

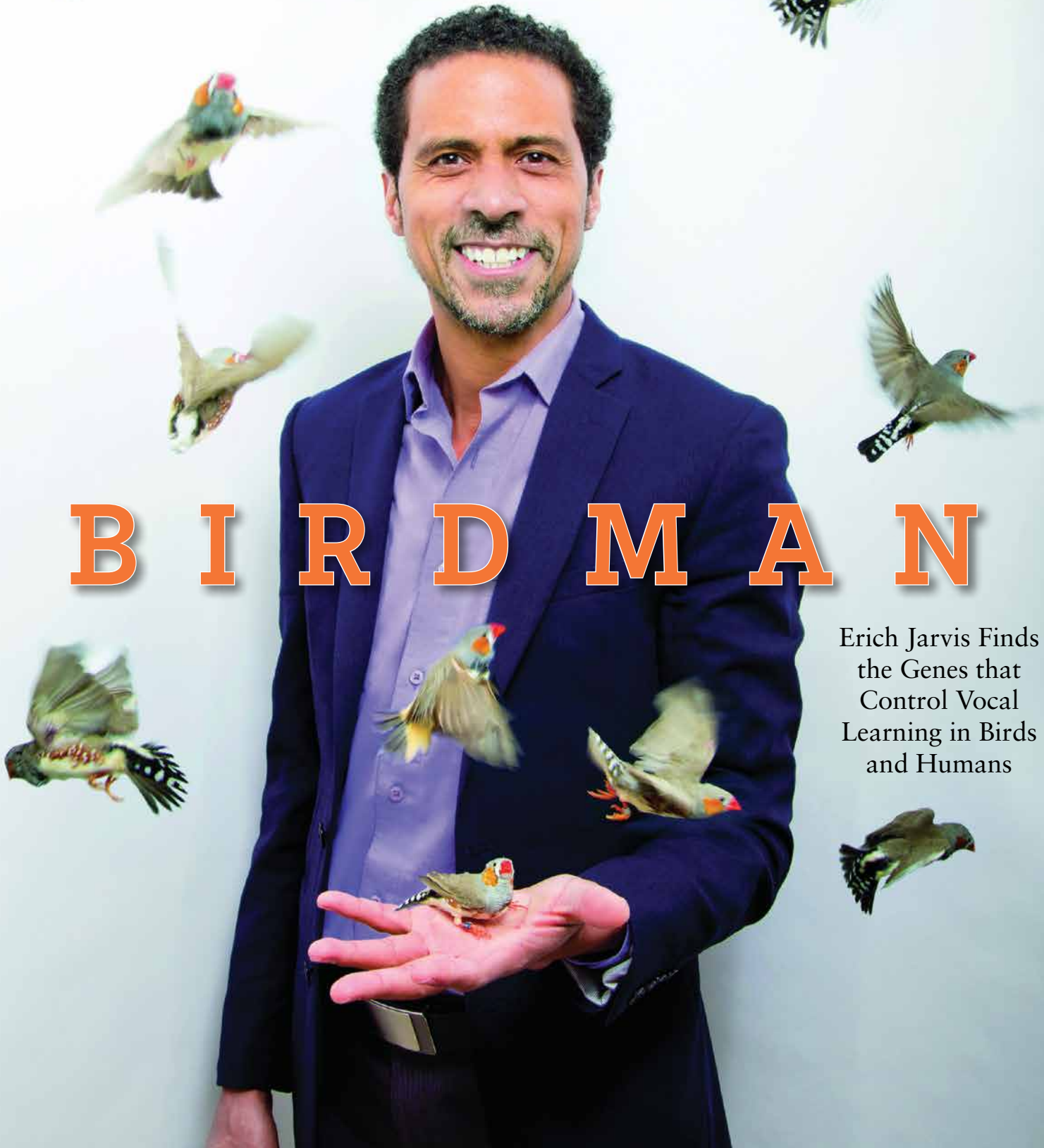
DukeMed AlumniNews



SPRING 2016

BIRD MAN

Erich Jarvis Finds
the Genes that
Control Vocal
Learning in Birds
and Humans



THIS SPRING, I gave my eighth State of the School Address and spoke about the progress we have made and our plans for the future. I reviewed the goals of the School of Medicine's last strategic plan, which was produced in 2006, a year before I arrived at Duke. In the 10 years since the plan was developed, the school and our outstanding faculty, staff and students have made extraordinary achievements.

Starting in the spring of 2015, the School of Medicine hosted a series of brainstorming sessions to elicit ideas for a new strategic plan that would align with a new enterprise-wide Duke Health strategic framework process led by the new Chancellor for Health Affairs, Eugene Washington, and a Duke University strategic planning process led by Provost Sally Kornbluth. The school's new strategic plan intersects with both of those efforts, but also uniquely focuses on issues that faculty leaders identified as most important for the school.



The highest priorities that emerged from this strategic planning process include:

emerged from this strategic planning process include:

- **Becoming a destination of choice** for the best faculty members, students, and staff by nurturing the careers of those we recruit and leading our peers in diversity and inclusion;

- **Having a portfolio of world-class research** across the full spectrum of biomedical sciences, but particularly strengthening our basic science departments, our physician-scientist faculty and our research in population health sciences;
- **Having a campus that inspires** with much needed expansion of laboratory space, a new home for our Doctor of Physical Therapy program and more clinician office space.
- **Collaborating** even more with the Duke University Health System, with other schools of Duke University in Durham and with Duke's new educational institutions in Asia;
- **Expanding and using our resources wisely** to achieve financial security both in the near term and in decades to come.

As we move forward with this new strategic plan, I want to thank all of our alumni and friends for their support in the past and ask for your continued support as we pursue new and ambitious goals.

With warm wishes,

Nancy C. Andrews, MD, PhD
 Dean, Duke University School of Medicine
 Vice Chancellor for Academic Affairs
 Nanaline H. Duke Professor of Medicine
 Professor, Pediatrics
 Professor, Pharmacology and Cancer Biology

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Remembering the Greats

It was my good fortune to attend Duke University School of Medicine, graduating in 1962. That was the era of Deans Davison and Woodhall, Dr. Markee, Dr. Forbus, Dr. Handler, Dr. Stead, Dr. Wyngaarden, and many other greats.

One of the physicians that I particularly enjoyed was Dr. Mort Bogdonoff, who ran a service dealing primarily with patients with “psycho-physiologic” problems. He could be a bit demanding but was always witty and fun to be around. His obituary appeared in the *DukeMed AlumniNews* and I simply wanted to say I enjoyed/appreciated him.

I also saw Dr. Anlyan’s picture in the same issue; he is another great. Unfortunately there aren’t many of that period still around. *

Chuck Colvin, MD ‘62
Birmingham, Alabama

**Since we received this letter, Dr. Anlyan passed away. Read his obituary on page 39.*

Duke Docs Care for Community

I read with great interest (as I always do) the most recent issue of *DukeMed Alumni News*. The article that particularly caught my attention was the one describing the tremendous job the surgical team led by Dr. Rice did in separating the conjoined twins.

These conjoined twins were diagnosed by my office in Fayetteville and cared for by myself; my wife, **Connette McMahon, T’96, MD’00, HS’00-’04**; Dr. Stuart Shelton of Cape Fear Perinatology; and Duke Maternal Fetal Medicine prior to their delivery at Duke by the Maternal Fetal Medicine staff.

We chose to refer to Duke not only based on reputation, but also because we all are Duke graduates and hold the program in highest esteem based on our ongoing personal connections. The real success of Duke Medicine lies not only in those still at the “mother ship,” but also in those graduates giving high level care in the community and continuing to support the university.

Michael R. Jones,
T’96, MD’00, HS’00-’04
Fayetteville, North Carolina

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Grant Aids Up-and-Coming Physician-Scientists

The School of Medicine is one of only 10 institutions nationwide to receive a grant from the Doris Duke Charitable Foundation (DDCF) through its inaugural Fund to Retain Clinical Scientists. Each school will receive \$540,000 over five years.

Designed to bolster the careers of young physician-scientists, the grant will be administered at Duke by Ann



Brown, MD, MHS, vice dean for faculty. According to Brown, the school will fund one to two scholars per year with up to \$50,000 from the grant and matching funds committed to the program by Dean Nancy Andrews, MD, PhD.

The DDCF grant builds on a growing momentum toward supporting young physician-scientists through phases of intense career obstacles.

Duke Medicine Becomes Duke Health

In January, Duke Medicine began the transition to a new name, Duke Health.

Duke Health encompasses all assets and entities within Duke University Health System, Duke University School of Medicine, and Duke University School of Nursing. The change is the result of widespread discussion involving faculty, staff, trainees, alumni, board members, and others, in which a renewed focus on health clearly emerged as a core pursuit in a new

strategic planning framework.

"Duke Health signals our intention to explore more comprehensive approaches to health that extend beyond medical care and into other



DukeHealth

determinants of population health improvement," said A. Eugene Washington, MD, MSC, chancellor for health affairs and president and CEO of Duke University Health System.

The transition will take most of 2016 and will involve changes to signage on Duke clinics and primary care sites, changes to Web sites, and more.

"Importantly, the leading constant is the value we place on the dedicated, compassionate, and high-performing individuals throughout our organization," said Washington. "They are the great strength of Duke Health."

Poss to Lead Regeneration Next

The School of Medicine has launched a new initiative, Regeneration Next, designed to synergize basic and translational research on tissue regeneration throughout Duke's campus.

"With the advent of an aging population, regenerative biology is a research field of rapidly expanding need," said Dean Nancy Andrews, MD, PhD. "Regenerative medicine is a strategy that seeks to replace lost, damaged, or diseased tissue with new, healthy tissue, through procedures not requiring organ donation and transplantation. This new initiative will

Kenneth Poss



promote discovery science, facilitate bioengineering and translational applications toward regenerative medicine, centralize administration for training programs and seminar series, and es-



tablish new coursework for undergraduate, medical, and graduate students and professionals at Duke."

Regeneration Next will be directed by Kenneth Poss, PhD, James B. Duke Professor of Cell Biology. Co-directors are Benjamin Allman, MD, chair and Distinguished James R. Urbaniak Professor of Orthopaedic Surgery; Nenad Bursac, PhD, professor of biomedical engineering; and David Sherwood, PhD, associate professor of biology.

Califf Confirmed as FDA Commissioner

Robert Califf, T'73, MD'78, HS'78, '80-'93, was confirmed in February as the next commissioner of the U.S. Food and Drug Administration. He takes over from Margaret Hamburg, who left the agency in March 2015.

Califf, a professor of medicine, served as vice chancellor of clinical and translational research, executive director and founder of the Duke Clinical Research Institute (DCRI), and director of the Duke Translational Medicine Institute. He has led many landmark clinical trials in cardiovascular disease and is considered an international leader in the fields of health outcomes, quality of care, and medical economics. He is one of the nation's leaders in translational research, which is key to translating scientific advances into clinical care.

"It's a proud day for the DCRI and Duke," said Eric Peterson, MD, MPH, executive director of DCRI. "So many of us have had the privilege to work



Robert Califf

side by side with Dr. Califf through the years, and today marks another milestone in his storied career as a champion for improving patient care around the world."

Curtis to Lead New Center for Population Health Sciences

A new Center for Population Health Sciences in the School of Medicine was launched in February. The center will be led by Lesley Curtis, PhD, a professor in the Department of Medicine and director of the Center for Pragmatic Health Systems Research in the Duke Clinical Research Institute (DCRI).

With a goal of identifying determinants of health and the most effective means for improving health, the center will comprise faculty members from a variety of disciplines including epidemiology, health services research and policy, health economics, health measurement and behavior, and implementation science. It will foster active collaborations with the recently established Duke-Margolis Center for Health Policy, the Duke Global Health Institute, the Center for Community and Population Health Improvement, the Duke Clinical Research Institute, Duke University Health System, and other

Lesley Curtis



entities engaged in the science of population health.

Curtis has led national and international efforts to develop and refine advanced methods for the analysis of large secondary data sets. She currently co-leads the Data Core for the FDA's Sentinel Initiative and the coordinating centers for the NIH's Health Care Systems Collaboratory and the Patient-Centered Outcomes Research Initiative's National Clinical Research Network (PCORnet.)

Duke Launches N.C.'s First Hand Transplant Program

Led by Linda Cendales, MD, Duke has launched the first hand transplant program in North Carolina, joining only 20 such centers in the nation.

The Duke program is part of a clinical trial to determine the safety and efficacy of hand transplantation for people who have lost one or both limbs below the elbow. The trial will also test the effectiveness of a new drug, belatacept, in preventing rejection of the transplanted hand.

"Currently, fewer than 150 people have received hand transplants in the world," Cendales said. "We look forward to offering this option to our patients and to serving our community."

Cendales joined Duke in 2014 from Emory University, where she served as the director of the Vascularized Composite Allotransplantation (VCA) Program and the Laboratory of Microsurgery. She completed training at the Christine M. Kleinert Institute for Hand and Microsurgery in Louisville,

Linda Cendales



Kentucky, where she helped establish the first hand transplant program in the U.S. and helped perform the first two cases in 1999 and 2001.

"People who have lost one or both hands face significant challenges in daily life," said Cendales. "It's difficult to perform activities of daily living and routine tasks that most of us take for granted. Hand transplantation improves quality of life."

Hand transplantation is highly complex, involving an intricate process of connecting bone, blood vessels, muscle, nerve, tendons, and skin. Matching the limb from a deceased donor is also a complex process, adding to the rarity of the procedure.



Modrich Accepts Duke's Second Nobel Prize

Paul Modrich, PhD, professor in the Department of Biochemistry, accepts the Nobel Prize in Chemistry for research in DNA repair.

Come back to
revisit, reconnect, rekindle

alumni awards
brunch with the dean
class dinners
campus tours
free time with your friends
grand rounds

Medical Alumni Weekend

and come back to Duke!
Save the Date
November 10-13, 2016



**Duke Medical Scientist
Training Program**

Events during Reunion
Weekend will celebrate the
50th anniversary of Duke's
renowned MSTP.

Don't miss the chance to renew old
friendships, reminisce about times past,
and celebrate new beginnings during
Medical Alumni Weekend this fall.

**For more information,
please visit
medalumni.duke.edu.**

Make your reservations now!

Accommodations are available at:
Washington Duke Inn (host hotel)
Call 800-443-3853, use group code
405681 for the rate of \$184 a night.

 **Duke University School of Medicine**



Eugene Washington

Chancellor Washington Inducted into Academy of Arts and Sciences

A. Eugene Washington, MD, MSc, chancellor for health affairs at Duke University and president and CEO of Duke University Health System, was inducted into the American Academy of Arts and Sciences in October.

