipresence of the disease over many years; and the ocean in the distance echoes her community partner's love of the sea.

"Her life is not an easy path—it has ups and downs and obstructions—but it's still a beautiful path," Kaleem says. "I loved getting to know her. She's a profound inspiration, and this entire experience is going to help me keep in mind that every patient we see isn't just a set of data





LESTODD  
Charis Spears performs her original composition, *Invisible Injury*, before a full house at the Scopes Exhibition's opening reception at the Trent Semans Center.

or symptoms, but an individual human being. Every single person has a story worth telling, and worth hearing."

#### ANOTHER FORM OF HEALING

That awareness is one of the important benefits of incorporating artistic and humanistic elements into health care, says John Moses, MD, an associate professor of pediatrics and one of several faculty mentors who advised the students. Moses is a documentary photographer who teaches photography at the Duke Center for Documentary Studies and founded Documenting Medicine at Duke University, a multimedia program that encourages the use of documentary to explore medical issues.

"Using art, photography, and other media helps the practitioner develop the skills and understand the importance of listening, observing, and being with patients," says Moses. "It's not a trivial thing, but a fundamental part of good medicine. Patients' stories often communicate important information that you can't get otherwise. We have ever-more elaborate tests, but even the best tests can only tell you so much. Even when we can look at a patient's whole genome, we'll still need to talk to them about their lives and experiences."

Sarah Alkilany, who created a screen print installation piece called *Stages* for the Scopes exhibition, says that connection can lead to more trust and openness between patient and practitioner. She incorporated her community partner's Hindu faith into *Stages* in various ways, from its circular path—reflecting the

Hindu belief in the cyclical nature of life—to the Om spiritual symbol that recurs throughout the piece.

"If you resonate with someone on a level beyond the data and studies, they tend to listen more closely and be more open to your ideas," Alkilany says. "I've had doctors who took labs but didn't make any effort to listen to me. I've had others who took the time to consider what was going on within the larger scope of my life. They might even suggest the same course of action, but I'm probably going to be more receptive to the second one."

The humanities and artistic expression can also help health care practitioners deal with the stresses of the field, says Sruti Pisharody, whose series of photographs offer poignant glimpses of her community partner's life dealing with various infirmities of aging.

“Using art, photography, and other media helps the practitioner develop the skills and understand the importance of listening, observing, and being with patients.”

John Moses



"As we learn to be doctors, it's wonderful to learn to deal with patients through a different lens," says Pisharody. "This may be a less scientific form of healing, but it's still healing. And it's also therapeutic for the practitioner. Although medical schools, including Duke, have started to talk more about issues like physician burnout, there aren't generally many solutions offered to help us build resilience. The humanities aren't built into the medical curriculum, but a lot of us have our own artistic outlets that help us deal with those issues. The Scopes project is a way for a number of us to begin to address that as a community."

A sizable and enthusiastic crowd attended the reception and exhibition, which were made possible by generous support from the Trent Center for Bioethics, Humanities & History of Medicine and in partnership with the Center for Documentary Studies and the Franklin Humanities Institute.

The turnout, and the creativity shown by the participants, heartened the Scopes exhibition's organizers and offered a bright way forward as the program moves into its second year.

"We've gotten great feedback," says co-organizer Leonid Aksenov. "We want to build on this and expand it in the future. The students told us this experience opened up new avenues of understanding, which is exactly what we were hoping. And in terms of what they've produced, wow. They have exceeded my wildest dreams." ■

# CLASS OF 2017



## Supporting Future Students... the results are in!

Congratulations, **Class of 2017** — **87 percent of the graduating class participated** in the Graduating Class Gift Campaign and raised \$2,135 for the Medical Scholarship Fund. The Class of 2017 now holds the record for the highest dollar amount raised and the second-highest participation rate of any class (just behind the Class of 2013, which had an 88 percent participation rate!)

Committee Chair **Kelly Murphy** led the campaign along with committee members **Alissa Stavig, Mimi Xu, Abby Fulp, Andrew Atia, Kal Gunasingha, Monte Simms, and Hans Zhang**. They encouraged classmates to contribute **\$20.17** or more in honor of their graduation year. Those who gave at that level received a one-year membership in the Davison Club, a prominent giving society that provides support for the School of Medicine Annual Fund.

The Graduating Class Gift Campaign allows graduating students to show appreciation for the top-tier medical education they received, to experience the satisfaction of giving, and to honor the new crop of medical students by raising funds to support scholarship. Giving back is part of the Duke experience: Duke truly would not be the same place without it.

**THANK YOU**  
to those students  
who participated!

Please visit the Graduating Class Gift Campaign website to find additional information, including the Class of 2017 Gift Honor Roll:

[medschool.duke.edu/about-us/giving/graduating-class-gift](http://medschool.duke.edu/about-us/giving/graduating-class-gift)

### *Medical Alumni Council*

The Medical Alumni Council members consist of: School of Medicine graduates, current and former house staff members, faculty, and current students. Members serve as advisors to the Medical Alumni Association, and help implement the Association's goals.

Medical Alumni Association Goals:

- Continually enhance the relationship between the Duke University School of Medicine and medical alumni
- Increase the number of medical alumni involved with the Duke University School of Medicine
- Lay the foundation for lifelong relationships with future medical alumni
- Develop an effective volunteer organization that supports and implements the mission of the Medical Alumni Association
- Continually assess and address the needs of medical alumni through communication and programming
- Increase the impact of alumni on the Duke University School of Medicine's future through increased volunteer leadership and increased number and level of alumni contributors

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# Meeting *in the* Middle

*“We’re forever grateful for our experiences at Duke. We’re very happy to be able to give back.”*

For **Jane Trinh, MD’02, HS’02-’06**, and her husband, **Peter Grossi, MD’02, HS’02-’08**, Duke University School of Medicine was the place where they met in the middle. She came north from her native Louisiana, and he came south from the Washington, D.C., area. Their paths crossed as first-year medical students. They got married just after graduation, and after a short honeymoon they both returned to Duke for their residencies and then faculty positions.

“We always say Duke is our happy medium,” says Trinh. “We met that first year and

have tracked side by side ever since. We chose Duke for medical school, we chose Duke for residency, and we chose Duke for our careers.”

Trinh is now an associate professor of internal medicine and pediatrics and serves as associate program director of Duke’s Med-Peds Residency Program. Grossi is an assistant professor of neurosurgery and practices at Duke Health Raleigh.

**Trinh and Grossi are generous supporters of the Davison Club.**

Gifts to the Davison Club provide critical unrestricted support for medical education at Duke through scholarships, curriculum enhancements, new technologies, and innovative research. Make your gifts online at [gifts.duke.edu/daa](https://gifts.duke.edu/daa).

To learn more about supporting the Davison Club, please contact Jason Bouck, director of Davison Club and Special Gifts, at 919-385-3162 or [jason.bouck@duke.edu](mailto:jason.bouck@duke.edu).







# NEW Challenges,

# NEW Opportunities

BY ONE MEASURE, MARY KLOTMAN, T'76, MD'80, HS'80-'85, hasn't gone very far: from the window of her new office in Duke North she can almost see the dorm room where she lived as a Duke undergraduate. But that proximity is deceptive. Since she arrived on campus as a freshman, Klotman has charted a trajectory that has risen through Duke medical school, residency and a fellowship, into leading labs where she conducted life-changing research, to prominent capacities at major national research institutions, through a glass ceiling or two, and now up to the top leadership position at one of the nation's great medical schools.

Klotman, the R.J. Reynolds Professor of Medicine, professor of pathology, and professor in molecular genetics and microbiology, last summer added another pair of titles when she was named the new dean of Duke University School of Medicine and vice chancellor for health affairs at Duke

CHRIS HILDRETH

*Mary Klotman Takes Office  
as the New Dean of the  
School of Medicine*

by Dave Hart

“Without question, our biggest strength is our very deep base of talented faculty, across the board.”

University. She succeeds Nancy Andrews, MD, PhD, who stepped down after a decade as the nation's first female dean of a top 10-ranked medical school.

Born and raised along with five siblings in Long Island, New York, Klotman graduated magna cum laude with a degree in zoology and then stayed at Duke to complete her medical degree and fellowship training in infectious diseases.

She has devoted her scientific life to conducting HIV research, especially as it affects the kidneys. She cared for HIV patients as a resident at Duke and then moved on to study the disease at the National Institutes of Health before spending 13 years as chief of the Division of Infectious Diseases at Mount Sinai in New York, where she also co-directed the Global Health and Emerging Pathogens Institute.

Klotman returned to Duke in 2010 to chair the Department of Medicine, the first woman to hold that position. Among other honors, she is a member of the National Academy of Medicine and president of the Association of Professors in Medicine.

With her recent appointment, Klotman and her husband and longtime research collaborator, Paul Klotman, MD, became the only husband-and-wife pair of deans in the history of the Association of American Medical Colleges; he is the executive dean, president, and CEO of the Baylor College of Medicine in Texas. Despite working half a continent apart, they haven't missed a weekend together in more than seven years. They have two sons, Alex and Sam.

When *DukeMed Alumni News* sat down with Klotman in early July, she had barely begun moving into her new office. The bookshelves were bare and the room empty except for a modest desk and computer and a conference table with a few chairs. The only other object in sight: her white coat, hanging on a hook on the door.

### What does your long history at Duke bring to your new role as dean?

It's always an interesting question: is it better to go with somebody inside or somebody outside? That's always part of the discussion during a search like this. But I saw myself as a blended candidate. I started at Duke, but I spent almost 20 years at other institutions, having very different experiences, and then I came back to Duke. I try to take the best ideas from wherever I go.