A respected clinical investigator and health policy scholar, Washington has been a national leader in assessing medical technologies, developing clinical practice guidelines, and establishing disease prevention policies, particularly for women's health.

Students, Faculty, and Alumni Elected to Alpha Omega Alpha

The following faculty and alumni were elected to the Duke University School of Medicine chapter of the Alpha Omega Alpha Medical Honor Society for fall 2015: **Kathy Andolsek, MD, MPH, HS'76-'79**, professor in the Department of Community and Family Medicine; **William Steinbach, MD, HS'01-'04**, professor in the Department of Pediatrics and the Department of Molecular Genetics and Microbiology; and **Peter Fecci, MD'07, PhD'07**, assistant professor in the Department of Neurosurgery and the Department of Pathology.

The following medical students were inducted: Abiram Bala, Jared Blau, Alison Brown, Ajay Gopalakrishna, Yamini Krishnamurthy, Cody Nelson, Lowell Nicholson, and Mark Winkler.



Kafui Dzirasa

Dzirasa Wins Presidential Early Career Award

Kafui Dzirasa, PhD'07, MD'09, is among 106 researchers named in February by President Barack Obama to receive the Presidential Early Career Award for Scientists and Engineers.

Dzirasa directs the Laboratory for Psychiatric Neuroengineering in the Bryan Research Building. He is an assistant professor in the departments of psychiatry and behavioral sciences and neurobiology and a member of the Duke Institute for Brain Sciences. His research uses multiple small electrodes in the brains of mice to measure interactions of genes and environment. Ultimately, he would like to develop a "pacemaker" for the brain to restore neural circuits affecting mood and cognition.

"These early-career scientists are leading the way in our efforts to confront and understand challenges from climate change to our health and wellness," President Obama said in a statement. "We congratulate these accomplished individuals and encourage them to continue to serve as an example of the incredible promise and ingenuity of the American people."

The Presidential Early Career Award is the highest honor bestowed by the U.S. government on young researchers. Dzirasa and the other winners will receive their awards at a White House ceremony this spring.

Brain Tumor Immunotherapy Research Wins NCI Outstanding Investigator Award

Two novel immune approaches developed at the Preston Robert Tisch Brain Tumor Center at Duke to treat deadly brain tumors have received nearly \$7 million in funding under the National Cancer Institute's prestigious Outstanding Investigator Award program.

The award recognizes the work of principal investigator Darell Bigner, MD, PhD, director of the Preston Robert Tisch Brain Tumor Center at Duke Cancer Institute. Bigner and the other 42 recipients nationwide were selected for "providing significant contributions toward understanding cancer and developing applications that may lead to a breakthrough in biomedical, behavioral, or clinical cancer research," according to the NCI.

The funding supports additional animal and human studies for two separate immunotherapies—one using a modified poliovirus and another using a bacterial immunotoxin to attack lethal glioblastoma tumors—that are already showing promise in early clinical trials.

New studies will combine each of the immunotherapies with a class of drugs called checkpoint inhibitors, which work to awaken the body's immune system to attack cancer cells.

"This is extremely important support for our work, and we are excited to move forward with the studies," Bigner said.

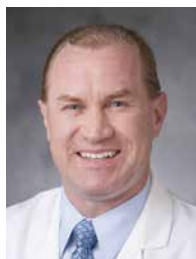
Darell Bigner



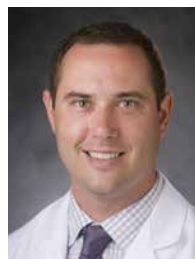
Kathy Andolsek



William Steinbach



Peter Fecci





SHAWN ROCCO

Chair of Neurosurgery John Sampson leads a roundtable discussion with Vice President Joe Biden.

positioned to accelerate discovery in cancer research and its translation into public benefit.”

As part of his visit to Duke on Wednesday, Biden met with Paul Modrich, PhD, professor in the Department of Biochemistry, who shared the 2015 Nobel Prize in Chemistry with Aziz Sanchar, PhD, from the University of North Carolina at Chapel Hill. He also met with Matthias Gromeier, MD, of the Preston Robert Tisch Brain Tumor Center at Duke, whose work has focused on a modified form of the poliovirus as an innovative brain cancer therapy.

5 Faculty Members Named AAAS Fellows

Five faculty members were elected as fellows of the American Association for the Advancement of Science for 2015, in recognition of their contributions to innovation, education, and scientific leadership. The new fellows were recognized in a February Fellows Forum at the 2016 AAAS Annual Meeting in Washington, D.C.

The new fellows are: Bruce R. Donald, PhD, a professor of biochemistry; Christopher Kontos, MD, an associate professor of medicine; Cynthia M. Kuhn, PhD, a professor of pharmacology and cancer biology; Rochelle Schwartz-Bloom, PhD, a professor of pharmacology and cancer biology; and Beth Sullivan, PhD, an associate professor of molecular genetics and microbiology.

VP Biden Brings Cancer “Moonshot” to Duke

Invoking the aspirational spirit that put U.S. astronauts on the moon, Vice President Joe Biden visited Duke Health in February as part of the national “Moonshot” initiative he is leading to advance cancer research.

With Duke Cancer Institute as a backdrop, the vice president cited the unique history of the Research Triangle area, where major universities, biotechnology companies, and federal research agencies have long combined forces, as demonstrating the sort of collaborative efforts that the cancer cure moonshot aims to foster nationwide.

“I’m not naïve that we are going to cure every cancer,” Biden said during a roundtable discussion, noting that more government funding is just one element necessary to achieve the moonshot’s goal of condensing a

decade’s worth of research advances into just five years. Biden urged all groups to work together across academic disciplines, joining business and industry, philanthropic organizations, advocacy groups, and others.

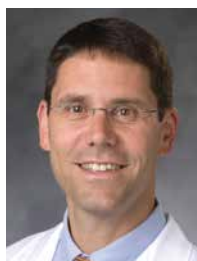
Chancellor A. Eugene Washington, MD, MSc, said the vice president’s visit highlights the leadership role Duke is prepared to play in bringing together those disparate communities in a united front against cancer, which has proven to be a formidable foe.

“Vice President Biden’s visit with our Duke Health community was a great honor,” Washington said. “We very much appreciated the opportunity to discuss how we are conducting cutting-edge research and to have him lead a productive dialogue with our world-class faculty and community leaders. Today’s events are also a tremendous validation of the efforts of people at all levels of our health enterprise. Because of their work, we at Duke Health are uniquely

Bruce R. Donald



Christopher Kontos



Cynthia M. Kuhn

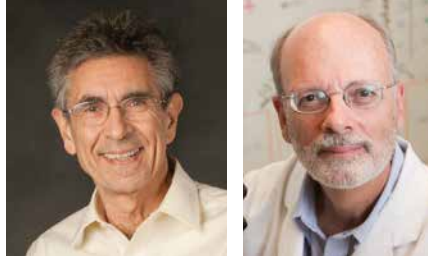


Rochelle Schwartz-Bloom



Beth Sullivan





Bob Lefkowitz

Barton Haynes



From left, Hal Bogerd, Ashley Finlen Copeland, Dean Nancy Andrews, and Pamela Gentry

Appreciation for Research Staff

Dean Nancy Andrews presented Research Staff Appreciation Awards to three staff members at a luncheon held in January. The awards, which will be presented annually, were given in three categories: basic, clinical, or translational, and staff members were recognized for more than five years of service and excellent performance. Receiving awards were Hal Bogerd, a research scientist in the Department of Molecular Genetics and Microbiology, for basic science; Ashley Finlen Copeland, an associate in research in the Department of Medicine, for translational research; and Pamela Gentry, RN, a clinical research nurse, for clinical research.

Lefkowitz, Haynes Elected to Inventors Academy

Duke AIDS researcher **Barton Haynes, MD, HS'73-'75**, and Nobel laureate **Bob Lefkowitz, MD**, have been named fellows of the National Academy of Inventors.

Fellows are recognized for “a prolific spirit of innovation in creating or facilitating outstanding inventions

that have made a tangible impact on quality of life, economic development, and the welfare of society.”

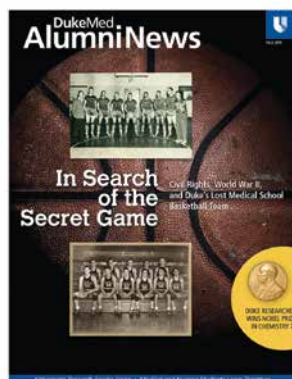
Haynes is the F.M. Hanes Professor of Medicine and director of the Human Vaccine Institute at Duke. Lefkowitz is a James B. Duke Professor of Medicine and a Howard Hughes Medical Institute Investigator in the Department of Biochemistry.

Fellows were inducted on April 15, 2016, as part of the Fifth Annual Conference of the National Academy of Inventors at the U.S. Patent and Trademark Office in Alexandria, Virginia.

The Secret Game Optioned for Movie Rights

The movie rights to *The Secret Game*, by **Scott Elsworth, G'77, PhD'82**, have been optioned by Legendary Pictures, according to *Variety* magazine. The book was the subject of the cover story of the fall 2015 issue of *DukeMed AlumniNews*. It has received numerous honors, including the PEN/ESPN Award for Literary Sports Writing, and it was named one of *Sports Illustrated's* Best Books of the Year for 2015.

Now out in paperback, the book tells the story of a secret, racially integrated basketball game played behind locked doors in 1944 by an unbeaten basketball team from North Carolina College for Negroes and a team of Duke medical students.



Injectable Agent Illuminates Cancer During Surgery

A collaboration among scientists at Duke, the Massachusetts Institute of Technology (MIT), and Lumicell, Inc., has yielded a new injectable agent that causes cancer cells in a tumor to fluoresce, potentially increasing a surgeon's ability to locate and remove all of a cancerous tumor on the first attempt.

A trial at Duke, published in *Science Translational Medicine*, tested the agent, a blue liquid called LUM015, in 15 patients undergoing surgery for soft-tissue sarcoma or breast cancer and found that it identified cancerous tissue without adverse effects.

Currently, cancer surgeons rely on cross-sectional imaging such as MRI and CT to guide them as they remove a tumor and its surrounding tissue. But in many cases, some cancerous tissue around the tumor is undetected and remains in the patient, sometimes requiring a second surgery and radiation therapy.

“At the time of surgery, a pathologist can examine the tissue for cancer cells at the edge of the tumor using a microscope, but because of the size of cancer, it's impossible to review the entire surface during surgery,” said senior author David Kirsch, MD, PHD, a professor of radiation oncology and pharmacology and cancer biology at Duke. “The goal is to give surgeons a practical and quick technology that allows them to scan the tumor bed during surgery to look for any residual fluorescence.”



An App for Autism Screening

A team of researchers and software developers from Duke has introduced a new free iOS app to develop a potential new screening tool for autism and other developmental disorders in children living around the world.

The ResearchKit app, called “Autism and Beyond,” is being offered from the Apple AppStore for use on iOS devices. ResearchKit is a new open-source framework developed by Apple that allows researchers to create app-based studies with a global reach. Parents and children will interact with questionnaires and videos on the app and then receive some feedback, such as how to deal with tantrums or what the child’s apparent risk for autism might be. In some cases, families will be encouraged to seek further evaluations with their health care providers.

“Our goal is to develop a screening, like hearing or eyesight at schools,” said Guillermo Sapiro, PhD, a professor of electrical and computer engineering. “They don’t get glasses, they get a referral.”

New Study May Lead to Less Invasive Breast Cancer Treatment

The first large U.S. study aimed at resolving an ongoing debate about the best way to treat an early sign of breast cancer will launch later this year under the direction of Duke Cancer Institute investigator E. Shelley Hwang, MD.

The study, entitled COMET (Comparison of Operative to Medical Endocrine Therapy) for low-risk ductal carcinoma in situ, received funding through a \$13.4 million, five-year award from the Patient-Centered Outcomes Research Institute (PCORI),

Duke-NUS Collaboration Yields Potential Treatment for Rare Metabolic Disease

Researchers from Duke-NUS Graduate Medical School Singapore (Duke-NUS) and Duke have identified a potential treatment strategy for an often fatal inherited glycogen storage disease.

Published ahead of print recently in the *Journal of Hepatology*, the study provides hope for the management of GSDIa or von Gierke disease, a genetic metabolic disorder that requires lifelong dietary therapy.

“GSDIa is a devastating disease,” said senior author Paul Yen, MD, of the Cardiovascular and Metabolic Disorders Programme at Duke-NUS. “Diet management is currently the only way to manage the disease, but it cannot prevent the more complex symptoms of the disorder related to organ failure.” Yen and colleagues collaborated with GSDIa expert Dwight Koeberl, MD, PhD, a professor in the departments of pediatrics and molecular genetics and microbiology at Duke.

Researchers Find First Primate Model of CMV Mother-to-Baby Transmission

Cytomegalovirus (CMV) is the leading infectious cause of birth defects worldwide, but scientists have been frustrated in their efforts to develop a vaccine to protect against infections. Among the most confounding problems is the lack of animal models that aptly mimic CMV passing from mother to unborn child. Aside from guinea pigs, which have limited similarities to humans, no other mammals are known to pass the virus to their fetuses.

Now Duke researchers have discov-

ered that rhesus monkeys can transmit the virus across the placenta to their unborn offspring. Reported online during the week of October 19 in the *Proceedings of the National Academy of Sciences*, the finding establishes the first primate model that researchers can use to study mother-to-fetus CMV infections, potentially spurring the development of vaccine approaches.

“A huge impediment to CMV vaccine development has been our lack of ability to determine what immune responses would be needed to protect against mother-to-fetus transmission,” said senior author Sallie M. Permar, MD, PhD, of the Duke Human Vaccine Institute.

A Blood Test to Detect Heart Disease Risk?

Combining the investigative tools of genetics, transcriptomics, epigenetics, and metabolomics, a Duke research team has identified a new molecular pathway involved in heart attacks and death from heart disease.

Publishing online in the journal *PLOS Genetics*, the researchers found that stress in a component of cells called the endoplasmic reticulum (ER) is associated with risk of future heart events, and it can be detected in bits of molecular detritus circulating in the blood.

“ER stress has long been linked to type 1 diabetes and Parkinson’s disease, among others, but this is the first indication that it is also playing a role in common heart attacks and death from heart disease,” said senior author Svati H. Shah, MD, associate professor of medicine and a faculty member in the Molecular Physiology Institute at Duke. “It’s also exciting that we were able to measure this ER stress in a small drop of blood, providing a potential way to intercede and lower the risk of a major cardiovascular event.”

an independent, nonprofit organization authorized by Congress in 2010 to support research that enlightens health care decisions.