### How did you come to Duke in the first place?

My dad was in textiles, and he knew Duke very well from his travels. He brought me on a trip here, and like everybody else I fell in love with the campus. I think that's how a lot of Northeasterners fall in love with Duke. They come down on a spring day and they say, "Oh, wow, I never want to leave."

## PATH TO THE DEANSHIP

1976 – BS, Duke University, major zoology

1980 – MD, Duke University School of Medicine

1980-1983 – Resident, Duke University

1983-1985 – Fellow In Infectious Diseases, Duke University

1986-1991 – Assistant Professor of Medicine and Infectious Disease, Duke University School of Medicine

1991-1994 – National Institutes of Health, Public Health Service

1994-2010 – Professor of Medicine and Microbiology, Mt. Sinai School of Medicine

2010 – Return to Duke as chair of the Department of Medicine

2017 – Named dean of Duke University School of Medicine

### When did you decide medicine was your path?

If you go to Duke and you're interested in science, it's easy to get swept up in premed. That was my initial experience, and as I had to seriously consider options, it became *the* option. My uncle and my grandfather were physicians, so we had some of that in the family.

At that time, every Duke undergrad who applied to medical school automatically got an interview. Mine was with a six-person committee. They fired great questions at me, and it was fun and engaging, and it all just clicked. I walked out of that interview and went back to my room, and I said to my roommate, "I just got into Duke Medical School." She said, "How do you know?" and I said, "I just do. It just worked." It was like magic.

### Did you know at that time what you wanted to focus on?

No idea. That's why Duke is so influential. It's very different than most. You're exposed to a physician-scientist career as a beginning student. The third-year research curriculum, which was considered novel at the time, put me on the academic medicine path. That, and one influential role model after another. It was just the culture of science in medicine on the wards. At the time, the idea that you would talk about evidence as you're talking about a patient was unique. That was when I started to understand what academic medicine was. I loved it.

### Then you decided to go into infectious diseases.

I started out thinking I would go into cardiology, until I realized that I really didn't like reading EKGs. But I loved reading about infectious diseases. Every new outbreak, every new entity, I thought, "Wow, that's really exciting." And then HIV hit the wards, and I said, "I want to be a physician-scientist studying a very challenging disease," and that was HIV.

### Can you talk about your research?

When I was a resident, I cared for some of the first HIV patients at Duke. It was an epidemic that just hit and exploded. So I went up to NIH and worked in Bob Gallo's lab, which was one of the labs that first isolated the virus. Once I learned molecular virology, I wanted to use that basic science to answer some key questions. I studied HIV nephropathy, which was a devastating complication in which patients



Dean Mary Klotman discusses the changing world of academic medicine with medical students Michelle Tang, Jake Dockterman, Hassan Alkazemi, and Shay Behrens.

would get end-stage kidney disease and usually die very rapidly. I worked with my husband, who was a nephrologist. Our team worked out most of the molecular biology of that epidemic. We figured out how the virus was doing damage to the kidney.

**What lessons did you draw from that experience?**

HIV research moved at a record pace. From the discovery of the virus to the first drugs was no more than 10 or 15 years. That example is the best argument for the value of academic institutions and the partnership between academic institutions and the NIH. That relationship supported the labs, the scientists, the funding, and the training programs. And then you bring in the third partner, which was industry. It really worked. That paradigm can be brought to bear on a lot of challenges, and in fact that's happening today, as we deal, for example, with Zika.

**The funding climate is very different now. How do we make sure the science that needs to get done continues to get done?**

Stories like HIV need to be told over and over again to make the case for the value of research and how it translates into public health. We need to articulate that to our politicians and to the public, to convey the real value of discovery science. I'm not sure we're always as articulate as we should be.

**How does Duke stay on top of the rapid changes in science and medicine?**

Quantitative science is the power right now. You can generate massive amounts of data, but if you don't have the quantitative skills to analyze it, that data is just data. To stay in front of that curve, we need to partner with the university and all of its strengths in quantitative science. We just created a center focusing on data science, which is being led by Rob Califf, MD, a Duke faculty member and former FDA

commissioner, for example. We'll use this center to engage Duke's quantitative computational scientists in teams with our biomedical scientists to solve big problems.

**You mentioned the importance of cross-disciplinary collaboration. How do we encourage that?**

The success of an institution like Duke is in partnerships. As chair, I built partnerships with anybody I thought could help facilitate the success of my faculty. I take the same approach as dean. I'm fortunate that we have great partners on campus. You develop personal relationships. Then we start sharing visions, and ideas come from that, and then we develop programs to realize those ideas. I consider the whole campus to be potential partners for the School of Medicine.

“We have a really dedicated group of medical alums. I’ve stayed close to many of them, and I will definitely continue to be engaged.”

### **What do you see as the school’s main strength?**

Without question, our biggest strength is our very deep base of talented faculty, across the board. And we have an extraordinary group of chairs. Dean Andrews spent 10 years appointing twenty-some chairs, so I won’t have to spend all my time doing searches. That allows me to focus on thinking about how to apply all that great talent to new programs.

### **What are the biggest challenges in doing that?**

Of course, we’re all a little bit worried about what happens with funding. We might think we’re offering great stuff, but if the faculty doesn’t know about it, or how to access it, it doesn’t matter. So one challenge is communi-

cating information and access about resources.

And, of course, staying competitive. We have to continually ask ourselves, how do we remain the institution of choice for talented faculty? How do we attract the top minds coming out of the best programs?

### **What are your first priorities?**

One is to focus on the operational parts of the strategic plan that Dean Andrews started two years ago, and another is assessing and investing in our core resources to keep them on the front edge of technology. A third priority is organizing genome science in a way that makes the most sense. The old model is to have an institute in genome science. Now genome science is in every part of medicine.

I’ll be taking some time to determine how we can best capitalize on that.

### **How do you balance the School of Medicine’s three main missions of research, education, and clinical care?**

In an ideal world, they’re all seamlessly integrated. But in the real world, there are a lot of stresses that pull those missions apart. Our faculty are here because they believe in the three missions: they want to be in a place that does incredible research, that is one of the best schools in the country, and that delivers outstanding clinical care. If we separate those parts from each other, we lose that pull. So we have to put a lot of effort into keeping them integrated. We have an incredible health system that generates data every day. That data helps advance our research mission. And then you add trainees on top of that. If you get it right, all the areas support the others. That’s the magic sauce. It’s challenging, but that is clearly an area where Duke can excel.

### **Are there ways to take some of the burden off the faculty’s clinical mission so they have more time to give to research and education?**

Certainly facilitating the success of our faculty to gain research funding is critical. We also need to make it easier for them to succeed in the clinic, so that they have time to breathe. For example, we’ve been doing a lot of work to make the Epic electronic medical record system a tool and an opportunity, as opposed to a burden.

### **You were the first woman to chair the Department of Medicine, and now you’re the second woman to serve as dean. Is that meaningful to you?**

On a personal level, yes. Even before I became chair, I’ve had women, especially young women, tell me they were inspired by what I was doing. I never thought of myself as particularly inspiring, but hearing them say that means a lot. It’s not about me. It’s about demonstrating that women can assume major leadership roles. I’m still surprised at how few there are. We have a lot of extraordinary women coming up, and if my being here can inspire some of them that they can do the same thing, then I’m all for that.



JARRED LAZARIUS

Members of the faculty congratulate Mary Klotman, formerly the chair of medicine, on her new appointment.



Dean Mary Klotman draws a crowd at a meet-and-greet event in August.

## SCHOOL OF MEDICINE DEANS

1927 – Wilburt Davison, MD  
 1960 - Barnes Woodhall, MD  
 1964 – William G. Anlyan, MD  
 1989 – Ralph Snyderman, MD  
 1999 – Edward W. Holmes, MD  
 2001 – R. Sanders Williams, MD  
 2007 – Nancy Andrews, MD  
 2017 – Mary C. Klotman, MD

### Do you have much contact with other alumni?

My engagement in the Duke medical alumni organization is why I'm now a dean. For about 10 years there, I wasn't connected. I was at NIH, and then I was in New York, working hard and raising my family. Then a couple of people said, "Why don't you join the Medical Alumni Council?" and I thought, "OK, I could probably work out two visits a year." So I became active in the council. It was great, and before long I became Medical Alumni Council president, and that's how I met Nancy Andrews. We hit it off, and the next thing I knew, I was chair of medicine at Duke, and now I'm dean. All because I re-engaged with the alumni association.

We have a really dedicated group of medical alums. I've stayed close to many of them, and I will definitely continue to be engaged.

### What role does philanthropy play in the school's success?

It makes a huge difference. Endowed professorships help us stay competitive. Research support

helps us do important research that traditional sources don't cover, and philanthropic resources support scholarships and financial aid and help us build great facilities. It's critical to the success of the school. Our financial model has to include philanthropy, and it's the dean's role to be a leader in that regard.

### Can you elaborate a little bit on your family's role in your career?

My husband and I are two deans, and before that we were two chairs. He was chair for eight years before I became chair, and he was dean for seven years before I became dean. I feel like I've had an apprenticeship for both jobs. When I took this job, we started out on one of the long walks we like to take, and he said, "You know, I never like to give you advice," and then for the whole five miles he gave me advice. Of course, he takes some of my best ideas as well. It's mutually beneficial and fun, and never competitive.

We never miss a weekend. You work hard all week, and on the weekends you decompress. We walk and talk, and then you start Monday

and you're ready to go. We didn't plan it this way, but it works remarkably well, so we're sticking to it.

### Is there anything else you'd like to add?

I'm approaching this job with two main principles in mind. The first is the idea of "One Duke." The opportunity to align Duke across all its missions and leverage that to do big things is enormous.