Hwang, who is chief of breast surgery at Duke Cancer Institute and vice chair of research in the Department of Surgery, will lead the study through the cooperative group, The Alliance for Clinical Trials in Oncology. The research will focus on ductal carcinoma in situ, or DCIS, which is a small cluster of abnormal cells in the breast ducts that has not spread to surrounding tissue.

Identified via mammography and other screening technologies, DCIS is currently diagnosed annually in about 60,000 women in the U.S., and is generally treated with surgery and radiation therapy. In recent years, physicians and researchers have questioned whether those treatments are necessary in all cases, given that DCIS lesions do not grow rapidly or spread in the majority of women with the diagnosis. Treatment can result in side effects, including long-term pain and altered body image, along with significant financial costs to both patients and the health care system. Actively monitoring many of these patients has been recommended as an alternative if research demonstrates it is safe and effective.

"This will be a definitive clinical trial that will help set the course for future DCIS treatment," said Hwang, who has been a leading voice in the national debate calling for a more informed approach to treating DCIS. "It is based on what we are discovering about the tremendous variety we see even in one disease such as DCIS, and how we must design our future treatments to more precisely reflect those differences." Hwang will work with co-principal investigators Alastair M. Thompson, MD, from The University of Texas MD Anderson Cancer Center and Ann H. Partridge, MD, from Dana-Farber Cancer Institute, partnering with The Alliance for Clinical Trials in Oncology.

Zebrafish Model Shows How Cryptococcus Infects the Brain

Most people breathe in airborne cells of *Cryptococcus* every day. For those with healthy immune systems, it's no problem. But for people living with HIV infection or undergoing cancer treatment, a resulting cryptococcal meningitis infection can quickly become deadly.

Scientists at Duke are using transparent zebrafish to watch in real time how the meningitis infection takes over the brain. The researchers injected the organism into microscopic zebrafish larvae, which



video

See how *Cryptococcus* moves through a zebrafish larvae:

research.duke.edu/meningitis-move

have clear bodies, and watched the infection move from the lungs into the blood stream and through the blood-brain barrier. The newly developed fish model is described in *mBio*, a journal of the American Society of Microbiology.

"What's impressive is that, unlike in a mouse or a rabbit, you can actually see the organism producing disease in the live animal," said John R. Perfect, MD, chief of the Division of Infectious Diseases. "Day by day,



it's growing and moving throughout the body. You can't see this anywhere else."

Using a zebrafish to observe the process of infection offers the chance to study a small vertebrate animal with an immune system somewhat similar to a human's. Because the fish are tiny and easy to reproduce, they cost less and are easier to study than a mouse or larger mammal. The larvae are also permeable to small molecules, which will allow scientists to batch-test different drug compounds against the infection relatively quickly and easily, said co-author David Tobin, PhD, assistant professor in molecular genetics and microbiology and immunology.

"This model will allow researchers to screen the whole organism while it is living with an infection," said Tobin. "It will allow us to screen libraries of drug compounds relatively quickly. We can also develop and test mutant strains of *Cryptococcus* in these larvae. This can teach us which factors play a role in infection and those that could be therapeutic targets in the future."

Potential New Shock-and-Kill Strategy Against HIV

A unique molecule developed at Duke, the University of North Carolina at Chapel Hill, and MacroGenics, Inc., is able to bind HIV-infected cells to the immune system's killer T cells. It could become a key part of a shock-and-kill strategy being developed to potentially clear HIV infection.

The molecule is a type of bi-specific antibody known as a Dual-Affinity Re-Targeting protein, or DART. It was engineered by MacroGenics using HIV-targeting antibodies discovered at Duke. Employed increasingly in cancer research, bi-specific molecules

have shown effectiveness in helping the immune system recognize and clear tumor cells. In this case, pre-clinical models demonstrate that DART creates a fatal union between HIV-infected cells and killer T cells.

When Julia Sung, MD, lead author and clinical assistant professor in medicine at UNC, used DART molecules in combination with additional agents that wake up latent reservoirs of the virus hiding in the body, the approach showed early promise as a way to clear HIV infection.

“This is an exciting approach that has the potential to clear a pool of cells that are so hard to get rid of—virus that lies silent and hidden in the host,” said Barton Haynes, MD, the F.M. Hanes Professor of Medicine, director of the Duke Human Vaccine Institute, and a senior author of a study describing the molecule in the *Journal of Clinical Investigation*.

“Waking Up” UTI Cells to Kill Them

While the best antibiotics can wipe out most of the bacteria that cause notoriously difficult urinary tract infections, a few “sleeper cells” often remain. They survive by going dormant, essentially sleeping through the attack that kills off their more active brethren.

A new study has shown that a protein called HipA acts as a kind of molecular Sandman, putting bacterial cells to sleep so they can live another day. The Duke researchers behind the finding say understanding HipA may give them a way to combat drug-tolerant infections. Published in July in *Nature*, the research showed that particularly potent, mutant versions of HipA cause multi-drug tolerance in urinary tract infections.

“This discovery presents us with a new method for combating multi-drug tolerance,” said Richard G. Brennan, PhD, professor and chair of biochemistry.



LES TODD

Devil’s Advocate Dinner

Local alumni and current med students gather for one in a series of Devil’s Advocate Dinners. The dinners provide a unique forum where students discuss career paths, specialties, and lifestyle choices with non-faculty alumni in a relaxed environment.

Thank You Alumni HOSTs!

Thank you to all of the alumni who volunteered for the Helping Our Students Travel (HOST) Program!

We currently have 229 alumni hosts and received 87 requests for a host from current fourth year students. We hope to continue growing the program, especially in areas where we have no hosts, so please volunteer if you can!

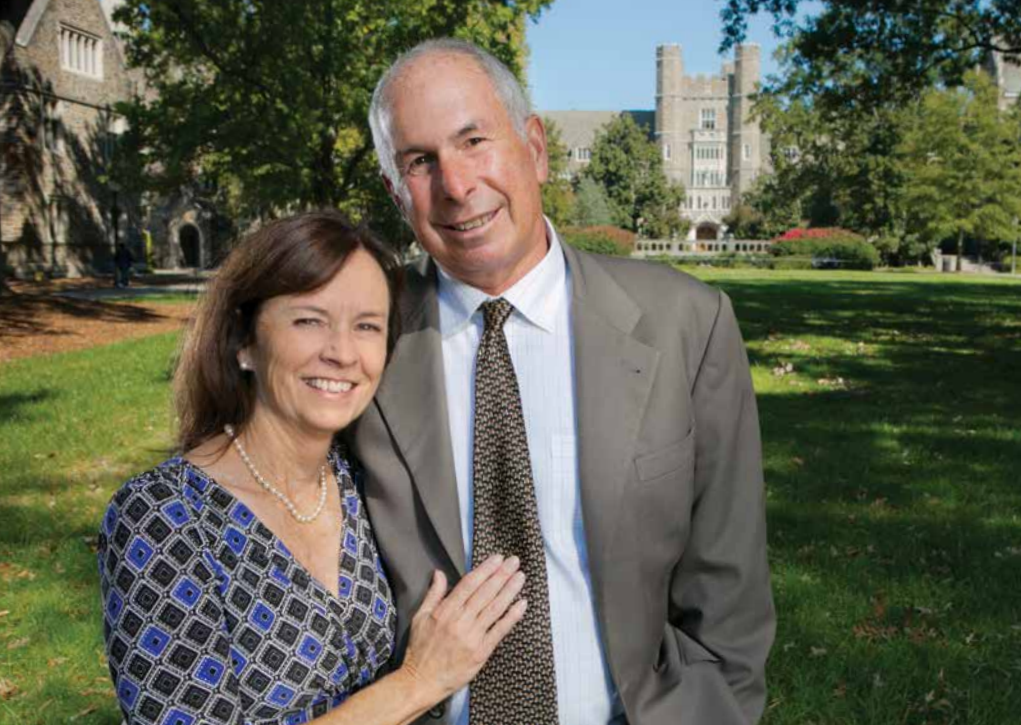
About the HOST Program

The Helping Our Students Travel (HOST) program matches fourth-year medical students with alumni volunteers during residency interviews around the country. Alumni volunteers provide lodging for medical students in their homes during interview travels and/or offer advice to the students about life after medical school and in the community in which they are interviewing.

Most hosting opportunities will be between November and January.

If you would like to be a host or need more information visit bit.ly/DukeMedHost or contact Karen Bernier at karen.bernier@duke.edu.





Lisa and Robert Margolis

Margolis Gift Launches Interdisciplinary Health Center

Thanks to a \$16.5 million gift from the Robert and Lisa Margolis Foundation, Duke in October announced the creation of the Duke-Robert J. Margolis Center for Health Policy.

The new center will have offices at Duke and in Washington, D.C., and will partner the intellectual resources of the university with policymakers and policy analysts in the public and private sectors. It will involve more than half a dozen schools and other units at Duke, including the School of Medicine, School of Nursing, Fuqua School of Business, Sanford School of Public Policy, and School of Law.

“Duke has a long-standing commitment to complex problem-solving in real-world settings, and deriving the highest value from American health care is a challenge perfectly suited to our interdisciplinary skills,” said President Richard H. Brodhead. “We are enormously grateful to Bob Margolis and Lisa for this gift, which will allow Duke to unify its expertise in medicine, business, and policy to make advances in this field.

Robert Margolis, MD’71, HS’70-’72, is former chairman of the board at DaVita HealthCare Partners and

CEO emeritus of HealthCare Partners, a physician-owned and operated medical group, independent physician association, and management services organization.

“Duke was such a wonderful part of my formative years in creating the opportunities that I’ve had,” Margolis said. “My wife and I have talked about how we can give back. We aspire to translate some of the things we’ve learned over the years into true improvements in American health care.

“Duke was such a wonderful part of my formative years in creating the opportunities that I’ve had.”

Robert Margolis

The best way we could think to do that was to say, ‘Let’s look to a place that has incredible medical care, world-class clinical research, an enormous amount of available data, and a history of great interdepartmental collaboration, and see if we can harness all of those strengths along with connections and proximity to Washington to try to fulfill that vision of improving American Health Care.’”

“Since arriving at Duke, I have gained a keen appreciation of the tremendous portfolio of health-related programs arrayed across the university,” said Washington. “We are incredibly grateful and proud that the vision to draw on all the components through the Duke-Margolis



From left, Lisa Margolis, Bob Margolis, President Richard Brodhead, Mark McClellan, Provost Sally Kornbluth, and Chancellor Eugene Washington

Test Your Duke Med Knowledge

Center is being made possible by one of the most distinguished graduates of our School of Medicine.”

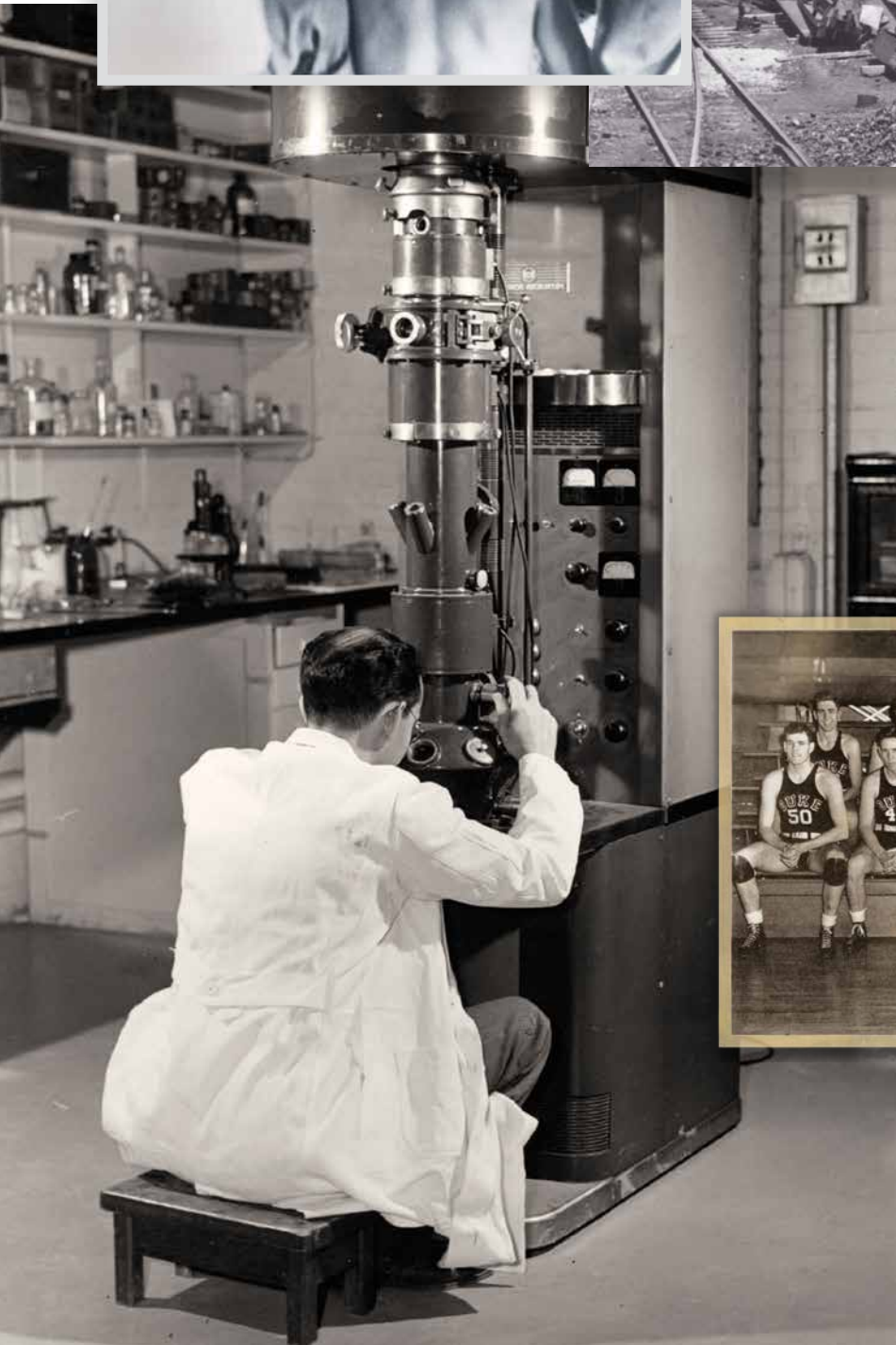
Mark McClellan, a senior fellow at the Brookings Institution and director of the Health Care Innovation and Value Initiatives, will direct the center, which will serve as a national hub for translational policy research and analysis. McClellan will also hold the title of Robert J. Margolis, MD, Professor of Business, Medicine, and Health Policy at Duke.