The other is the concept of service to the faculty. If you can facilitate what they can do, that's the magic of an institution like this. I will be very disappointed if I can't facilitate greater success for them. I always say I'm not the smartest person in the room, and I like that. My job is to give them the opportunities to allow their skills and leadership to develop. If we can do that, that'll be a successful deanship. ■

# Gut

# Instincts

Lawrence David and his team explore the teeming world deep within us.

**I**nside our guts, a teeming world of bacteria go about their lives. We are seldom aware of their presence, but they interact with us in countless ways and play a profound role in determining our health. In a way, they help make us who we are.

Lawrence David, PhD, studies this hidden world, the community of hundreds of different species of bacteria that make up each person's gut microbiome. To understand this highly complex environment and its inhabitants, Lawrence and his crew of researchers are rolling up their sleeves

in the wet lab, writing computer code, and creating new statistical methods.

David showed a knack for creativity and dedication while he was still a graduate student at the Massachusetts Institute of Technology, where he and his mentor, Eric Alm, PhD, studied their personal gut microbiomes in unprecedented detail. This included collecting their own fecal samples every day for a year and tracking more than 300 other health and lifestyle measures, using an iPhone app that David customized (this was before Fitbits were ubiquitous).

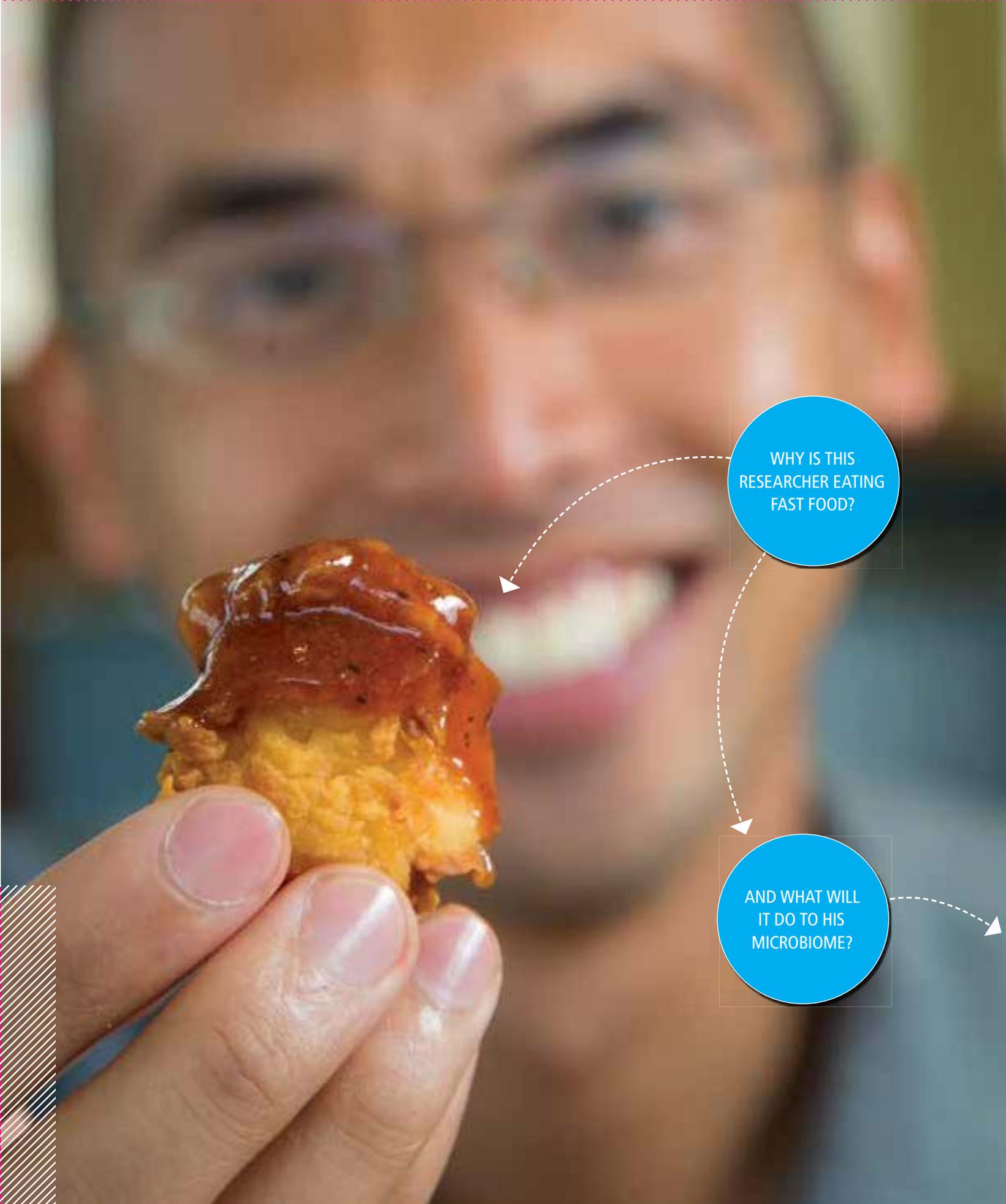
Later, during his three years as a member of the elite Harvard Society of Fellows, David measured the effect

of two very different, controlled diets in a small group of people. He found that eating certain foods to excess, such as meat and dairy, changed the microbiome dramatically in as little as one day.

Now, whenever David gives a talk about his work, someone will sidle up to him and ask, "So, what should I be eating for my microbiome?" David, an assistant professor in the Department of Molecular Genetics and Microbiology in the School of Medicine and a member of

*By  
Angela  
Spivey*

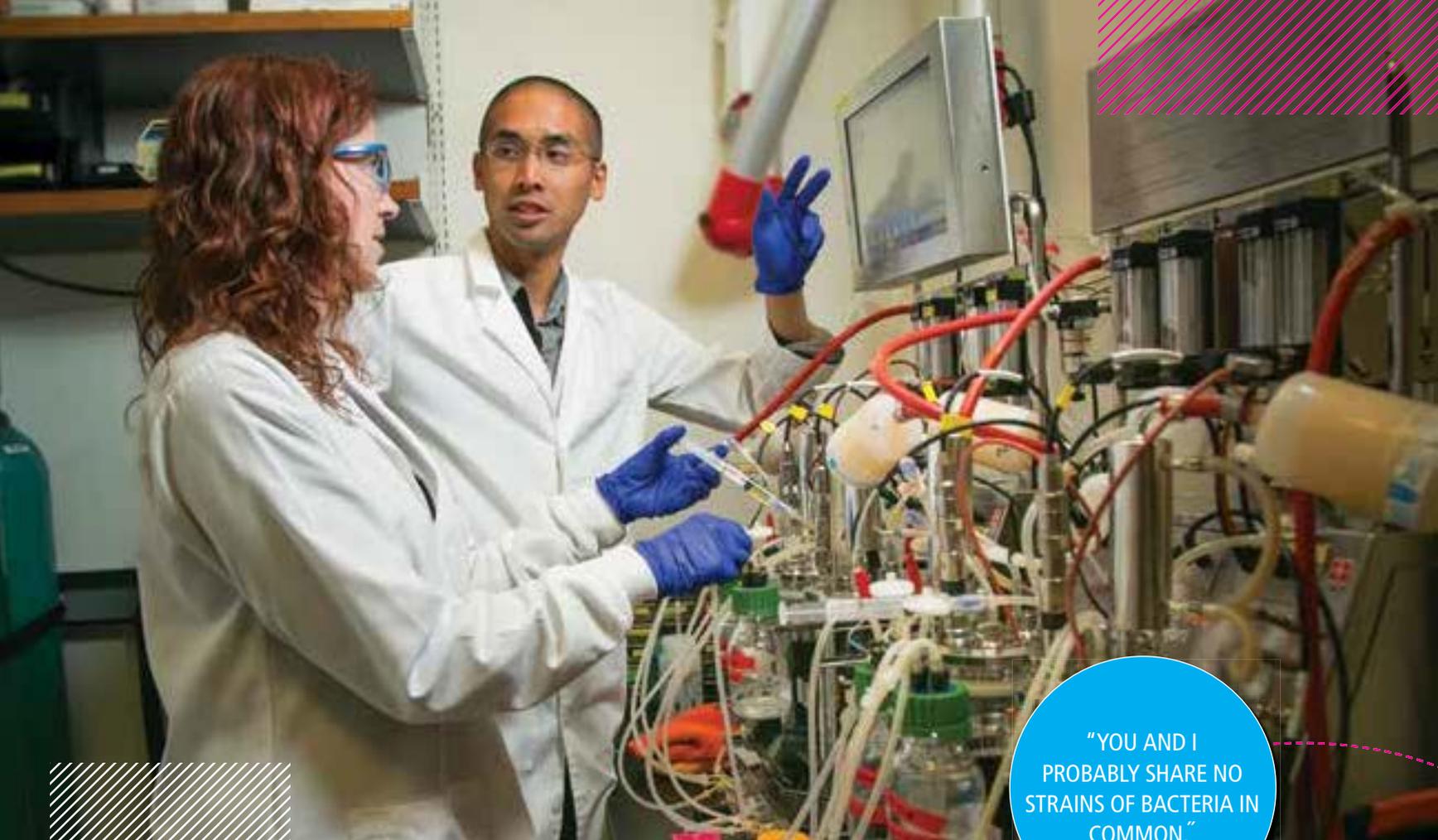
Lawrence David studies the complex interactions between the communities of bacteria that live within the gut and chemicals, nutrients, and other substances we absorb from sources such as medications and food, including his beloved chicken nuggets.



WHY IS THIS RESEARCHER EATING FAST FOOD?

AND WHAT WILL IT DO TO HIS MICROBIOME?





"YOU AND I  
PROBABLY SHARE NO  
STRAINS OF BACTERIA IN  
COMMON."

Lab manager Heather Durand and Lawrence David with the artificial gut, which enables them to observe bacterial communities in real time.

the Center for Genomics and Computational Biology, has mostly tried to sidestep the question. "Some research suggests fiber is good for it," he might say.

He certainly doesn't feel that his own personal example qualifies him to give dietary advice. "I'm a fast food connoisseur," he admits. Chicken nuggets are his obsession. "Whenever we go on a trip, my kids know we're going to get some nuggets."

But lately David has decided that the future of his lab lies in tackling this very question — what people should eat to have a healthy gut microbiome. And, he says, the answer likely won't be the same for everyone.

"We all have different microbial communities inside of us," David says, sipping tea from Bangladesh (he brought it back after traveling there to study gut bacteria in the aftermath of cholera). "You and I probably share no strains of bacteria in common. As a result, each of us will respond to the same nutrient source in different ways. So we have

to develop an understanding to account for that."

#### A PART OF US THAT IS NOT US

Bacteria are not us. They maintain an entire ecosystem of their own. But they live inside our bodies, changing the properties of our gut and how it responds to food, medical treatments, and pathogens. For instance, bacteria control one of the basic characteristics of a healthy gut — that it's anoxic (free of oxygen).

"You can picture the gut as a tube, with our host epithelial cells on the outside of this tube. And all of our cells, of course, have oxygen. Oxygen diffuses out of our cells on the outside of the gut and starts leaking into the gut," David says. "But there are all these bacteria that live on the edges of our intestine that make a living by breathing all the oxygen. So that oxygen never makes it to the middle of the intestine. And you just walk around carrying this fantastic ecological phenomenon inside of you."

David's lab has found evidence

that higher oxygen levels occur in the gut in the aftermath of nasty diseases such as cholera, as well as antibiotic treatment. He and his team are exploring whether elevated oxygen is simply a biomarker of disease or whether it's involved in the disease process.

He explores this and other questions in the complicated world of the gut by not only conducting hands-on experiments, but also developing the algorithms needed to analyze the enormous amounts of resulting data. "It's sometimes hard to develop algorithms as well as to do experiments," David says. "But doing them in combination affords us a lot of flexibility and insight into how to control microbial communities."

#### 24 MILLION HITS OF DATA

A typical experiment yields a survey of a thousand or more different species of bacteria, observed in

hundreds of different experimental settings. "So if you picture an Excel spreadsheet, that's a 1,000-by-1,000 matrix of data points," David says. "I'm fortunate to have in the group researchers who are gifted in terms of math and statistics, so we can take full advantage of the data we generate to build powerful models."

Research analyst and lab manager Heather Durand explains that the last time she did a genetic sequencing run, to identify bacteria by their genes, she ran 600 fecal samples at once, which yielded 24 million DNA sequences. "Advancements in molecular genetics, in high-throughput data computing, and in statistics have coalesced to make microbiome research possible," she says.

"AS A RESULT, EACH OF US WILL RESPOND TO THE SAME NUTRIENT SOURCE IN DIFFERENT WAYS."

David has assembled a lab of people with wide-ranging expertise. "It's really fun; people in my lab come from all over and have all different types of skills," he says. Durand is a clinical microbiologist, trained in identifying pathogens by culturing them. There's a molecular biologist. A biophysicist. A biomedical engineer. An ecologist. Someone with a PhD in materials science and engineering. David himself spent most of his MIT graduate years designing algorithms and writing computer code as part of his work modeling how

genes of ancient microbiomes evolved. His undergraduate degree is in biomedical engineering, and his PhD is in computational and systems biology. But he's modest about his own skills. "I've tried to learn a lot of things, but wouldn't call myself a master of any particular field," he says.

### A NEW GENERATION EVERY HOUR

Because bacteria can replicate as often as every 20 minutes, ideally David would like to observe human gut bacterial communities that often. But because collecting human fecal samples is the only non-invasive method of gathering that data, that's just not going to happen.

"There may be some super donors who poop more than once a day, but generally we would expect to take only one sample a day," David says. "What results is not like a continuous movie; you're just seeing snapshots once a day of what the ecosystem looks like. If the generation time for a bacteria is an hour, taking a fecal sample once a day is like a sociologist studying a human society but only getting to look at it once every 500 years."

That's not a terribly realistic picture. The solution to that challenge? An artificial gut. There are various versions out there, but in David's lab, the artificial gut consists of a set of input tubes, a glass vessel, and a waste tube, all attached to a computerized monitoring dashboard that enables the scientists to simulate the large intestine. The researchers seed the vessel with a human sample, then digitally monitor in real time how the bacteria respond to different manipulations, such as changes in temperature, pH, oxygen, or nutrients. They can physically sample the bacterial community every hour or even every few minutes if they want to.

"We can recreate these really fine-scale timelines of what a microbial community does when

you give it a drug or when we change the food we're giving it," David says.

David's lab has four artificial guts at the moment. The small room that houses them will smell familiar to anyone who has ever lived near hogs or cows. "We haven't run samples for two months," says Durand, spraying a can of air freshener. "But it smells like we have."

Odors aside, "These artificial guts have turned out to be really

to tailor diet to improve health or fight disease.

As he sees it, every day, when we eat, we are conducting a mini-experiment. "A drug contains only one compound," David says. "But in this apple," he says, picking one up off his desk, "there

A closeup of the artificial gut.



helpful tools," David says. "We've found that often bacterial communities respond to diet or other changes much faster than within a single day. And you would never have seen that if you just used human subjects."

This type of creativity is part of the reason why, in his few years at Duke, David has been named a Beckman Young Investigator, a Searle Scholar, a Hartwell Investigator, and an Alfred P. Sloan Research Fellow. Last year, *Science News* named him one of "10 Scientists to Watch."

### HOW MANY COMPOUNDS IN A CHICKEN NUGGET?

In the long term, David sees plenty of work ahead of him to figure out how to use personalized measurements of the gut microbiome

are so many different kinds of carbohydrates. It's a complicated problem to build a model and think about what's going to happen when I eat this apple."

It turns out there are nearly 30 compounds in that apple. In David's beloved chicken nuggets? If they're from a typical fast food place, it's around 40.

Even the commonplace advice that eating fiber is good for the microbiome is not very specific, David points out. "There are all different kinds of fiber. How granular do you need to get in order to tailor things to people? These are open questions." ■

# BUILDING A BETTER FOOTBALL HELMET

If you were, say, the National Football League, and you were looking for someone who could both evaluate innovative new ideas for reducing head and neck injuries on the field and help those ideas succeed in the marketplace, you would almost inevitably wind up knocking on the door of Barry Myers, MD'89, PhD'91, MBA'05.

Myers, a professor of biomedical engineering in Duke's Pratt School of Engineering and director of innovation at the Duke Clinical and Translational Science Institute (CTSI) in the School of Medicine, is among the world's foremost experts on the biomechanics of catastrophic head and neck injuries. He has worked to help craft safety standards for the NFL, NASCAR, the National Highway Traffic Safety Administration, and many other organizations.

On top of that, he's built a second career as a specialist in the intersection between research and entrepreneurship, helping faculty and other

innovators navigate the complex world of venture capital, production, licensing, and marketing necessary to translate creative research into viable enterprises in the marketplace.

So it was hardly a surprise when the NFL asked Myers to lead a new initiative designed to spur the development of safer football helmets and other protective equipment. The project, a partnership between the NFL and Football Research Inc. (FRI) and the CTSI, is called the HeadHealth TECH Challenge. It invites researchers, entrepreneurs, and product manufacturers to compete for awards of up to \$1 million per year to develop improved football helmet technologies and other improvements that will lead to significant gains in head protection.

"Here at Duke, we have the three elements the NFL was looking for," says Myers, who also serves as a consultant for the NFL Players Association. "We have expertise in the biomechanics of head and neck injury. We have expertise in project management. And we have expertise in funding

**"So Duke has a trifecta of skill sets that make it a unique resource nationally to do this kind of work."**

early-stage projects to enable research to turn into products and new ventures. So Duke has a trifecta of skill sets that make it a unique resource nationally to do this kind of work."

The TECH Challenge is one part of the NFL's \$60 million "Engineering Roadmap" effort to encourage new technologies to improve player safety, especially head and neck safety. Concussions and other head and neck injuries have sparked substantial public concern in recent years.

"Societal interest and pressure drives innovation and research," says Myers. "The problem of concussions and head injuries isn't new. It's always been there, and we've always been working on it. But when society takes notice, that creates an opportunity. Smoking was like that. Car safety was like that; fifty years ago, nobody cared about car safety. But then people started to pay attention, money was spent, research was done, and now we have safer cars."