A former administrator of the Centers for Medicare & Medicaid Services and a former commissioner of the U.S. Food and Drug Administration, he previously served as a member of the President’s Council of Economic Advisors and senior director for health policy at the White House and was an associate professor of economics at Stanford University. He chairs the National Academy of Medicine’s Leadership Consortium for Value and Science-Driven Health Care, co-chairs the guiding committee of the Health Care Payment Learning and Action Network, directs the Merkin Initiative on Payment Reform and Clinical Leadership, is a senior advisor on health policy for the Dell Medical School at the University of Texas at Austin, and is a research associate at the National Bureau of Economic Research.

“I’ve had many opportunities to work with the faculty and staff at Duke, and I appreciate the university’s unique and diverse capacity to support health policy research and health policy reform,” McClellan says. “It is a tremendous privilege to work with the Duke-Margolis Center to make a difference in health care and health.”

Test your knowledge of Duke medical history with this quiz. Submit answers to **dukemed@dm.duke.edu** by Friday, April 29, 2016. The first **3** submissions with all correct answers will each receive a \$50 gift certificate to the Medical Center Bookstore.

- 1 What year did the Duke University School of Medicine open?
 - a. 1930
 - b. 1932
 - c. 1950
- 2 Who was the first dean of the Medical School?
 - a. **Sandy Williams**
 - b. **Wilburt Davison**
 - c. **Guy Odom**
- 3 How many academic departments are in the School of Medicine?
 - a. 22
 - b. 17
 - c. 28
- 4 What is unique about the School of Medicine curriculum that sets Duke apart from other schools?
 - a. **MD students at Duke are able to graduate in three years instead of four, and take 50% of their classes online.**
 - b. **MD students at Duke are required to study abroad for one year and perform 100 hours of community service before graduating.**
 - c. **MD students at Duke study the core basic sciences for one year instead of two, giving them the opportunity to devote their entire third year to a scholarly research project. Students care for patients during their second year, a full year earlier than their peers.**
- 5 Which School of Medicine health professions program was the first of its kind in the nation?
 - a. **Doctor of Physical Therapy**
 - b. **Physician Assistant**
 - c. **Master of Biostatistics**
- 6 Last year, how many patients were actively enrolled in clinical research studies at Duke?
 - a. **1,843**
 - b. **17,969**
 - c. **9,233**
- 7 What is the name of the School of Medicine’s newest masters program which launched this year?
 - a. **Master of Biomedical Sciences**
 - b. **Master of Biostatistics**
 - c. **Master of Public Health**
- 8 How many faculty members are in the School of Medicine?
 - a. 756
 - b. **4,560**
 - c. 2,136
- 9 Approximately how many applications did the School of Medicine receive for the 115 spaces in its MD program last year?
 - a. 7,000
 - b. **2,000**
 - c. 900
- 10 What year did the first female graduate from the School of Medicine?
 - a. 1955
 - b. 1932
 - c. 1978
- 11 What year did the Duke School of Medicine basketball team beat the varsity Duke Blue Devils team?
 - a. 1976
 - b. 1943
 - c. 2010



LIFTING

THE SHROUD

OF POVERTY

AN EAGER GROUP OF MIDDLE

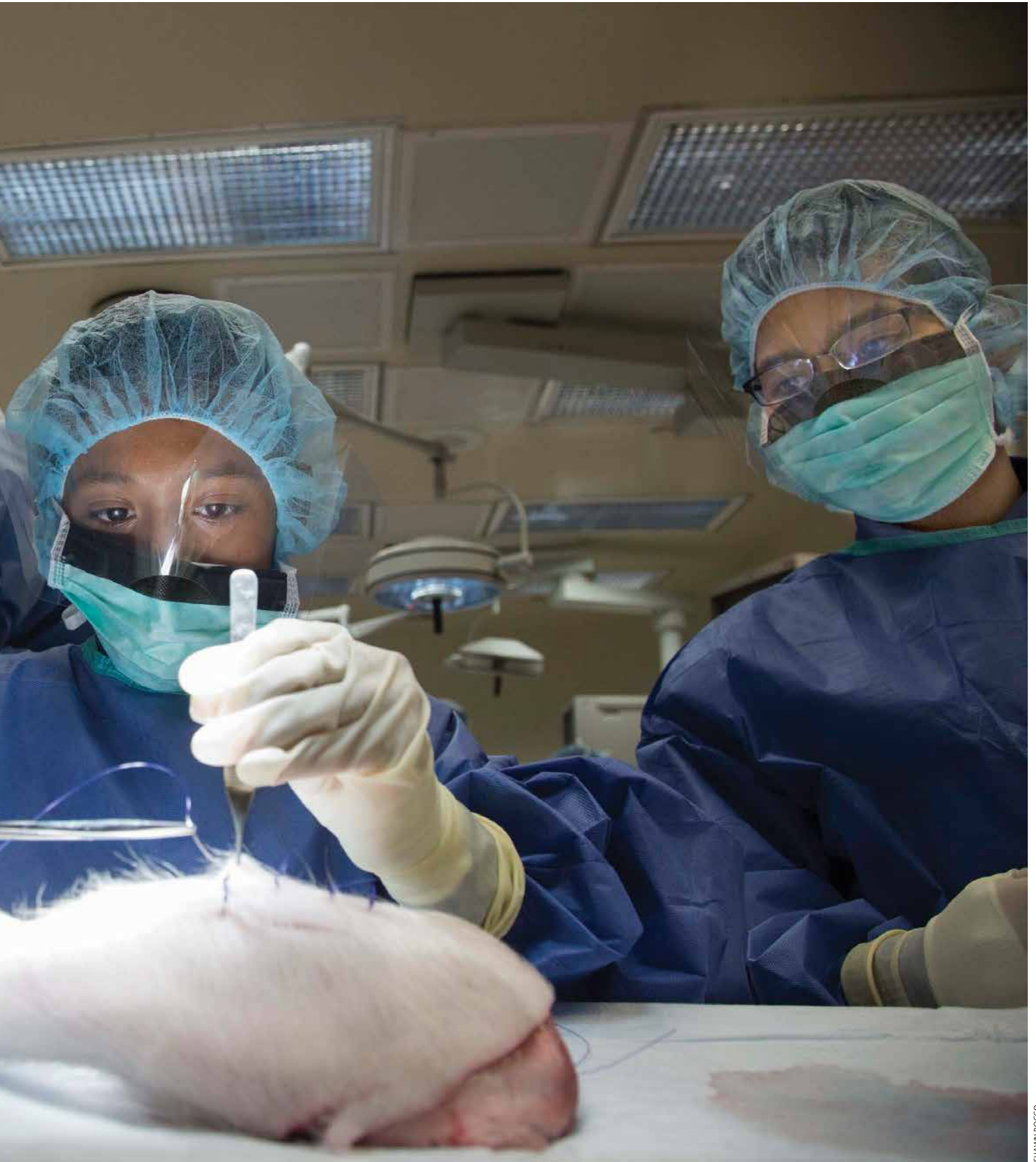
school-aged boys from Durham Nativity School had the experience of a lifetime this fall, when they got to practice surgery on pig feet under the tutelage of renowned hand surgeon Linda Cendales, MD, and her colleagues.

The students received instruction on the correct techniques for making incisions into the skin with a scalpel, suturing the incisions with a suture needle and thread, and tying surgical knots. They then took turns suturing the skin while an instructor provided guidance. The students quickly learned the suturing technique, and at one point, several students began timing each other in a competition for the fastest muscle repair.

Following the suturing skills session, the instructors dissected the feet to teach the students about the anatomical structure. Definitely the highlight of the workshop, the dissection session was peppered with emphatic “whoas” when the students discovered a new, fascinating part of the anatomy, such as how the muscle connects to the tendon and moves a joint.”



A student from Durham Nativity School practices suturing while a Duke surgery instructor looks on.



SHAWN ROCCO

“It is much more meaningful to them to pull on a tendon and see it work than to look at a diagram or listen to a description,” said Mary Anderson, the students’ science teacher. “The expertise of the surgeons...and the excellent instructor-to-student ratio cannot be replicated at school. It was a wonderful first experience with dissection.”

In addition to surgery and anatomy, the students will learn about biologic systems, such as the cardiac system, at the Duke Simulation Lab, where surgical residents undergo training.

The program is part of a new educational outreach program from the Department of Surgery. Called the Academic Success Through Surgical Education and Training (ASSET) program, it aims to foster high achievement in science through surgical education for financially disadvantaged students at the Nativity School.

“There is exceptional talent shrouded in poverty,” said Cendales, an associate professor of surgery and one of the program leaders. “We will all benefit if we can lift that shroud and expose the talent. Duke Surgery is internationally recognized as one of the leading surgery programs worldwide. We are also here

“Serving our community, and contributing in this way, is one of the things that grounds us.”

Linda Cendales

to serve our community. Serving our community, and contributing in this way, is one of the things that grounds us.”

Founded in 2002 by the late chief of trauma surgery Joseph Moylan, MD, Durham Nativity School is a tuition-free middle school for boys



Durham Nativity students in the surgical lab.

from low-income families in the local community. Moylan, a recipient of the 2010 Duke Medical Alumni Association Humanitarian Award, established the school to enable underprivileged boys to achieve academic excellence through a robust, comprehensive 11-year educational program beginning in middle school through the completion of college. Eighty-two percent of graduates attend college.

The Department of Surgery has partnered with the Nativity School in providing career mentorship and educational assistance to nurture the students’ intellectual curiosity and to prepare them for medical school, residency, and beyond.

“Each morning the young men of Durham Nativity School recite a creed that begins, ‘As DNS Men, we will...Dare to Dream Big,’” said Dan Vanelle, head of the school.

“The mission of our school is to prepare and position these young men to fulfill their biggest dreams. We are grateful to Duke Surgery for investing in and making a difference in the lives of these young men.”



SHAWN ROCCO



Gretchen Link and Alden Dudley

“We realized there would be much more purchasing power if we gave these IRAs to Duke.”

Alden Dudley

A DUKE LEGACY

Alden W. “Bud” Dudley, Jr., T’58, MD’62, HS’65-’67, and his family have a long history with Duke. His late wife, **Mary Adams Dudley, WC’59, PhD’66**, and her father, **Raymond D. Adams, MD’37**, were alumni. Alden and Mary’s sons, **R. Adams Dudley, T’86, MD’91**, and **Eric Clark Dudley, T’89**, are both Duke graduates.

When Mary died in 2014, she left all of the assets in an IRA to Duke to establish a scholarship endowment, the Dudley Family Academic Scholarship Fund. Because Duke is exempt from taxes, the assets passing from her IRA

to Duke were not reduced by either estate or income taxes, and the gift was more than sufficient to endow the scholarship fund.

Dudley and his current wife, Gretchen Link (his childhood sweetheart), recently made new commitments to add to the endowment, including a bequest commitment of their IRAs. “We realized there would be much more purchasing power if we gave these IRAs to Duke,” Dudley says. Their goal is to build the endowment so that it will provide two full scholarships.

By making a planned gift to any area of Duke Health, donors get the benefit of consulting with Joe Tynan, JD, executive director of gift and endowment planning, who has 30 years of experience in charitable gift planning, 20 of them at Duke. To learn more about making a planned gift, contact Tynan at joseph.tynan@duke.edu or 919-385-3114.



Joe Tynan, JD

b i r d



m a n



ERICH JARVIS EXPLORES STARTLING SIMILARITIES IN HOW AVIAN AND HUMAN BRAINS LEARN

by Dave Hart



photographs by Jared Lazarus

WHEN ERICH JARVIS, PHD, WAS A BOY growing up in New York, every Thanksgiving and Christmas holiday his extended family would pull some chairs together after the holiday dinner and put on a talent show. The family came from a long line of performing artists—Jarvis’s mother was related to the jazz great Thelonious Monk—and the children would take turns on the living room stage.

“My brothers Marcus and Victor were great singers like my mother and father, so they would sing, and my sister Monique would sing and dance,” Jarvis says. “My thing at that time was being a magician. I read books about Houdini as a little kid, and I taught myself tricks, and my cousin Sean and I would put on a magic show.”

It was in some ways a telling ambition. Although Jarvis no longer makes coins disappear or magically rejoins cut lengths of rope, he’s performing even more astonishing feats as a neurobiologist at Duke.

His primary focus is exploring the neural and genetic basis of vocal learning—the ability to acquire and modify one’s vocalizations by imitating heard sounds, the way young children do when they learn to speak. Besides humans, only a very few animals can do that, including three orders of birds: songbirds, parrots, and hummingbirds.

Jarvis investigates what it is about human and songbird brains that makes vocal learning possible. He and his group have made a number of remarkable discoveries already, uncovering striking similarities in the neural circuits that control song in birds and speech in humans, and recently he identified the group of individual genes that appear to be responsible for vocal learning in both.

But he’s not done yet. Based on those and other previous findings,



his research group is now attempting something that would amaze even Houdini: to produce chickens and mice that can learn to talk.

LIKE SCIENCE FICTION

Jarvis, of course, doesn't really intend to produce a chicken that can recite the Gettysburg Address. He laughs when you describe his research in terms of talking animals. But he admits that you're not entirely off base either.

"In simple terms, you could say that," he says with a smile. "I used to be very quiet about saying it that way, because it makes you sound like a mad scientist. But I'm more confident saying it now, because we've found so much already."

What he is hoping to do is implant chickens and mice, both non-vocal learning species, with the genes that appear to control vocal learning in songbirds and humans, respectively. If those genes can be induced to activate the corresponding neural pathways, Jarvis says, the possibility exists for turning a non-vocal learning animal into a vocal learning one. A chicken that could change its cluck, or a mouse its squeak, by mimicking sounds the way parrots and people can do would represent a transformative advance.

"For one thing, it would absolutely confirm that these are the genes that regulate vocal learning," he says. "It would also mean you could take genes that you know function in a specialized way in the human brain and study them in non-human animals in ways you can't do in humans."

Jarvis admits that it sounds a little bit out there. But his work thus far has led him to the point where he believes it's possible—and potentially translatable to human health.

"Somebody might say, OK, that sounds like science fiction, but what benefit can we get out of it besides just saying that it's really cool?" he says. "Well, it certainly has implications for brain repair. If you have a speech aphasia, for example, we might be able to put stem cells into that area of the brain and get them to connect to the brain stem motor neurons for speech. We might be able to recover your ability to speak."

SWITCHING TRACKS

Jarvis came to songbirds, and to science, via a roundabout route, and his background and vivid family had a lot to do with that journey. Both his parents adopted Buddhism—not the prevailing



Erich Jarvis, center, and graduate students Lindsey Cantin and Greg Gedman discuss their research into vocal learning.

faith in their Harlem and later Bronx neighborhoods, where the sound of gunshots occasionally cracked the night—and taught their children its precepts, along with those of Martin Luther King, Jr. When Jarvis was 6, his parents divorced, and his father, a brilliant man gifted in music and science but troubled by psychological and social difficulties, had trouble maintaining a stable life. After failed attempts at maintaining a steady job, he lived the rest of his life on the streets, in shelters, and, for six years, in caves in Central Park and elsewhere in New York; the *New York Times* ran a front-page story after he was found shot to death, an apparently random crime victim, in 1989.

Jarvis himself eventually swapped magic for dance. An exceptional talent, he was accepted into the High School of the Performing Arts in New York, and had scholarships with two of the most prestigious dance schools in the nation, the Joffrey Ballet and Alvin Ailey. A career on the stage was his for the taking.

But as he approached graduation from high school, he switched tracks entirely.

"I thought, 'What do I really want to do?'" he says. "My mother taught me two very important things: She taught me to find something to do and go at it with passion and commitment, and she said, 'Have a positive impact on society; do something that's going to change the world.' While I was training to be a dancer, I was also taking classes, and I fell in love with science. Being a scientist had always been an unfulfilled dream of my father's. I thought, well, maybe here's a dream I can fulfill. Here was a way to make a difference. So I just changed overnight: I would become a scientist."

"My mother taught me two very important things: She taught me to find something to do and go at it with passion and commitment, and she said, 'Have a positive impact on society; do something that's going to change the world.'"

ERICH JARVIS

THE IMITATION GAME

And that's what he did. He majored in biology and mathematics at Hunter College, where he did extensive research on bacterial molecular genetics and published six papers as an undergraduate. When he decided to continue toward a PhD, he faced another decision.

"I was most interested in two things: the nature of the universe and how the brain works," he says. "In the end, I chose the brain because it's closer to earth, I can touch it, and it controls the ability for dancing and singing."

He went to Rockefeller University for graduate school with the goal of studying how the brain produces complex behaviors. He assumed he'd be working primarily with the usual suspects: mice or non-human primates. But he found himself pulled in another direction when he realized that, unlike those animals, songbirds share one extraordinary characteristic with humans: vocal learning.

"I thought, wow, these songbirds are producing imitative sounds just like we do when we learn to speak," he says. "You can't get that out of a mouse, or even out of a non-human primate. I thought that if I could understand what was happening in the brain that makes that possible, I could better understand the brain in general. So that's how I came to songbirds."

Most mammals can vocalize, of course. Dogs bark, cows moo, and so on. But dogs, cows, and the vast majority of other mammals are locked from birth into a finite repertoire of innate vocalizations; they can't imitate sounds they hear and by that means modify or expand their vocabulary.

Humans, of course, acquire language as children by imitating the sounds they hear their mothers and others around them make. Songbirds learn to sing in the same way, by listening to and imitating their elders.

Jarvis struggled at first at Rockefeller, reeling from the murder of his father, the deaths of grandparents, aunts, and uncles, and the need to help his family financially. But he regained his balance and began exploring how the brains of vocal learners differ from those of non-vocal learners. In studies during his PhD and postdoctoral work at Rockefeller, and after he came to Duke in 1998, he found that the neural circuits and pathways that govern vocalization in songbirds and humans are entirely different from the circuits and pathways that control vocalization in non-vocal learning species.

"Vocal learning behavior is convergent in humans and songbirds," he says. "I suspected that the underlying neural circuitry was convergent too. We discovered that they are. In humans and songbirds, you see a vocal production pathway in the forebrain that you don't see in a chimp or a macaque or a pigeon."

If vocal learning behavior is convergent, and if the neural circuitry is convergent, he wondered, what about the genes? Have songbirds and humans evolved a similar set of key genes and gene expression that might explain how both species can learn "spoken language" in a way that other animals can't?

BIRD BRAINS

In a lab room in the Bryan Research Building at Duke University, dozens of ice chests—ordinary blue and white plastic beer coolers—are stacked in columns, all tipped on their sides so the lid opens downward like an oven door. Jarvis gently opens one, revealing soundproofing foam glued to the interior walls, a microphone dangling through a hole cut in the top, and, in the middle, a small birdcage. Three little multicolored birds—Zebra Finches—flit about, calling and chirping softly.

These birds and others like them helped Jarvis and his



Zebra Finches, like humans, learn to vocalize by mimicking adults.



JARED LAZARIUS

Erich Jarvis and post-doctoral research assistant Gustavo Arriaga are exploring differences in vocalization among species such as mice, songbirds, and humans.

students and collaborators establish, in a 2014 paper in *Science*, that a set of 50 to 70 genes are involved in vocal learning in human and songbird brains. Having isolated those genes, he and his lab group are now delving deeper into how they work and exploring what happens when they are manipulated.

“If we over-express the function of a particular gene in a songbird, its song begins to change,” he says. “If we can learn how to control these genes and brain circuits, we might be able to enhance faulty connections or bypass broken ones in conditions that affect speech.”

And maybe even more than just speech. Another intriguing line of research stems from the discovery by other investigators that only vocal learning species can, well, dance.

“Lots of species can respond to music, but only vocal learners can actually synchronize their movements to the rhythm of music,” Jarvis says. “That led us to the idea that maybe the motor pathways that surround the speech system for spoken language also are unique in humans and vocal learning birds. There’s a connection between the vocal learning circuit and some motor control pathways.”

He picks up a glass microscope slide.

“This is a section of a bird’s brain,” he says. “Here’s the forebrain, and do you see that tiny hole? That’s a laser cut region, were we cut out a part called area x. It’s involved in song learning, and it’s also involved in stuttering; the general region where it is housed, called the striatum, is involved in Parkinson’s disease and also some autistic deficits. One of the things I’d like to pursue with this work is seeing whether we can not only enhance connections but actually repair them.”

A decade ago, Jarvis would have been highly doubtful that he could succeed in these investigations. But he sees big leaps ahead, thanks in large part to revolutionary advances in whole-genome sequencing. This is an advance he knows well, having co-led a four-year international effort called the Avian Phylogenomics Consortium, which sequenced the genomes of every major order

“I experienced a lot of the issues that underrepresented minorities go through. And that has influenced how I approach science.”

ERICH JARVIS

of birds, dramatically redrawing the avian family tree.

“I feel pretty optimistic about the prospect of doing some of these things, or at least getting halfway there, in my lifetime,” says Jarvis, a Howard Hughes Medical Institute investigator. “The genome revolution has changed everything. We’ve published a lot of research, including finding convergent genes in birds and humans, that I wasn’t sure we’d find in my lifetime. And I’ve managed to convince funding agencies like the National Institutes of Health, National Science Foundation, and the Howard Hughes Medical Institute to provide funding to try it. So I feel pretty good about our chances.”

FULL CIRCLE

Jarvis never intended to build his career on songbird research.

“I thought I would leave songbirds after graduate school and move on to something else,” he says. “I expected other people to take our songbird discoveries and apply them to humans. But that didn’t really happen. So I finally just said, OK, I’ll do it myself.”

As he has done that, he finds himself drawing again and again on lessons he learned growing up in New York as a child of a diverse ethnic background. His race has blocked some doors and opened others; being a person of color, he says, has been variously a disadvantage and an advantage—but it is never neutral.

“I experienced a lot of the issues that underrepresented minorities go through,” he says. “And that has influenced how I approach science. When I was growing up, you either followed Martin Luther King or you followed Malcolm X. We took more of the Martin Luther King approach: accept all sorts of different people, bring people together, love everybody, and more. That’s always been how I’ve tried to do science, by building coalitions with people from all sorts of backgrounds.”

The lessons he learned as an aspiring professional dancer, and even as a budding magician, have played a role in his science too.

“Training to become a dancer trained me to become a scientist,” he says. “Dance is all about discipline. It’s about getting used to working crazy hours, about learning how to accept failure, and about creativity. And magic is all about figuring out how things work, about understanding what’s going on that you can’t see on the surface. Science requires all of those things, and I’ve never forgotten them. Everything comes full circle.”

2

medical
alumni
association

honorees

0

DISTINGUISHED ALUMNI AWARD

Robert J. Margolis

HUMANITARIAN AWARD

Juan Batlle

EMERGING LEADER AWARD

Kafui Dzirasa

Audrey Odom

DISTINGUISHED FACULTY AWARD

Howard Rockman

Chris B. Newgard

1

6

**distinguished
alumnus award****Robert J. Margolis,
MD'71, HS'70-'72**

Since the beginning of his career in the early 1970s, Robert J. Margolis has managed to be at the leading edge of medicine. He played a principal role in a host of innovations, including creating new models of coordinated team-based medical care, pioneering what came to be called the hospitalist movement, and reforming the way health care is paid for and monitored for quality.

After earning a medical degree at Duke and completing an oncology fellowship at the National Cancer Institute, Margolis set up a practice with fellow internists in an underserved part of Los Angeles. The challenge of managing many elderly and fragile patients with limited resources required innovative and creative approaches, including establishing one of the nation's first coordinated care organizations, California Primary Physicians Medical Group, which later became HealthCare Partners in 1992.

HealthCare Partners is a physician-owned and operated medical group, independent physician association, and management services organization. Margolis served as managing partner and CEO of the organization from 1992 to 2014. He is now CEO emeritus.

In October 2015, Duke announced that Margolis and his wife, Lisa, have given Duke University \$16.5 million through the Robert and Lisa Margolis Family Foundation to launch a major new health policy center whose goal is to develop and implement new ideas on health reform nationally.

With offices at Duke and in Washington, D.C., the Duke-Robert J. Margolis, MD, Center for Health Policy will partner the intellectual resources of the university with policymakers and policy analysts in the public and private sectors. It will involve more than half a dozen schools and other units at Duke, including the School of Medicine, School of Nursing, Fuqua School of Business, Sanford School of Public Policy, and School of Law.

Essential to the center's success will be translating research data, information, and ideas developed at Duke into policy changes

that can be implemented at the national level.

Margolis currently serves on the board of directors of the Martin Luther King Jr. Hospital in Los Angeles, the Health Care Policy Advisory Council for Harvard Medical School, and the Advisory Board of the Schaeffer Center for Health Policy and Economics at the University of Southern California. He is the longest-serving member and former chairman of the board of directors of the National Committee for Quality Assurance. He is also a member of the Duke Institute for Health Innovation Global Advisory Board.

He is former co-chairman of the board at DaVita HealthCare Partners and previously chaired the California Association of Physician Groups, the California Hospital Medical Center, and the Council of Accountable Physician Practices.

Education: Rutgers University, Duke University School of Medicine

Training: Duke University Medical Center

Current Title: CEO Emeritus,
HealthCare Partners

humanitarian award

**Juan Batlle,
T'75, MD'79, HS'80**



As a world-renowned ophthalmologist, pioneer, and humanitarian, Juan Batlle has helped to return or improve sight for thousands of individuals in the Dominican Republic, Latin America, and elsewhere. He established the Elias Santana Center, the largest provider of eye care for the poor in the Dominican Republic, founding it in 1984 as a small charity clinic and growing it into an international example of a successful clinic for the poor. As part of this effort, he created the largest and most successful ophthalmology training program in the country, and many of his trainees have gone on to open similar centers in Peru, Costa Rica, Venezuela, Ethiopia, and India.

Born in the Dominican Republic to an ophthalmologist father, he left home at age 16 to attend Duke University, where he graduated with honors with a degree in zoology-marine biology. He stayed at Duke for medical school, internship, and residency, with the eventual goal of returning to his homeland to bring modern eye care. His major Duke influences were J.A.C. Wadsworth, MD, and David Sabiston, MD, who he says remains his role model today.

He returned to the Dominican Republic af-

ter two fellowships at the Bascom Palmer Eye Institute and soon become the most noted ophthalmology authority in the country. He not only treats the indigent, but also some of the country's most elite—Major League Baseball players, past Dominican presidents, and international businesspeople.

His pioneering research includes the use of amniotic membrane to repair conjunctival damage, use of implantable contact lenses, and the femtosecond laser approach to cataract surgery. He has taught hundreds of U.S. ophthalmologists on the procedure for implantable contact lenses.

In addition to the Elias Santana Center, he founded and is president of Centro Laser Ophthalmology; is founder and president of the Cornea Bank of the Dominican Republic; and is founder and president of Centro Laser Surgicenter. He founded the Alliance of Institutions Caring for the Handicapped.

He is past president of the Dominican Society of Ophthalmology, the Academic Committee of the Dominican Society of Ophthalmology, and the Pan American Eye Bank Association. He currently is director of the National Committee for the Prevention of Blindness and project director for the Na-

tional Survey of Blindness in the Dominican Republic. Other leadership positions include the International Agency for the Prevention of Blindness, and Vision 2020 Latin America.

Honors include the Pan American Association of Ophthalmology Carl Kupfer Award for the prevention of blindness and the American Association of Ophthalmology Achievement Award.

He said his success would not be possible without the support of Yolanda Logrono—his wife of 35 years.

Education: Duke University; Duke University School of Medicine

Training: Duke University Medical Center; Bascom Palmer Eye Institute

Current Title: Founder and chief of ophthalmology, Elias Santana Center; founder and president, Centro de Microcirugia Ocular y Laser; founder and president, Banco de Corneas de la Republica Dominicana; founder and president, Centro Laser; founder and president, Laser Center; chairman, Vision2020-IAPB

**early career
achievement award****Kafui “Kaf” Dzirasa,
PhD’07, MD’09**

KAFUI DZIRASA IS REGARDED AS ONE OF THE MOST gifted young neurophysiologists ever to be part of the Duke Neurobiology Graduate Program. The National Institute of Mental Health (NIMH) says his work investigating neurocircuitry changes underlying major depressive disorders “is nothing short of groundbreaking.”

Dzirasa combines the reasoning of an engineer and the compassion of a doctor to unite the fields of neurobiology and psychiatry behind a new understanding of psychiatric illness based on the neural patterns of brain networks, not on solely subjective evaluations of symptoms.

His pioneering multidisciplinary studies in mice explore the role of genes, stress, and drugs of abuse in psychiatric illnesses including addiction, bipolar disorder, schizophrenia, depression, and autism.

Dzirasa believes that new technologies could provide better diagnosis and treatment for these diseases, and in a 2012 article in *DukeMed Alumni News* he envisioned what would be akin to a pacemaker for the brain to correct specific abnormalities in brain wave activity.