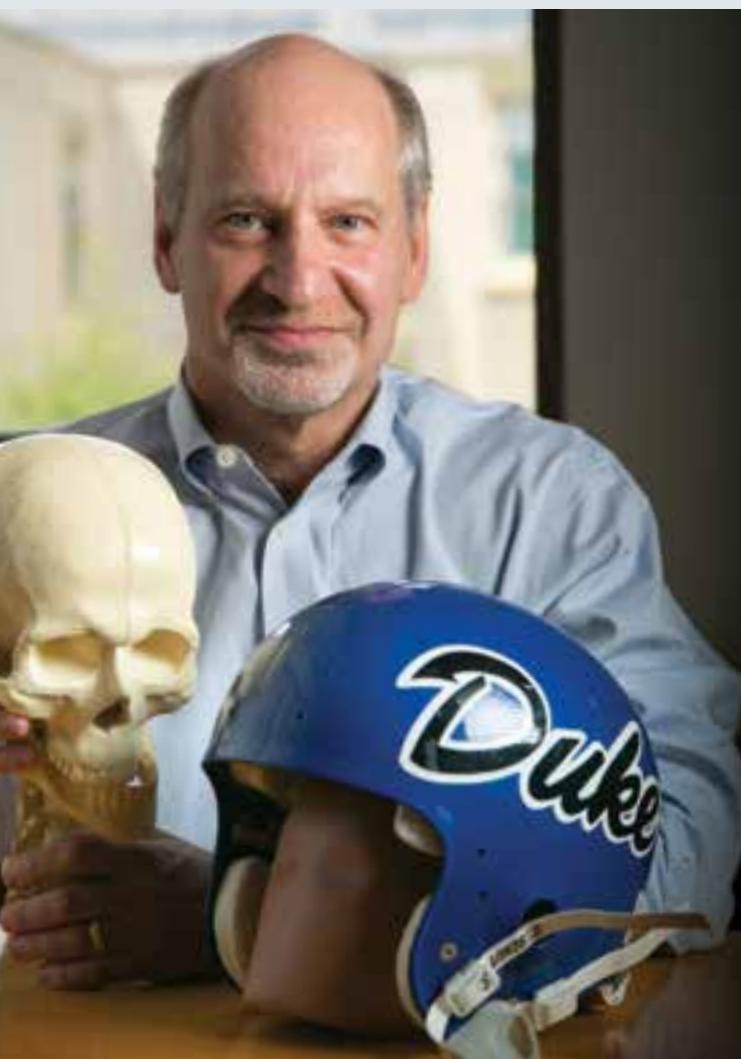
Myers's own path to helping develop safer cars, helmets, and other equipment began with an undergraduate degree in engineering. A native of Toronto, he came to Duke for his medical training, which enabled him to apply engineering principles to physiological systems. He stayed here to get a doctorate in engineering and then joined the faculty.

"I came to Duke Med in 1985, fell into a PhD in biomechanics, loved doing research, and never left the lab," he says.

Along the way, he became interested in, and then instrumental in, helping bridge the gap between research and entrepreneurship. Among his many hats, he founded and directs the Duke-Coulter Translational Research Partnership, which has awarded more than \$8 million to support 39 pilot projects between Duke clinicians and biomechanical engineers and led to nearly \$500 million in follow-up funding, 13 industry licenses, and eight new startup companies. The NFL's TECH Challenge is another opportunity to help research improve lives.

"I'm very committed to Duke, to CTSI, to the NFL, and the NFL Players Association on this program," Myers says. "I look for opportunities, and when I see them, I take them. Duke is a special place because I've been able to do that and be on the faculty here for 26 years. How cool is that?"

— By Dave Hart



JARED LAZARUS

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## 1950s

**Norman Shealy, MD'56, HS'57, DC**, was recognized as the Professional of the Year for two consecutive years, 2016 and 2017, by *Strathmore's Who's Who Worldwide* for outstanding contributions to the field of holistic health care. He lives in Fair Grove, Missouri.

**George E. Bacon, MD'57, HS'58, DC**, was honored with the second annual George E. Bacon Lecture in Pediatric Endocrinology on April 25, 2017, at the University of Michigan. He is a retired endocrinologist and professor emeritus in the Department of Pediatrics at the University of Michigan. He and his wife, Grace, live in Ann Arbor, Michigan.

**Richard F. Bedell, T'53, MD'57**, of Lafayette, Colorado, and his wife, **Jean Bedell, BSN'56**, received the Rotary International Service Above Self Award. The couple conducted part-time medical missionary work in India annually until two years ago. They also spent time in Mexico and Honduras. They have four children, 10 grandchildren, and one great-grandchild.

**R. Rodney Howell, MD'57, HS'60, DC**, was elected president of the International Society for Neonatal Screening. His three-year term began at the organization's September 2016 meeting in The Hague, the Netherlands. Howell, who specializes in biochemical genetics, has been heavily involved in newborn genetic screening policies in the United States for many years, and he was the founding chair of the Advisory Committee on Heritable Disorders in Newborns and Children, which is the congressionally mandated committee that provides recommendations on newborn screening to the U.S. Secretary of Health and Human Services. He is professor of pediatrics and chairman emeritus at the Miller School of Medicine at the University of Miami and lives in Coconut Grove, Florida. He has three grown children and two grandchildren.

**Floyd L. Wergeland Jr., MD'58, DC**, moved from Bonita, California, to Eugene, Oregon, to be closer to his children, Peter and Nicole, who live there. Retired after 49 years of medical practice in ophthalmology, he served as a colonel in the United States Marine Corps and taught at three

universities: the University of California, San Francisco; University of California, San Diego; and Uniformed Services University of Health Sciences in Bethesda, Maryland. At this writing, he was shortly due to receive a Paul Harris Fellowship from the Rotary Foundation.

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## 1960s

**Lawrence H. Parrott, MD'60**, was elected elder emeritus at Bethesda Presbyterian Church in Camden, South Carolina, in January. He spent 30 years teaching at the University of South Carolina and 40 years at the Medical University of South Carolina. He has three children and six grandchildren. His wife, **Joy Parrott, BSN'60**, is the parish nurse at Bethesda Presbyterian Church.

**Philip Pearce, MD'60, HS'60, HS'67**, of Durham, North Carolina, and his wife, Ann, just celebrated their 60th wedding anniversary. In 2016, their oldest grandson married and entered law practice, and their granddaughter earned a master's degree in classical vocal performance and pedagogy. Another granddaughter is working on a master's degree and works with autistic children. Three other grandchildren are in college and doing well.

**Richard L. Reece, T'56, MD'60**, of Old Lyme, Connecticut, has written 12 books on health reform; 4,000 posts on his blog, *Medinnovation and Health Reform*; and 1,500 tweets. He and his wife, Loretta, have two sons, Carter and Spencer. Carter works at Brooks Brothers in New York. An Episcopal priest, Spencer is an internationally acclaimed poet and serves as assistant to and spokesperson for the Episcopal bishop in Madrid. Spencer has published three books of poetry. His most recent book, *Twelve Love Poems from the Murder Capital of the World*, is also a documentary film. He is a recipient of the Griffin Poetry Prize.

**Stanley Worton, MD'60, DC**, is a board member of the Health Foundation of South Florida. A retired radiologist, he lives in Miami with his wife, Joan. They have four daughters—**Linda Worton Jackson, T'84**; Marcelle Worton May; Debra Worton Teich; and Diane Worton Amour—and eight grandchildren.

**Donald C. Mullen, MD'61**, was inducted into the Global Medical Mission Hall of Fame at the University of Toledo Medical School in April 2017. Now retired, he has published a book on his activities since retirement from active practice. *A Radical Change of Direction: Memoir of the Spiritual Journey of a Surgeon* was published by WestBow Press in 2015 and is available on [amazon.com](http://amazon.com). He lives in Newnan, Georgia. He and his wife, Patricia Few Armstrong, have a grandson who graduated from Mercer Medical School in 2017 and is now a resident at the University of Virginia. They have 15 other grandchildren in high school and college.

**Alden W. "Bud" Dudley Jr., T'58, MD'62, HS'62-'63, '65-'67**, sent a letter last year to the *New England Journal of Medicine* about the use of IV albumin to prevent fat emboli complications in orthopaedic surgery. That letter was published in 2016—25 years after his previous one in the journal, about the transmission of AIDS by HIV antibody-negative blood. He promises to send another one in 2041. He and his wife, Gretchen, live in Roanoke, Virginia.

**Ben F. Orman, MD'62**, recently returned from his 15th medical mission trip to Guatemala with Faith in Practice. He and his wife, Janet, live in Houston, Texas, and have three sons: Mark, Neil, and Brian.

**Peter O. Kohler, MD'63, HS'63-65**, retired in 2006 as president emeritus of Oregon Health & Science University (OHSU) after 18 years. He recently retired again after serving for 10 years as vice chancellor for a new regional campus of the University of Arkansas for Medical Sciences in Fayetteville, Arkansas. His role in leading OHSU's conversion to a public benefit corporation has been captured by author William Graves in a recent book, *Transformed: How Oregon's Public Health University Won Independence and Healed Itself*. The book was published in 2017 by Pacific University Press. The transition has had a salutary effect on OHSU and might serve as a model for other public institutions. He and his wife, Judy, live in Fayetteville.

## WHAT'S NEW?

We, and your DukeMed classmates, would love to hear what you've been up to. Please submit your latest news, activities, accomplishments, and other highlights for Class Notes via the link at [medalumni.duke.edu](http://medalumni.duke.edu) or directly by email to [dukemed@mc.duke.edu](mailto:dukemed@mc.duke.edu). We look forward to hearing from you!

**William McMillan, T'59, MD'63, HS'68**, has received the 2017 *Wilmington StarNews* Lifetime Achievement Award for his many years of service to the Wilmington, North Carolina, area. A family practice physician, he played an important role in starting a family medicine residency program in the area. He developed the New Hanover Regional Medical Center's pediatrics program and helped to get the Betty H. Cameron Women's & Children's Hospital off the ground. He retired in 2005 and has remained an active volunteer in the community.

**Carl J. Rubenstein, MD'64, HS'64-'72**, of Oklahoma City, Oklahoma, is the immediate past president of the Interfaith Alliance of Oklahoma. In 2016, he received the Interfaith Award from the Oklahoma Conference of Churches. He is also involved with multiple community organization boards. He and his wife, Deborah, have three children and five grandchildren.