He joined the Duke Center for Neuro-

engineering as a Duke MD/PhD student to investigate psychiatric disease at the molecular and systems level and soon developed experiments using dopamine transporter knockout mice to study the role of dopamine in sleep-wake disturbance. His work was published in the *Journal of Neuroscience* and focused on how high levels of dopamine interact to deteriorate the boundaries between REM sleep and wakeful states. His findings supported the hypothesis that hyperdopaminergic conditions contribute to the genesis of psychotic symptoms in schizophrenic patients.

In 2012, he was chosen to lead the neuroscience presentation for the National Institutes of Health (NIH) Celebration of Science.

At Duke, he proposed and was granted an unprecedented career path that combined residency in psychiatry with a position as assistant professor running his own lab. In

this hybrid role he has published no fewer than 15 papers and secured both R21 and R01 grants from the NIH.

He is a founding member of the Association of Underrepresented Minority Fellows.

His honors include the Rising Star Translational Research Award from IMHRO (One Mind Institute); the Sidney R. Baer Jr. Prize for Schizophrenia Research from the Brain and Behavioral Research Foundation; the Outstanding Resident Award from the NIMH; The Griot 100 Award; the Robert J. Lefkowitz Society for Physician Scientists; the Appleseed Resident Teaching Award by Duke University Medical Center; and numerous others.

Education: University of Maryland; Duke University School of Medicine

Training: Duke University Medical Center

Current Positions: Assistant professor of psychiatry and behavioral sciences; assistant professor of biomedical engineering; assistant professor of neurobiology; resident in psychiatry, Duke University School of Medicine

**early career
achievement award****Audrey Odom, T'96,
PhD'02, MD'03**

AUDREY ODOM HAS MADE SEMINAL CONTRIBUTIONS in the understanding of infectious diseases, with a focus on malaria. Her research on metabolic pathways, parasite resistance, and signaling molecules in malaria parasites has implications for drug discovery, disease transmission, and infection control.

Her lab aims to improve the fundamental understanding of the basic molecular and cellular biology of the malaria parasite, *Plasmodium falciparum*, in order to identify new antimalarial drug targets. The lab's primary goals are to understand the biological functions of specific metabolic and signaling pathways in the malaria parasite.

In her research of a plant-like metabolic pathway in malaria parasites, called non-mevalonate isoprenoid biosynthesis, Odom performed foundational genetic studies that determined this parasite-specific pathway is required for parasite development. Since 2012, she has also led an international team for malaria drug discovery, which identified a promising class of antimalarial agents.

Odom's lab recently discovered that the malaria parasite makes volatile compounds that can find their way into the breath of children with malaria. She and her colleagues are now exploring the use of low-cost

sensors to provide rapid, accurate diagnosis from a single exhaled breath, which would be a critical development in the war against drug-resistant infections. She and her colleagues have begun clinical trials in Africa to identify compounds that are only present in the breath of children with malaria.

Their work on the malaria volatiles has been featured in national news media, including NPR, *Scientific American*, Public



video

See more about malaria volatiles at the TEDx event:

[youtube.com/watch?v=kj9HYBD-knQ](https://www.youtube.com/watch?v=kj9HYBD-knQ)

Radio International's Science Friday, and *National Geographic's* blog, *The Loom*. Odom also spoke about this work as a featured speaker during a TEDx event in 2015.

Odom first joined the faculty at Washington University School of Medicine in St. Louis as an instructor in 2008 and is now an assistant professor in the departments of pediatrics and molecular microbiology.

A member of the American Society for Microbiology, Odom is chair-elect of the society's Division AA (Free-living and Parasitic Protozoa). She is also an active member of the American Society of Tropical Medicine

and Hygiene and the American Society for Molecular Biology and Biochemistry.

Her honors include receiving the Basil O'Connor Starter Scholar Research Award from the March of Dimes, Innovator Award from the St. Louis Academy of Sciences, Mentor of the Year from Washington University, Clinical Scientist Development Award from the Doris Duke Charitable Foundation, and New Faculty Recruitment Award from the Children's Discovery Institute.

While earning a medical degree and PhD at Duke, Odom was recognized with a national Harold M. Weintraub Award for excellence in graduate studies in the biological sciences. She completed a residency in pediatrics and a fellowship in pediatric infectious diseases at the University of Washington in Seattle.

Education: Duke University, Duke University School of Medicine

Training: University of Washington, Seattle, Washington

Current Titles: Assistant professor of pediatrics, assistant professor of molecular microbiology, Washington University School of Medicine in St. Louis, Missouri

2016

medical
alumni
association

distinguished
faculty award

Christopher B. Newgard,
T'78, PhD



Christopher B. Newgard is internationally known for his studies of cardiometabolic diseases at a basic and translational level. He has made major contributions to understanding of metabolic regulation via application of the new science of “metabolomics” and has also delivered novel insights into the function, growth, and survival of the insulin-producing pancreatic islet cells. This work has fueled deeper understanding of human diseases and conditions such as diabetes, obesity, and cardiovascular diseases.

Newgard came home to Duke in 2002, recruited by former Dean R. Sanders Williams to lead the Sarah W. Stedman Nutrition and Metabolism Center. In 2013, Newgard founded the Duke Molecular Physiology Institute (DMPI), to include the Stedman Center. DMPI and the Stedman Center have established a world-class reputation in metabolic research. They are among only a handful of centers in the country performing the full spectrum of cardiometabolic disease research from discovery science to translational and clinical research.

His numerous honors and awards include the American Diabetes Association’s Lilly Award for Outstanding Scientific Achieve-

ment, the Juvenile Diabetes Research Foundation’s Kayla Grodsky Award for Outstanding Basic Science Research, a Merit Award from the National Institutes of Health, and a Freedom to Discover Award in Metabolic Research from Bristol-Meyers Squibb.

Newgard is also widely recognized as a teacher, leader, and mentor who tirelessly promotes the work and careers of others. He has mentored dozens of predoctoral and postdoctoral trainees, many of whom are now leaders in their fields. He was named the recipient of the 2006 Golden Apple Award for Medical Student Teaching at Duke. In addition, Newgard’s service at Duke includes the Medical Center Executive Council, numerous search committees and Dean’s committees, and the Senior Advisory Committee in the Department of Pharmacology and Cancer Biology.

Before joining the Duke faculty, he was the Gifford O. Touchstone Jr. and Randolph G. Touchstone Distinguished Chair in Diabetes Research, co-director of the Touchstone Center for Diabetes Research, and professor in the departments of biochemistry and internal medicine and the Center for Diabetes Research at the University of Texas Southwestern Medical Center at Dallas.

Education: Duke University, University of Texas Southwestern Medical Center at Dallas

Training: University of California, San Francisco

Current Titles: W. David and Sarah W. Stedman Distinguished Professor, professor of pharmacology and cancer biology, and professor of medicine; director of the Sarah W. Stedman Nutrition and Metabolism Center; founding director of the Duke Molecular Physiology Institute

distinguished
faculty award

Howard A. Rockman, MD



Howard A. Rockman is nationally recognized for his excellence in clinical care, research, teaching, and administration, and for his creativity and productivity as a cardiovascular scientist.

Rockman has conducted innovative and groundbreaking research, especially on the molecular mechanisms of cardiac hypertrophy and heart failure, focusing on the role of G protein-coupled receptors. His work led to a paradigm shift in scientists' understanding of how the heart responds to pathological stresses. In addition, he pioneered the use of mouse models to study the molecular underpinnings of cardiac hypertrophy and was the first to develop a noninvasive means to measure cardiac function in *Drosophila* (fruit flies). His discoveries have led to the development of novel drug therapies to treat heart disease.

He is the recipient of many awards and honors, including a Burroughs-Wellcome Fund Award for translational medicine and

a Distinguished Achievement Award from the American Heart Association. In 2015, he received the distinction of being named a Distinguished Scientist by the American Heart Association, which honors individuals who have made extraordinary contributions to cardiovascular research. He was elected to both the Association of American Physicians and the American Society for Clinical Investigation. He currently serves as editor-in-chief of the prestigious *Journal of Clinical Investigation*.

Rockman is recognized for his passion in mentoring young scientists and physicians. He has trained more than 65 scientists and is actively involved in the teaching of first-year medical students. Rockman is the only recipient of both the Duke School of Medicine Research Mentoring Award and the prestigious Master Teaching Award. Known as a positive and high-energy colleague, Rockman served three years as chief of the Division of Cardiology at Duke and is

currently the director of the Duke Cardiovascular Research Center.

Before joining the Duke faculty in 1999 as an associate professor, Rockman was an associate professor of medicine and pharmacology at the University of North Carolina at Chapel Hill and before that an associate professor at the University of California, San Diego.

Education: McGill University, Montreal, Canada

Training: Victoria General Hospital, Victoria, Canada; Montreal General Hospital, McGill University, Montreal, Canada; University of California, San Diego;

Current Titles: Edward S. Orgain Professor of Cardiology, professor of medicine, professor of molecular genetics and microbiology, professor of cell biology

Nominations are currently being accepted for our 2017 awards.
Visit medalumni.duke.edu for more information.

1950s

Norman H. Garret, Jr., MD'50, DC, and his wife Rebecca have recently moved into a retirement village in Colfax, North Carolina. They have four children, 16 grandchildren, and five great-grandchildren.

Spencer S. Brewer, MD'52, HS'54-'56, DC, and his wife Nancy celebrated their 66th wedding anniversary in June 2015. He retired in 2002 after practicing internal medicine, hematology, and medical oncology at Piedmont Hospital in Atlanta for 46 years. He still attends grand rounds every Wednesday morning. The couple lives in Atlanta.

T. Byron Thames, MD'55, DC, continues to serve as a medical review officer and consultant for Florida Hospital Orlando and fully retired on November 30, 2015. He and his wife Judy have a blended family of five children, eight grandchildren, and six great-grandchildren. The couple lives in Orlando.

Charles A. Wilkinson, MD'56, HS'56-'58, DC, has been retired since 1995. He and his wife Ann have been married 60 years. They will celebrate the wedding of their first grandson in November. The couple lives in Wilmington, North Carolina.

R. Rodney Howell, MD'57, HS'57-'60, DC, has been named the first recipient of the Advocacy Award of the American Society of Human Genetics. Howell is chairman emeritus of pediatrics, professor in the Department of Pediatrics, and member of the Hussman Institute for Human Genomics at the University of Miami Leonard M. Miller School of Medicine. The award honors individuals or groups who have exhibited excellence and achievement in applications of human genetics for the common good. He is a 2007 recipient of the William G. Anlyan, MD, Lifetime Achievement Award from the Duke Medical Alumni Association. He lives in Coconut Grove, Florida.

William "Bill" Painter, T'53, MD'57, DC, has been retired since 1996. He was named a Fellow of the American Academy of Radiology; won the Distinguished Service Award from the Lynchburg, Virginia, Community Council; and won the W.H. Barney, MD, Award for Outstanding Medical Service. He and his wife Karen have two daughters, Amy and Emily, and a son, **William Jr., F'00**. The Painters live in Lynchburg.

1960s

Elaine Eyster Dye, WC'56, MD'60, DC, a distinguished professor of medicine at Penn State Hershey Medical Center in Hershey, Pennsylvania, and director of the Hemophilia and Thrombosis Center of Central Pennsylvania, recently received two distinguished awards. She was named the 2015 National Hemophilia Foundation Physician of the Year and received the 2015 Pennsylvania Medical Society Distinguished Service Award. In 2011, she was honored with a Duke Medical Alumni Association Distinguished Alumna Award. Watch her award bio here: youtu.be/iIEVSYrNrl. She lives in Hershey.

Andrew M. Lewis, T'56, MD'60, HS'63, is helping to develop a model, based on microRNA expression and chromosomal changes, that can be used to systematically study spontaneous neoplastic development in cells growing in tissue culture from any organ or species. He says his classmates might be interested to know that Joseph Beard, MD, who taught dog surgery at Duke from 1957-58, published a paper with Peyton Rouse in 1935 describing the fundamental concept of neoplastic progression. This concept became a fundamental component of the process of neoplasia and represents a basic component of Lewis's model. In family news, he and his wife **Gladys, BSN'60, MSN'62**, have been married for 58 years. They have two sons and four grandchildren. The Lewises live in Leesburg, Virginia.

John L. Opdyke, MD'60, is enjoying retirement by taking daily trips to the gym and playing bridge. He and his wife Suzanne enjoy visiting their three children and two grandchildren in Boston, Colorado, and California. They live in Santa Monica, California.

Lawrence H. Parrott, MD'60, retired in 1995 after 30 years of teaching pathology at the University of South Carolina. His golf game is still sharp, as he recently won the Senior Championship at the Camden Country Club for the third straight year. He and his wife Joy have three children and six grandchildren and live in Camden, South Carolina.

John H. Sadler, T'57, MD'60, DC, says he is "largely retired" from his nephrology career. He still is involved in medicine at the University of Maryland by attending nephrology meetings, serving on several boards, and doing some consulting. His first wife, Joan, died in 2011, and in 2012 he remarried. He and his wife Dawn have one grandchild in high school and two in college. Two other grandchildren are out of college. The couple lives in Baltimore.

Lawrence C. Walker Jr., MD'60, retired in 2010 after 45 years in an OB-GYN practice in which he delivered about 10,000 babies. He worked at Forsyth Hospital in Winston-Salem and at Wake Forest University School of Medicine in a multitude of positions. He and his wife Anne live in Winston-Salem.

Charle S. Hammond, T'57, MD'61, DC, the E.C. Hamblen Professor emeritus of Reproductive Biology and Family Planning at Duke, retired in 2010. He still volunteers his medical services at the Lincoln Community Health Center. Hammond is a Fellow of the Institute of Medicine of the National Academy of Sciences. He and his wife Peggy have a son, **Charles Jr., T'85**, and three grandchildren. They live in Durham.

Donald C. Mullen, MD'61, HS'61-'69, has published a book, *A Radical Change of Direction: Memoir of the Spiritual Journey of a Surgeon*. It centers on a

trip to Kenya that Mullen made in 1981 that helped to turn him to what he calls "true Christ-centered Christianity." The book is available at Amazon, Barnes and Noble, and Westbowpress.com.

Robert K. Yowell, MD'61, HS'64-'69, DC, and wife **Barbara, BSN'62**, recently celebrated their 53rd wedding anniversary. All three of their children have Duke degrees: **Robert, T'88**; **Sally, T'90**; and **Charles, T'92, MD'00, HS'00-'06**. The Yowells live in Durham.