**Creighton Bolter Wright Sr., T'61, MD'65, HS'66**, was named a Lifetime Achiever by *Marquis Who's Who* in 2017. He served on the Mayfield Foundation Board in 2017. He is past president of the AHA Great Rivers Affiliate. He is professor of health sciences at Mount St. Joseph and medical director of the physician assistant program there. He and his wife, Carolyn, have 11 grandchildren. They live in Covington, Kentucky.



BRIAN BAER

## HACKING THE CODE OF AGING

Thanks to advances in medicine and other factors, average life expectancy, which for millennia rarely approached 35, is now more than twice that. That's impressive, but **Joon Yun, MD'94**, thinks the potential exists to extend our life span—and, more important, *high-quality* life span—much further. And he's putting his money where his mouth is.

Yun, president of Palo Alto Investors, a \$2 billion hedge fund in California, three years ago launched the Palo Alto Longevity Prize, a \$1 million science competition to spur innovations to extend healthy, functional longevity.

"Health care advances have been breathtaking," says Yun, who was a resident, fellow, and attending radiologist at Stanford before moving into the hedge fund world. "But the current system promotes longevity without solving aging; we're creating an older population that needs more health care, creating a vicious cycle of cost escalation."

Yun is interested in nurturing moonshot innovations that address aging, especially those that restore homeostatic capacity, the ability of the body's systems to self-stabilize in response to stressors and return to homeostasis (allostasis). As we get older, our homeostatic capacity diminishes. It takes longer to bounce back after injuries, jet lag, or late nights. Our tolerance for temperature or altitude variations diminishes.

"Homeostatic capacity is resilience; it's the body's ability to auto-regulate back to equilibrium," Yun says. "If we focus on restoring homeostatic capacity rather than restoring homeostasis, we address chronic conditions such as aging completely differently. For example, the customary solution to high blood pressure is to take a medication to lower it. But if we look

at it as a resilience problem, a solution to high blood pressure is to increase homeostatic capacity by *raising* blood pressure, as we do with exercise. It sounds counterintuitive, but when we exercise, our bodies respond to this eustress, or capacity-building stress, by gradually increasing their buffer to handle stress. Declining resilience appears to be a system-wide phenomenon as we age. The key question is, what is causing the loss of homeostatic capacity, and can the restoration of homeostatic capacity ameliorate the aging process?"

With that in mind, Yun established the Palo Alto Prize as two prizes, each worth \$500,000: one to the first team that can extend the life span of a mammal by 50 percent, and the other to the first team that can restore homeostatic capacity in an aging human to that of a young adult.

A number of scientific teams are competing for the first prize, which is scheduled to run through 2019. The second prize is in the process of being launched.

"The homeostatic capacity prize asks teams to improve multiple functional outcomes and measures of resilience," Yun says. "An example of the latter is heart rate recovery after exercise, which correlates with chronologic age more than baseline heart rate does. Biology is better studied four dimensionally, with more time series data

and better temporal resolution."

The current prizes, Yun says, are just the beginning. He and his wife just announced a \$2 million founding pledge to the National Academy of Medicine's Grand Challenge for Healthy Longevity. "We're committed to the long haul," Yun says. "We'll see what we learn and revise for the next round."

That dedication to building knowledge is something Yun honed at Duke. He grew up in Chapel Hill while his father earned his doctorate at UNC, and after going to Harvard for college, he came back south to attend Duke University School of Medicine.

**"...we're creating an older population that needs more health care, creating a vicious cycle of cost escalation."**

And although he is now on the West Coast, he took a lot of Duke with him: both his wife, **Kimberly Bazar, MD'94**, and his Palo Alto Investors partner, **Patrick Lee, MD'01**, are School of Medicine graduates.

"I have extraordinarily fond memories of my time at Duke," Yun says. "One of the best parts of the Duke education is the research year, when students are given the time to explore an area deeply. I credit Duke with providing that kind of running room and for establishing the model for how to pursue things in depth. I've never forgotten that, and it's still how I approach what I do."

— **By Dave Hart**

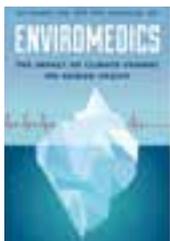
## 1970's

Nancy Stead Atwood, WC'66, MD'70, has been recognized for Outstanding Professional Achievement by her alma mater, the National Cathedral School in Washington, D.C. The award recognizes her for her accomplished career as a medical doctor and patient advocate. After earning a medical degree at Duke, she served as house officer in internal medicine at Massachusetts General Hospital and completed a fellowship in hematology at the Peter Bent Brigham Hospital. She served on the medical faculty at Duke and the Medical College of Georgia in Augusta and established an oncology, hematology, and internal medicine practice in Gainesville, Georgia in 1991. Her practice later merged with the oncology practice of James Butts, MD, at the Northeast Georgia Diagnostic Clinic in 2000. Since retiring, Stead has become a patient advocate and ethics watchdog in the profession of health care. She educates consumers through her website, [steadfasthealthcare.com](http://steadfasthealthcare.com). She and her husband, Alan Atwood, MD, a retired surgeon, live in Gainesville.

Walter L. Miller, MD'70, DC, was honored with the Fred Conrad Koch Lifetime Achievement Award from the Endocrine Society this year. It is the society's highest honor. Miller retired in 2014 after 40 years at the University of California, San Francisco (UCSF), where he spent 36 years on faculty and 15 as chief of endocrinology. His wife, Synthia Mellon, PhD, professor of OB/GYN at UCSF, still runs her highly productive lab. They live in San Francisco. Their daughter, Samantha Miller-Khaikin, completed a master of fine arts degree at Columbia University and is beginning to publish short stories.



Richard B. Frost, MD'73, recently published a new novel, *Final Season*. It tells the story of a man who suffers recurrence of the malignant lymphoma for which he has already endured radiation and chemotherapy. He decides not to go through the grueling treatment process again, opting instead to take whatever time he has left and follow his baseball team, the Baltimore Orioles, through its 1993 season. The book is available in Plattsburgh, New York, bookstores and in print and e-book form on [amazon.com](http://amazon.com). He lives in Plattsburgh.



Paul S. Auerbach, T'73, MD'77, a professor of emergency medicine at Stanford University and co-founder of the Wilderness Medical Society, has co-authored another book, *Enviromedics—The Impact of Climate Change on Human Health*. The premise of the book is that climate change, and in particular global warming, will have disturbing impacts upon human health. The book is written to appeal to both lay readers and health professionals interested in addressing the issue. It is published by Rowman & Littlefield. Auerbach also is author of *Wilderness Medicine*, a book of more than 2,000 pages that is in its seventh edition. He lives in Los Altos, California.

## 1980's

Wilson "Bill" Crone, T'82, MD'87, PhD, a basic science coordinator for the physician assistant program at Albany Medical College in Albany, New York, has earned his second Helen Molinari Graduate Encouragement and Merit Award from the school's graduate students.

## 1990's

R. Adams Dudley, T'86, MD'91, DC, has been appointed director of the Center for Health Care Value at the University of California, San Francisco. He lives in San Francisco.



Tom Catena, MD'92, recipient of the 2014 Duke Medical Alumni Association Humanitarian Award, is the subject of a feature documentary with Maria Shriver as executive producer. Catena is the medical director and only physician at Mother of Mercy Hospital in the war-torn Nuba Mountains of Sudan. The hospital serves a population of nearly 1 million people who are the victims of famine, disease, war, and ethnic cleansing. The film is titled *The Heart of Nuba* and is beginning to screen at venues around the world. For more information, visit [theheartofnuba.com](http://theheartofnuba.com).

## 2000's

Philip Lehman, MD'10, MPP'10, completed a fellowship in cardiovascular disease at Duke this summer. Along with his wife, Emily, and daughters, Anna, 4, and Catherine, 1, Lehman is moving to Chattanooga, Tennessee, to join the Chattanooga Heart Institute. He will practice clinical cardiology with a focus on interventional echocardiography and imaging.

## HOUSE STAFF

Christophe Lillis, MD, HS'00-'04, has been named the medical director of the PRIME and Patient Centered Medical Home programs at the University of California Davis Medical Center. In this role, he will work closely with the Primary Care Network Associate medical directors and hospital-based clinic medical directors to lead primary care practice transformation initiatives. He joined UC Davis in 2015 after 11 years in private practice in Northern Virginia, where he also served on the Governor's Council for the Virginia Chapter of the American College of Physicians and as a member of the board of directors for the nonprofit group Doctors for America. He lives in Granite Bay, California.

We'd like to  
hear from  
you

Please submit your latest news, activities, accomplishments, and other highlights for Class Notes via the link at [medalumni.duke.edu](http://medalumni.duke.edu) or directly by email to [dukemed@mc.duke.edu](mailto:dukemed@mc.duke.edu).



2007



Warren Kibbe



Haywood Brown



Susan Emmett

## KIBBE NAMED CHIEF FOR TRANSLATIONAL BIOMEDICAL INFORMATICS

Warren Kibbe, PhD, joined Duke University School of Medicine in August as chief for Translational Biomedical Informatics in the Department of Biostatistics and Bioinformatics and chief data officer for the Duke Cancer Institute.

Prior to coming to Duke, Kibbe was acting deputy director of the National Cancer Institute (NCI) and director of the NCI's Center for Biomedical Informatics and Information Technology. A recognized national leader in biomedical informatics and data sharing, Kibbe has been instrumental in efforts to speed scientific discovery and facilitate translational research by using IT, informatics, and data science to address complex research challenges. He was instrumental in establishing the NCI's partnership with the U.S. Department of Energy, which is aimed at defining and developing the next generation of high-performance computing architectures to address important questions in cancer biology, treatment, development of resistance in patients, and understanding outcomes.

## FOUR SOM FACULTY AWARDED DISTINGUISHED PROFESSORSHIPS

Four School of Medicine faculty members were awarded distinguished professorships at a ceremony last May. Distinguished professorships recognize extraordinary scholarship in advancing science and improving human health.

Jiaoti Huang, MD, PhD, is the Department Chair of Pathology. He is a professor of pathology and professor of pharmacology and cancer biology and a member of the Duke Cancer Institute. He is a world-renowned surgical pathologist whose clinical expertise is in the pathologic diagnosis of genitourinary tumors.

**William Kraus, MD'83, HS'83-'88**, is the Richard and Pat Johnson Professor. He is a professor of medicine in the Division of Cardiology, professor in the School of Nursing, and professor of biomedical engineering in the Pratt School of Engineering. He is also a member of the Duke Molecular Physiology Institute and Duke Cancer Institute. A clinician-scientist, his research interests focus on the use of exercise for favorable mediation of cardiometabolic risk.

William Maixner, DDS, MD, is the Joannes H. Karis, M.D., Professor of Anesthesiology. He is the direc-

tor of the Center for Translational Pain and vice chair of research. Throughout his career, he has investigated complex persistent pain conditions such as craniofacial pain and temporomandibular disorders.

Marie Schumacher, PhD, is the Nanaline H. Duke Professor of Biochemistry. A highly accomplished structural biologist whose primary technique is X-ray crystallography, she has provided key data on critical biological processes such as transcriptional regulation, RNA editing, DNA organization, DNA-protein interactions, and cell division.

## BROWN NAMED PRESIDENT OF ACOG

Haywood Brown, MD, became the 68th president of the American Congress of Obstetrics and Gynecology (ACOG) in May. Brown, the F. Bayard Carter Professor of Obstetrics and Gynecology in the School of Medicine, served as the chair of the Department of Obstetrics and Gynecology at Duke for 14 years and follows his department chair predecessors, all of whom held the presidency of ACOG. During his tenure at Duke, he has been an active clinician in maternal-fetal medicine specializing in medical high-risk pregnancy.

Dr. Brown previously served as chair of the Council on Resi-

dent Education in Obstetrics and Gynecology and as president and board member of the Society of Maternal-Fetal Medicine. He is past president of the American Gynecological Obstetrical Society and the North Carolina Obstetrical and Gynecological Society. Dr. Brown is the immediate past chair of ACOG District IV.

## DUKE OTOLARYNGOLOGIST SELECTED AS A TED FELLOW

Otolaryngologist **Susan Emmett, MD'10**, an assistant professor of surgery at Duke University School of Medicine and assistant research professor at the Duke Global Health Institute, has been selected as a TED Fellow. Emmett, the first-ever otolaryngologist to be named a TED Fellow, joined 20 other change-makers from around the world. Each delivered a talk from the TEDGlobal stage in August in Arusha, Tanzania.

Her TED talk reflected her research efforts, which focus on reducing hearing health disparities across the globe. Emmett is best known for her work to expand



Debara Tucci



Anthony Viera



Mark Stacy



Nicholas Katsanis

access to cochlear implants, a treatment for severe-to-profound hearing loss that is often unavailable in low- and middle-income countries. She has collaborated with researchers across 14 countries to demonstrate that cochlear implants can be a cost-effective treatment option in Sub-Saharan Africa and Latin America.

Emmett's interest in global hearing health extends back to her experience as a Duke medical student, when she spent a year doing research in Tanzania through the prestigious Howard Hughes Medical Institute Research Training Fellowship.

## TUCCI WINS PUBLIC SERVICE AWARD

Debara Tucci, MD, Professor of Surgery in the Division of Head and Neck Surgery & Communication Sciences, received the 2017 Jerome C. Goldstein Public Service Award from the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS). This award recognizes AAO-HNS members for their professional excellence and their tireless commitment to improving patient welfare. Recipients are nominated and elected by members of the academy.

## VIERA NAMED CHAIR OF COMMUNITY AND FAMILY MEDICINE

Anthony Viera, MD, MPH, is the new chair of the Department of Community and Family Medicine at Duke University School of Medicine.

Prior to taking his new position at Duke, Viera was a professor in the Department of Family Medicine at the University of North Carolina at Chapel Hill School of Medicine. He also held appointments as adjunct professor in the Department of Epidemiology and in the Public Health Leadership Program at UNC.

In addition to maintaining an active family medicine clinical practice, Viera is a nationally recognized researcher focused on cardiovascular disease prevention, with a special interest in hypertension, nutrition, and physical activity. He has published nearly 200 articles, book chapters, monographs, and books. Viera is a fellow of the American Heart Association and has been the principal investigator on numerous grants from the NIH and other funding agencies. He also plays an active role in the education of medical students, residents, and fellows.

At UNC, he was director of the UNC MD-MPH Program (Health Care & Prevention), and throughout his career has received numerous teaching and research awards. Viera received his medical degree from the Medical University of South Carolina. He completed his residency training in family

medicine at the Naval Hospital in Jacksonville, Florida, where he served as chief resident. He served in the United States Navy from 1996 to 2004 before joining UNC as a Robert Wood Johnson Clinical Scholar. Viera received his Master of Public Health degree from the Gillings School of Global Public Health at UNC.

## STACY BECOMES DEAN OF ECU MEDICAL SCHOOL

Mark Stacy, MD, former vice dean for clinical research for the School of Medicine, was named the new dean of the Brody School of Medicine at East Carolina University. Stacy took office in his new position on Sept. 1.

Stacy, who was a professor in the Department of Neurology, served as vice dean for clinical research since 2011. He was instrumental in improving the school's clinical research practice and developing Duke's site-based research community. Stacy had oversight of Duke's Institutional Review Board, the Duke Office of Clinical Research, Office of Regulatory Affairs, and the Duke Biobank initiative. Stacy joined the Duke University faculty in 2003 and served as director of Duke's Movement Disorders Program.

## ASHG HONORS KATSANIS

The American Society of Human Genetics (ASHG) has named Nicholas Katsanis, PhD, director of the Center for Human Disease Modeling, professor of cell biology, and Brumley Distinguished Professor of Pediatrics at Duke University, the 2017 recipient of the Curt Stern Award.

This annual award, named for the late pioneering geneticist Curt Stern, PhD, recognizes genetics and genomics researchers who have made significant scientific contributions during the past decade.

Katsanis investigates the molecular causes behind ciliary disorders, with emphasis on the signaling roles of cilia, the mechanisms behind how genes interact to cause rare genetic disorders, and possible treatments for these conditions. In 2009, he established the Center for Human Disease Modeling at Duke University, which aims to facilitate collaboration across disciplines and to develop physiologically relevant, scalable tools to study variation among human patient genomes.

**Spencer S. Brewer Jr., MD'52, HS'52**, of Atlanta, Georgia, died July 9, 2017. He was 90. After a year at the Citadel he enlisted in the U.S. Navy during World War II, where he worked in hospital settings. He completed his undergraduate degree at the University of Georgia before receiving his medical degree at Duke. He interned at Grady Memorial and the Veterans Administration in Atlanta and then returned to Durham as a fellow in hematology with the American Cancer Society. He practiced medicine at Piedmont Hospital in Atlanta for 46 years, where he was the first to introduce infusion therapy. He was known for his dedication and devotion to his patients. He was active with the Medical Association of Atlanta, the Georgia Medical Society, the Southeastern Clinical Society, and the Southern Medical Association.

**Yancey G. Culton Jr., MD'56, HS'57-'61**, of Chapel Hill, North Carolina, died June 14, 2017. He was 89. He graduated from Guilford College in 1950 and completed both medical school and internship/residency in obstetrics and gynecology at Duke. He honorably served as a major in the United States Air Force from 1961 to 1968. In 1968 he joined what is now Durham Obstetrics and Gynecology and the medical staff at Watts Hospital. At Watts he chaired the Department of OB/GYN and then became Durham Regional Hospital's first medical staff president when the hospital opened in 1976. He retired in 2000.

**Thomas L. Dulin, MD'57**, of Charlotte, North Carolina, died May 26, 2017. He was 85. After completing three years of undergraduate work at Duke, he entered the School of Medicine, where he was elected to the AOA Medical Honorary Society. He interned at The University of North Carolina at Chapel Hill and served two years as a physician in the U.S. Army in Karlsruhe, Germany. After completing a residency in family medicine at the University of Michigan Medical School, in 1961 he founded the Cotswold Medical Clinic in Charlotte, the first non-segregated family medicine office in Mecklenburg County. He practiced there until his retirement in 1995. He was a charter member of the American Academy of Family Practice and served as president of the Mecklenburg Chapter of the American Heart Association, president of the Mecklenburg County Medical Society, and chief of the medical staff of Presbyterian Hospital.

**Paul T. Forth Jr., T'66, MD'70**, of Hendersonville, North Carolina, died on May 25, 2017. He was 73. He completed both his undergraduate and medical degrees at Duke. He served in the U.S. Army in Germany for three years and returned to Duke afterward for a fellowship program. In 1977, he moved his young family to Houston, Texas, where he spent 26 years as an internist at Diagnostic

Clinic. He returned to North Carolina in 2003 and worked for Pardee Internal Medicine Associates for 12 years until his retirement. He also volunteered as a tutor at Hendersonville Elementary and at Interfaith Assistance Ministries. He was a lifelong Duke basketball fan who equally enjoyed picking apart the most recent game and grousing about the referees.

**Tom W. Gore Jr., T'51, MD'55**, of Fort Myers, Florida, died on July 28, 2017, surrounded by his family. He was 90. He graduated from Duke University School of Medicine, where he also completed his internship and four years of residency. After honorably serving in the U.S. Army, he moved to Fort Myers, Florida, in 1961 to practice internal medicine. He was board certified in internal medicine and hematology. He was a member of the CMCS Sailing Club and enjoyed competitive racing with his boats, a J29 named "Toad" and a Henderson 30 called "Judy." His son named his first shrimp boat "Doctor Tom" after his father. He was a huge Duke basketball fan.