Alden W. Dudley Jr., T'58, MD'62, HS'62-'63, '65-'67, says it was his privilege to be appointed to the editorial boards of four medical journals in 1984, and he continued on the *Journal of Computers in Biology and Medicine* until 2010. He has authored 40 papers for the Journal of Computerized Medical Imaging and Graphics. After the loss of his first wife, Mary, he married Gretchen Link in 2014. She was his girlfriend from grades four through 10. They live in Roanoke, Virginia.

Martin I. Victor, MD'62, HS'62, DC, is retired and doing volunteer work at a military hospital in Melbourne, Florida. He has written a memoir titled *Doctor in Blue*, about his 30-year career as an active duty U.S. Air Force physician with specialties in aerospace medicine and family practice. It is part travelogue and part Cold War history. He and his wife Sara Jane recently became great-grandparents. They live in Melbourne.

Charles A. Woods, MD'62, HS'63, retired from pediatrics and pediatric allergy in 2013 and currently is on the Board of Directors of Mountain Valley Medical Clinic in Weston, Vermont. The nonprofit clinic serves five small Vermont towns. He lives in Weston.

A. Everette James, MD'63, DC, has been honored with a North Carolina Award. Established by the General Assembly in 1961, the North Carolina Award is the highest civilian honor given by the state. Presented annually since 1964, the award recognizes significant contributions to the state and nation in

the fields of fine art, literature, public service, and science. James widely collects, studies, writes about, and shares many forms of art. He and his wife Nancy Farmer live in Chapel Hill, North Carolina.

Carl Eisdorfer, MD'64, HS'64-'67, retired in 2011 as chair of the Department of Psychiatry at the University of Miami School of Medicine. He now lives in Asheville, North Carolina, and is teaching at UNC-Asheville's Osher Lifelong Learning Institute. He and his wife Dr. Susan Eisdorfer recently returned from a vacation in France and Scotland. They have four grown children.

Eugene S. LeBauer, T'60, MD'65, retired in 2013 from pulmonary intensive care medicine. He now enjoys travel, reading, his beach home, and spending time with his children and grandchildren. He also is on six different volunteer boards in Greensboro, North Carolina, where he and his wife Gail live. They have been married 51 years.



▲ **James J. Salz, MD'65**, sent in this photo of himself and his wife Judith posing with six of their 10 grandchildren at the Roar and Snore Safari Camp at the San Diego Animal Park. Salz has moved from a large practice with over 30 employees to a small two-man practice with only three employees, which is a 10-minute, non-freeway commute from his home. He still performs LASIK and cataract surgery. Last year he authored two book chapters and won his NCAA basketball pool, picking Duke as he does every year.

Creighton B. Wright, T'61, MD'65, HS'65-'66, has received the Daniel Drake Humanitarian Award from the Academy of Medicine of Cincinnati. He continues to work in administration and see a few patients at the Mercy Health System. He has accepted a professorship at Mount Saint Joseph University to start a physician assistant program. "I hope to emulate the great success of our teacher and mentor Dr. Eugene A. Stead, whose photo will hang in my office," he says. He and his wife Carolyn have 11 grandchildren in the Greater Cincinnati area.

1970s

James C. Ballenger, MD'70, HS'70-'71, has retired from full-time academic medicine and has made a "successful and happy transition" to a solo and internship practice of forensic psychiatry. He and his wife Susan have three sons and four grandchildren. They live in Isle of Palms, South Carolina.

Carlos C. Campbell, MD'70, is director of the Malaria Center of Excellence at PATH, an international health organization based in Seattle, Washington. He previously served for 22 years as director of the malaria program at the U.S. Centers for Disease Control and Prevention and then helped to build the College of Public Health at the University of Arizona in Tucson, serving as its first dean. He and his wife Elizabeth have a son and daughter who are both medical doctors.

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▲ **John A. Horton, MD'70, DC**, is co-author of *The Inner Game of Stress*, published by Random House. Horton teamed up with noted sports



Bucky Waters (holding the basketball) with his Duke basketball team following his 100th career win in 1971.

Bucky Waters Turns 80

Raymond "Bucky" Waters, head coach of the Duke men's basketball team from 1969 to 1973, and vice chancellor for alumni and development at Duke University Medical Center from 1974 to 2004, turned 80 on December 17, 2015.

News & Observer columnist Barry Jacobs wrote a column about Waters, his controversial career at Duke, and his coaching legacy.

After playing under Coach Everett Case at N.C. State, Waters joined the Duke Blue Devils as an assistant to Coach Vic Bubas, where "he helped guide Duke to prosperity during the 1960s," writes Jacobs. He went on to become the youngest head coach in college basketball at age 29 for the West Virginia (WVU) Mountaineers. Waters is credited with leading a near-seamless racial integration of that team starting in 1965-66.

After a very successful career at WVU, including winning the Southern Conference Tournament and reaching the NCAA finals, he returned to Duke during a time when students at Duke and on college campuses across the country were challenging convention, calling for equal rights for blacks and women, an end to the Vietnam War, and greater involvement in national decision-making. It was the era of Afros, beards, and long hair, and Waters admitted his "drill sergeant" style rubbed many of the players the wrong way. He resigned in 1974 but never left Duke. In addition to his work with the Medical Alumni Association, he spent 40 years as a broadcast analyst for college basketball. He still regularly attends games at Cameron Indoor Stadium, where he enjoys a seat on press row opposite the home bench, "a perch from which he jokingly insists he sends plays to Coach Mike Krzyzewski via 'Polish hand signals,'" writes Jacobs.

learn more

To read the full article, visit:

newsobserver.com/sports/college/acc/duke/article49662450.html

Duke Grads Find Comfort During Humanitarian Deployment



From left to right: Kevan Mann, James Duncan, and Eugene Mamaril aboard the *USNS Comfort*.

James E. Duncan, T'93, MD'97, and Kevan E. Mann, T'91, MD, had run into each other within the U.S. Navy surgical community on several occasions over a few years, but never got acquainted.

That changed the day that President Barack Obama chose his 2015 NCAA men's basketball bracket picks on ESPN. Duncan and Mann happened to be watching it on the same television aboard the U.S. Navy medical ship *USNS Comfort*.

When the President picked Villanova to beat Duke to reach the finals, Duncan and Mann both grunted and expressed displeasure.

"That led to us asking, 'Did you go to Duke?'" Duncan said. "It was kind of funny how we discovered that."

Added Mann, "I remember us laughing as we pieced together why both of us were interested in Duke basketball. With these deployments, it's always a crapshoot who you end up with as a partner and I can't imagine ending up better than with Jim."

Sometime later in one of the ship's 12 operating rooms, nurse **Eugene E. Mamaril, MSN'15**, showed up wearing a Duke scrub cap, and a trio of Duke compatriots was formed.

"Epiphany is a great way to describe the first time I entered the OR when all three of us were proudly wearing our Duke surgical caps," Mamaril said. "I knew immediately it'd be a great deployment!"

The three Dukies were often teamed together during the ship's

six-month humanitarian mission to the Caribbean and Latin America and always made sure to wear their distinctive Duke caps in the OR.

"When all three of us were working together, people would dub our operating room the 'Duke Room' or the 'Blue Devils Room,'" said Mamaril.

The *Comfort's* April through October humanitarian mission was called Continuing Promise 2015 and had an ambitious agenda, spending 10 or 11 days in a dozen different countries providing people in need with everything from basic health care screenings to complex surgeries. The fully equipped hospital ship visited Barbados, Belize, Columbia, Dominica, the Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, and Panama.

Hospital staff completed more than 900 humanitarian-based operations, serving more than 122,000 people.

As a colorectal surgery specialist, Duncan led two surgeries that were particularly gratifying. One involved a young woman in Dominica who had been suffering for the past eight years with a rectal-vaginal fistula.

"On an island of just 70,000 people," Duncan said, "they just didn't have the ability to fix it." His surgery on the woman was successful, and the prognosis was she would be able to lead a full, normal life.

The other involved a young man in the Dominican Republic who had a colostomy following a



learn more

You can find more information about Continuing Promise 2015 at:

facebook.com/navycp and

southcom.mil/newsroom/Pages/Continuing-Promise-2015.aspx

gunshot wound 13 years earlier.

"He was a healthy young guy with no resources to get him off the colostomy," Duncan said. Duncan reversed the man's stoma – or opening – and eliminated the need for the external excretion bag.

"Many of our patients were very grateful, but this young man was especially happy and grateful," Duncan said.

The need for medical care in the Caribbean and Latin America is

great, the trio agreed. Even with help from the U.S. military and non-government organizations like Operation Smile, Project Hope, and others, there remains a large demand for even basic medical care.

"It was very satisfying to be a part of this deployment," Duncan said.

Mamaril fondly remembers interviewing a Dominican boy prior to surgery who took notice of Mamaril's Duke cap.

"He was smiling ear to ear," Mamaril said. "He was a huge Blue Devils fan."

While the Navy ran a tight ship and did not allow for much free time, the *USNS Comfort* did dock in Barbados for several days to give its crew some much needed rest and relaxation. Duncan flew his wife **Deidre, T'93**, and their children, Sophie, 11, and Andrew, 9, to Barbados for some family time at the beach. And Mamaril's wife Liz also made the trip.

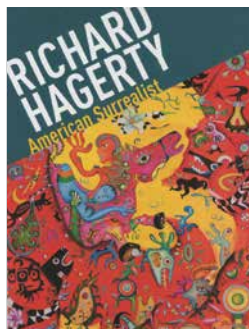
Mamaril said the School of Nursing "was extremely supportive of me and my learning throughout the entire program—including the six months that I was on deployment." He was conferred his degree while on deployment. He plans to stay active in Navy health care and pursue a doctoral program.

As for how the 2015 NCAA men's basketball tournament ended, Duncan said, "We were pleased to prove our Commander-in-Chief wrong when Duke won the whole thing."

- by **Jim Rogalski**

psychologist W. Timothy Gallway and Edd Hanzelik, MD, to write the book, which "offers a unique and empowering guide to mental health in today's volatile world." Gallway is the author of the popular books, *The Inner Game of Golf*, *The Inner Game of Work*, and *Inner Skiing*. Horton and his wife Stella live in Westlake Village, California.

Gale A. McCarty, WC'72, MD'75, HS'75-'81, DC, says that after living in Northern California for three years, she's looking to relocate to mid-Southern California, Washington, D.C., or North Carolina to escape the fires and smoke. She is active in the Rheumatology Research Foundation and the American College of Rheumatology (ACR). She attended the ACR Congressional visits to increase funding for NIH/NIAMS, research training, and to ensure patient access to care. In her free time she likes to drive to Santa Cruz to be a better surfer, and she is still running, skiing, and writing.



▲ **Richard C. "Duke" Hagerty, MD'77**, has had a book published by Evening Post Press titled *American Surrealist: The Art of Richard Hagerty*, which features more than 275 reproductions of his original work over a 40 year span. *Charleston Magazine* of Charleston, South Carolina, recently published a 10-page article about Hagerty and his work, and from November through January, his work was featured at an exhibition at the City Gallery at Waterfront Park. Hagerty was born at Duke University Hospital while

his father **Robert F. Hagerty, MD, HS'50** was in residency, hence his nickname of "Duke." The book is available at eveningpostbooks.com. Hagerty and his wife Barbara live in Charleston.

Bruce A. Perler, T'72, MD'76, was elected president of the Society for Vascular Surgery (SVS) at the society's 2015 annual meeting in June 2015. As president of the 5,300-member organization, Perler will chair a board of directors of more than two dozen vascular surgery leaders and will oversee four governing councils, 26 committees and 400 volunteer members. In addition, he will lead the efforts of more than 20 full-time SVS employees in the society's Chicago and Washington, D.C., offices. Perler is the Julius H. Jacobson II, MD, Professor of Vascular Surgery at the Johns Hopkins University School of Medicine, vice chair for clinical operations and financial affairs for the Department of Surgery and chief emeritus of the Division of Vascular Surgery and Endovascular Therapy at Johns Hopkins Hospital. He and his wife Patti live in Baltimore, Maryland.

1980s



▲ **Barbara J. Martin, T'82, MD'86**, and **Kerry T. Givens, MD'86**, were married in August 2015 at the Demuth Museum in Lancaster, Pennsylvania. This tongue-in-cheek photo was taken at Alcatraz prison in San Francisco. The couple honeymooned in northern California. It is the first marriage for Martin and the second for Givens. A practicing ophthalmologist in Lancaster for 23 years,

Givens is the president of Campus Eye Center. Formerly a practicing neurologist, Martin has been a freelance writer for seven years and is the author of *Elixir: The American Tragedy of a Deadly Drug*. For the ceremony, the bride and groom wore loose, comfortable, matching outfits, they said, "in keeping with institutional policy." They live in East Hempfield Township, Pennsylvania.

Cornelius M. Dyke, T'83, MD'87, has been named associate dean for the Southeast Campus at the University of North Dakota School of Medicine and Health Sciences in Fargo. He and his wife **Melanie, T'83**, have a daughter **Mary, T'10**. His parents **Peter, MD'60**, and **Perry, MD'60**, are both Duke medical school graduates. The Dykes live in Fargo.

Mark S. Humayun, MD'89, HS'90-'93, received the National Medal of Technology and Innovation Award from President Barack Obama this spring. Humayun holds joint appointments at the Keck School of Medicine at the University of Southern California (USC) and the USC Viterbi School of Engineering. He earned worldwide acclaim through his development of a retinal prosthesis system that helps individuals with a certain type of blindness to see. A recent iteration of that system, the Argus II, became the first retinal implant to receive FDA approval two years ago. The award recognizes those who have made a lasting contribution to America's competitiveness and quality of life that helped to strengthen the nation's technology workforce. Humayun is the inaugural Cornelius Pings Professor of Biomedical Sciences, and professor of ophthalmology, biomedical engineering, and cell and neurobiology at USC. He and his wife Karen live in Glendale, California.



JARED LAZARUS

M.D., Olympic medal, or both?

Abigail (Abby) Johnston, T'13, MSII, is a Duke medical student and an Olympic diver who is pursuing both her degree and a medal at the same time. Although it is not unusual for Olympic athletes to go on to become doctors, most finish competing before moving on to medical school.

While a Duke undergraduate, Johnston won a silver medal in the 2012 Olympics in women's synchronized three-meter springboard with partner Kelci Bryant. Majoring in psychology and neuroscience, she was part of the CAPE program (Collegiate Athletic Pre-Medical Experience), a pre-medical mentoring program for female student-athletes. Through CAPE she interned at the Preston Robert Tisch Brain Tumor Center at Duke.