**Benjamin T. Jackson, T'51, MD'54**, of Weston, Massachusetts, died June 28, 2017. He was 88. He was a captain in the U.S. Army posted in Washington and Minneapolis, Minnesota. He pursued research, concentrating in physiology and endocrinology and publishing many peer-reviewed studies. His work brought him to the Medical College of Virginia and then to Weston, Massachusetts, to continue his research at Boston University School of Medicine and Brown University. He was a dedicated surgeon and held the position of chief of surgery at the Veterans Administration Hospital in Providence, Rhode Island for 18 years until he retired in 1998. He was a very passionate professor and mentor to residents and medical students. He was a devoted family man with a wide range of interests and activities, including gardening, music, sports, fishing, hiking, and traveling.

**Edwin L. Jones III, T'66, MD'70**, of Hollywood, South Carolina, died on July 18, 2017, at the age of 72. He did his residency in pediatrics at Baylor University Medical School in Waco, Texas, where he was chief resident. He worked for many years for the U.S. Public Health Service, initially working in clinics on Native American reservations and then at the medical clinic at Norfolk Naval Base in Norfolk, Virginia. He entered private practice at Louisiana State University Health Sciences Center in Shreveport, Louisiana, where he was the head of pediatrics. He returned to the Public Health Services at Coast Guard Air Station Clearwater in Clearwater, Florida, where he was a flight surgeon and the chief medical officer, attaining the rank of captain. He later worked at Coast Guard Headquarters in Washington, D.C., and in the medical clinic at

Bethesda Naval Hospital in Bethesda, Maryland. **Ullin W. Leavell Jr., MD'45, HS'46**, of Lexington, Kentucky, died July 17, 2017. He was 94. He was a professor of medicine and chair of dermatology at the University of Kentucky College of Medicine from 1971 until his retirement in 1997. He served as a captain in the U.S. Army in postwar Japan before opening a private practice in Lexington in 1951, which evolved into what is now Dermatology Associates of Kentucky. He wrote numerous groundbreaking papers in the field of dermatology. He was on staff at Cardinal Hill Hospital, Central Baptist, Good Samaritan, St. Joe's, Shriner's Hospital for Children, UK Medical Center, and the Veteran's Administration Hospital. An award-winning photographer, he was the first physician in Lexington to be trained in the use of electron microscopic photography.

**Paul McGroarty, MD, HS'89-'92**, of Lexington, Kentucky, died June 9, 2017. He was 63. He received his undergraduate and medical degrees at Georgetown University and did his residency at Duke. He worked as an anesthesiologist at St. Joseph East Hospital.

**Giles Y. Mebane, T'51, MD'54**, of Mebane, North Carolina, died July 9, 2017. He was 89. He served in the U.S. Navy from 1945 to 1947. He completed his residency at the Medical College of Virginia in 1956, and that year he and **William Glenn Aycock, T'49, M'54, HS'55**, started their medical practice at Mebane Medical Arts in Mebane. He was board certified with the American Board of Family Practice. He was a medical examiner for Alamance County and served as medical director for Alamance County Rescue Service and with Alamance County EMS, where he was instrumental in developing programs for Advanced Life Support, as well as starting the Alamance County Rescue diving team. He was a member of the Wilderness Medical Society and the Professional Association of Diving Instructors.

**David Dixon Porter, MD, HS'61-'62**, died April 16, 2017. He was 87. After earning both his undergraduate and medical degrees at the University of Pittsburgh, he trained at Duke in anatomic pathology. He furthered his research career at the Scripps Research Institute in La Jolla, California. While at the Wistar Institute in Philadelphia, he trained in virus research to further his studies in various viruses, including respiratory syncytial virus (RSV), which is particularly harmful to infants and the elderly. His career as a professor of pathology spanned from 1969 to his retirement in 1998 at University of California, Los Angeles School of Medicine. For a time he also served as deputy coroner for Los Angeles County.

**J. Peter Reitt, T'61, MD'65**, of Northampton, Massachusetts, died June 2, 2017. He was 78. He earned his undergraduate and medical degrees at Duke and did his internship and junior surgical residency at Emory University's Grady Memorial Hospital. He served in the U.S. Navy during the Vietnam War for two years. After completing a residency in neurosurgery, he started in private practice in Atlanta, ultimately forming his own independent practice, Peachtree Neurosurgery. In 1981, he was elected a fellow of the American College of Surgeons. He retired in 1990 and became active in numerous volunteer activities, building hiking trails for the U.S. Forest Service, serving as community host for the Highlands Chamber of Commerce, joining fellow Rotarians in community service, accepting appointment to the Macon County Board of Health, and serving as president of the board of directors of Macon County Hospice.

**James E. Saltz Jr., T'57, MD'67**, of St. Petersburg, Florida, died June 1, 2017. He was 82. After earning his undergraduate degree at Duke, he joined the U.S. Marines and served for six years. He returned to Duke for medical school, followed by a residency at the University of New Mexico School of Medicine in pediatrics and obstetrics. He opened a medical practice in Tucumcari, New Mexico, in 1970 and served the community there for 45 years. He delivered hundreds of babies and cared for several generations of families. He provided services in the emergency room and served as hospital chief of staff. He was a member of the City Commission and served as mayor of Tucumcari. He worked as a

medical missionary in Afghanistan and Guatemala, and in 2009, he and his wife, Linda, relocated to Snow Hill, North Carolina, where they worked in rural medical clinics.

**Otto K. Stewart Jr., MD, HS'61**, of Sheboygan, Wisconsin, died July 20, 2017. He was 89. He attended Georgetown University for both undergraduate and medical school, and served in the U.S. Army Medical Reserve in Germany. He and his wife, Maribeth, moved to Duke in 1957, where he completed his residency and served as chief resident of orthopaedics. In 1961, they moved to Sheboygan, where he and his partners built an orthopaedic practice covering eight hospitals. He was a favorite among patients and colleagues alike with his generosity, compassion, dedication, and sense of humor. He served the community in many capacities, including: St. Nicholas Hospital, president; Piedmont Orthopedic Society, chairman; Sierra Cascade Trauma Society, member; American Academy of Orthopedic Surgeons, member; and Bay Lakes Council of the Boy Scouts of America, board member (he was an Eagle Scout). Orthopaedics and his family were his life.

**Lloyd F. Timberlake, T'38, MD'41, HS'46-'47**, of Atlanta, Georgia, died May 31, 2017. He was 99. He was a leading Atlanta doctor and former staff president at Piedmont Hospital. In 1941 he interned at Grady Hospital in Atlanta and served in the U.S. Army during World War II, first in Panama as a medical officer at Gorgas Hospital and then as a battalion surgeon with the parachute infantry.

After the war, he completed his medical training in Atlanta. He began his practice in internal medicine in 1948 and enjoyed 38 years of practice, primarily at Piedmont Hospital. He was much loved by his patients from all walks of life throughout Atlanta and surrounding communities. He served on Piedmont Hospital's board of directors and was president of the staff. He was a member of medical societies including the Alpha Omega Alpha Honors Medical Society and the Southeastern Clinical Club.

**Robert B. Yudell, T'50, MD'54**, of Charlotte, died June 26, 2017. He was 87. He credited Duke for "saving his life" with scholarship funds when his father suddenly passed away in his sophomore year. After he completed medical school, he and his wife, Anne, moved to Massachusetts, where he served as a lieutenant commander in both the U.S. Marines and the Navy. He continued his medical training in Washington, D.C., earning his specialty in ophthalmology. He started his own private practice in Charlotte, which later became Laurel Eye Associates. An accomplished surgeon, he was chief of ophthalmology at both Presbyterian and Mercy Hospitals, and he performed the first intraocular lens implant surgery in North Carolina. He was an active and philanthropic supporter of the arts and the community, and after retirement he volunteered by performing eye exams for the Lions Club.

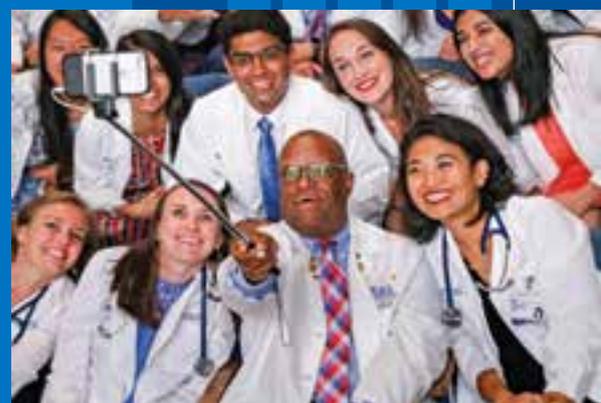


The Duke medical campus, with Duke Clinic at left, Duke Cancer Center in the center, and Duke Medicine Pavilion at right.

JARED LAZARUS

Duke Medical Alumni Association  
Development and Alumni Affairs  
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## Students receive stethoscopes along with their white coats

This year, on behalf of the Duke medical alumni family, the Duke Medical Alumni Association presented each incoming student with a personalized stethoscope during the White Coat Ceremony. Alumni were invited to participate in this special occasion by showing support for our students with a gift to the Medical Annual Fund. The students are grateful

for this meaningful and long-lasting gift and appreciate the generosity of our alumni.

Gifts to the Medical Annual Fund support scholarships, innovative research, faculty support, curriculum enhancements, new technologies, and more. To participate, please visit [medicalannualfund.duke.edu](https://medicalannualfund.duke.edu).