Johnston began medical school at Duke in 2014, while her sights were set on the 2016 Olympics in Rio de Janeiro. Now in her second year, Johnston says she devotes four hours a day to diving and six hours to school, six days a week. Because of her training schedule, she was able to convince Duke officials to allow her to switch her second and third years, devoting this year to research instead of rotations. "Duke has a unique curriculum and culture, and it is the only medical school in the country that would allow me the flexibility to pursue my medical degree while also competing at the highest level in my sport," says Johnston.

In February of this year, Johnston competed in the FINA Diving World Cup in Rio de Janeiro, finishing eighth with partner Laura Ryan, missing an Olympic berth by one spot. Johnston still has an opportunity to qualify to compete individually, which will be determined at the U.S. Olympic Trials in June.

- by Carol Harbers

1990s



▲ David Schoenfeld, MD'94, HS'94-'95, sent this photo of a recent mini reunion of the class of 1994. Eleven classmates gathered in Asheville, where Schoenfeld lives, to play golf and enjoy the Sierra Nevada Brewery. The annual event also was a time to remember their classmate Steve Malchow, MD'94, HS'94-'99, who passed away in 2007. Joining Schoenfeld were David Esposito, MD'94; Fred Chen, MD'94; Drew Schneider, T'90, MD'94; Paul Chai, T'90, MD'94, HS'94-'04; Joff Thompson, MD'94; Robert Lee, MD'94; Christopher Woods, MD'94, HS'94-'97, '99-'02; Joon Yun, MD'94; Darin Smith, MD'94; and Jeff Goldstein, T'90, MD'94.

James R. Jacobs MD'96, was named associate vice provost of student affairs and executive director for Vaden Health Center at Stanford University. He joins the Stanford faculty from the University of Southern California (USC), where he was the medical director and acting executive director for the Engemann Student Health Center and had a joint appointment as associate professor of clinical pediatrics at the Keck School of Medicine. Before his tenure at USC, Jacobs served as director of student health services at Ohio State University and Syracuse University. He lives in Los Angeles.

Jason D. Hickey, MD'99, L'01, has been named chief executive officer (CEO) for Blue Cross and Blue Shield of Tennessee. Hickey has served as chief operating officer since 2012 and CEO-elect since June. Before coming to Blue Cross, Hickey was a principal at McKinsey & Co., where

he led strategic health care consulting and management teams for one of the world's leading management consulting firms. There he was recognized as the top expert on health care reform. As a member of former Tennessee Governor Phil Bredesen's cabinet, Hickey served as director of the TennCare Bureau from 2004 to 2006. In this role, he led efforts to reform the TennCare program and ultimately return it to financial stability. He lives in Lookout Mountain, Tennessee.

2000s

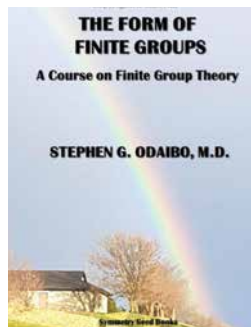
Michael A. Bernstein, T'99, MD'03, was selected as the 2015 recipient of the prestigious Dr. Melville G. Magida Award, which recognizes a young physician who has shown a notable capacity for patient treatment and care and a special sensitivity to patient-physician relationships. The annual award is presented by the Fairfield County Medical Association and the Rosenthal Family Foundation of Shelton, Connecticut. Bernstein is a member of Pulmonary Associates of Stamford. He leads the bronchoscopy and advanced pulmonary procedures team at Stamford Hospital and serves as the associate director of critical care medicine. He also is a co-director of the Pulmonary Nodule and Lung Cancer Screening Program at the hospital. Bernstein is board certified in internal medicine, pediatrics, pulmonary disease, critical care medicine, and hospice and palliative care. He lives in Stamford, Connecticut.



▲ **Stephanie G. Vanterpool, MD'05, MBA'15**, has joined the University of Tennessee (UT) Department of Anesthesiology as assistant professor and director of Comprehensive Pain Services for the UT Medical Center in Knoxville. Under her direction,

the department has established a new comprehensive pain center with the goal of helping patients reclaim relief and function. She is enjoying living in Knoxville with her husband Reggie and their son Nathaniel.

Loren K. Robinson, MD'09, was named in August 2015 as Pennsylvania's deputy secretary for health promotion and disease prevention. She also moonlights as an overnight physician at Abington-Lansdale Hospital in Lansdale, Pennsylvania. She worked there on Christmas from 7 a.m. to 7 a.m., and she was written about in the *Philadelphia Inquirer*. Read the article at ow.ly/X3I9E. Robinson recently completed a master's degree in public-health policy research at the University of Pennsylvania. She lives in Philadelphia.



▲ **Stephen G. Odaibo, MD'10, HS'10-'11**, recently published a math textbook on finite group theory. The book is titled *The Forms of Finite Groups: A Course on Finite Group Theory*. All proceeds will go to the Dr. James Robert Ward Jr. Memorial Scholarship Fund at the University of Alabama Birmingham. Odaibo is a retina specialist at Medical Associates Clinic in Dubuque, Iowa.

1970s

Russel E. Kaufman, MD, HS'73-'78, the president emeritus of the Wistar Institute, received the Wistar Award at a gala celebration in October 2015. It is a biennial award given to an individual who embodies the qualities of compassion, integrity, generosity, commitment, and vision that led the founder of the Wistar Institute to create and endow the institute in 1892. Kaufman was the first president and chief executive officer of the Wistar Institute and served in that role for 13 years. He is a former associate vice chancellor for academic affairs at Duke. The Wistar Institute is an international leader in biomedical research with special expertise in cancer research and vaccine development. Kaufman and his wife Jane live in Philadelphia.

1980s

Paul A. Gurbel, MD, HS'86-'90, a world-renowned interventional cardiologist and researcher, has joined Inova Heart and Vascular Institute in Fairfax, Virginia, as director of interventional cardiology and cardiovascular medicine research. He previously was at Sinai Hospital of Baltimore, where he served as the director of cardiovascular research and the director of the Sinai Center for Thrombosis Research, which he founded in 1997. He also is a professor of medicine at the Johns Hopkins University School of Medicine and adjunct professor of medicine at Duke University School of Medicine.

1990s

R. Morris Friedman, T'84, MD, HS'89-'95, has been practicing urologic surgery in Winston-Salem, North Carolina, since 1995. He was recently appointed to a second term on the board of Hospice and Pallia-

tive Care Center Foundation and currently serves as senior warden of St. Paul's Episcopal Church. He and his wife Colleen live in Winston-Salem.

Gary W. Procop, MD, HS'92-'96, was elected president of the Trustees of the American Board of Pathology. He also was recently honored by the College of American Pathologists with the Distinguished Patient Care Award for his national work during the Ebola crisis. He also received the Mastership designation by the American Society of Clinical Pathology for his groundbreaking work in test utilization management. He is the medical director of enterprise test utilization and consultative services; director of molecular microbiology, virology, mycology, and parasitology; and professor of pathology at the Cleveland Clinic Lerner College of Medicine in Cleveland, Ohio.

2000s



▲ **Rosanna P. Bahadur, MD, HS'03-'04**, who completed a cornea/external diseases and refractive fellowship at Duke, has been named section chief of ophthalmology at the G.V. Sonny Montgomery Jackson, Mississippi, Veterans Affairs Medical Center.

Robert S. Abernathy, MD'49, of Little Rock, Arkansas and Durham, North Carolina, died Jan. 29, 2016, at his home in The Forest at Duke. He was 92. He served as a physician in a U.S. Army MASH unit in Korea in 1952. He earned a doctorate of microbiology from the University of Minnesota in 1957, and then he and his wife Ros joined the Department of Medicine at the University of Arkansas for Medical Sciences (UAMS). He served as chair of the Department of Medicine from 1967 to 1977, and then became the director of the Division of Infectious Diseases from 1977 until his retirement in 2002. He served UAMS and the Little Rock Veterans' Administration Hospital for 45 years.

Anne Preston Askew, MD'56, died Oct. 27, 2015 at her home in Bayleaf near Raleigh at the age of 83. She practiced pediatric medicine in Raleigh for almost 35 years until a horseback riding accident in 1995. She cared for multiple generations of patients. She eagerly pursued and enjoyed numerous interests including golf, tennis, and piano. She and her husband Blake founded the Red Mountain Foxhounds.

Alice-Eugenia Robin Black-Schaffer, MD'50, of Bloomington, Indiana, died Jan. 29, 2015. She was 99. Before retiring in 1989, she was an Indiana University Student Health Center doctor, where she attended to thousands of students for over two decades. She lived for several years in Japan, where her husband served on the Atomic Bomb Casualty Commission. After her children were in school, she became an emergency room physician for several hospitals around Cincinnati. She created the ISMAP multi-lingual medical health questionnaire for use in universities and medical facilities.

Alan B. Carter, T'58, MD'62, HS'63-'71, died in Minneapolis on Oct. 28, 2015, at age 79. He spent two years as a U.S. Army physician in Heidelberg, Germany, and was in a private practice for many years in Raleigh. He was involved in setting up a number of child treatment programs at various mental health centers.

Scott R. Clarke, MD'95, of Carrboro, North Carolina, died at his home on Nov. 1, 2015, after a 20-month battle with non-Hodgkins lymphoma. He was 48. He had a 15-year career in general otolaryngology with North Carolina Eye, Ear, Nose, & Throat in Durham. He was a master at coaxing reluctant children into ENT exams. An avid runner for his entire adult life, he kept up his practice of regular runs even during 11 rounds of intensive chemotherapy.

Michael H. Clayton, MD, HS'82-'85, a long-time Albuquerque physician, died unexpectedly Dec. 1, 2015, at the age of 64 while out jogging with his dog, Slim. He started an allergy practice in Albuquerque in 2000, and for the past several months before his death he also worked part-time at University of New Mexico Hospitals in pediatric immunology.

Samuel R. Fisher, MD'76, HS'76-'81, died Nov. 25, 2015, at the age of 65. Fisher was a professor of surgery in the Division of Head and Neck Surgery & Communication Sciences at Duke University Health System. He was recognized as an expert in the diagnosis and treatment of melanoma of the head and neck. He had a thriving practice at Duke for more than 40 years, during which time he helped to train many current head and neck surgeons.

Thomas E. Fitz, MD'50, HS'50-'53, died in his sleep on Jan. 5, 2016. He was 94. He was a two-time recipient of the The Order of the Long Leaf Pine. The award is the highest civilian honor conferred by the North Carolina governor. He joined the U.S. Army Air Corps shortly after the start of World War II, where he flew P-47 fighters and other aircraft. He practiced internal medicine and cardiology in Hickory, North Carolina, and was beloved by his patients.

John T. Flaherty, MD'67, of Cambridge, Massachusetts, died on Sept. 1, 2015, of complications of Parkinson's disease and surgery. He was 73. After serving in the Public Health Service at the National Institutes of Health and training in internal medicine and cardiology, he served on the faculty of Johns Hopkins University School of Medicine in the Division of Cardiology for 18 years. He left there to become executive director of clinical development at Merck, and later worked at Sonus Pharmaceuticals, Inc., where he was senior vice president and chief medical officer. He also served as vice president of medical affairs at Transkaryotic Therapies.

John R. Gill Jr., MD, HS'55-'57, of Washington, D.C., died Oct. 11, 2015, in Bethesda, Maryland, after a brief battle with cancer. He was 86. In 1957 he began a 30-year career as an endocrinologist at the National Institutes of Health. During his career he contributed many important research discoveries in the fields of hypertension and diseases of the adrenal gland. He retired in 1988 with the rank of medical director. He continued his career as medical director emeritus until 1995.

John S. Gould, MD, HS'74-'75, died at home in Vestavia Hills, Alabama, on Sept. 29, 2015, after an eight-month illness. He was 76. At the completion of an internship and general surgery residency, he joined the U.S. Navy and was stationed in San Diego, California. During the first year of his two-year assignment, he served as medical officer aboard the heavy guided missile cruiser *USS Canberra*, which was deployed to Vietnam. During that time he earned the Navy Commendation Medal for outstanding performance in the care of war casualties. He was a sought-after orthopaedic surgeon and was a faculty member at the University of Alabama at Birmingham (UAB) and the Medical College of Wisconsin in Milwaukee. In 2014, he was awarded the title of professor emeritus at the UAB School of Medicine.

William T. Hardaker, MD'72, HS'73-'79, a professor of orthopaedic surgery at Duke and director of the Duke Orthopaedic Residency Training Program, died at his Durham home on Dec. 4, 2015. He was 73. As residency director, he recruited and trained more than 250 orthopaedic residents and was affectionately known as "The Rock." He was an active participant in Pediatric Outreach Clinics throughout North Carolina. As a pilot in the U.S. Marine Corps during the Vietnam War, he served in the Marine Fighter Attack Squadron, flying more than 285 combat missions.

Anthony V. Keese, MD'43, died at his home in San Luis Obispo, California, on Aug. 12, 2015. He was 98. He was one of the original leading orthopaedic surgeons in San Luis Obispo for over 42 years until he retired at the age of 75. He co-founded the Sierra Vista Hospital and the San Luis Medical Clinic and volunteered weekly at Chris Jespersen School, providing medical care for children with special education needs, and donated his services at the San Luis Obispo County Hospital. His other lifelong passion was cattle ranching. He was named Citizen of the Year by the San Luis Obispo Chamber of Commerce, and Cattleman of the Year by the San Luis Obispo County Cattlemen's Association.

John M. Kilby, MD, HS'90-'93, of Mount Pleasant, South Carolina, died Aug. 10, 2015. He was 53. He was an internationally recognized expert in the care of patients with HIV infection. Positions he held include chief of the Division for Infectious Diseases at the Medical University of South Carolina and faculty member at the University of Alabama at Birmingham (UAB), where he served as the medical director of the UAB HIV Clinic. He was a pioneer in groundbreaking clinical studies involving viral entry inhibitors and immune-based therapies for HIV infection, including T-20, a novel drug for the treatment of AIDS, and was in charge of the federally funded Ryan White programs, which help support clinical care for over 1000 HIV-infected adults and children from across South Carolina.

Stuart B. Kincaid, MD'76, of Westwood, California, died Oct. 1, 2015, from pancreatic cancer. He was 65. Throughout his career, he was ranked among the top plastic surgeons in the country. He began his professional career in San Diego in 1989, and in 1995, he started his own practice and eventually operated offices in both La Jolla and Temecula, California. He also regularly participated in charitable medical trips, providing free reconstructive plastic surgery services to children and adults around the world.

Tillinghast G. Lybass T'57, MD'61, HS'61-'63, DC, a longtime resident of North Palm Beach, Florida, died Aug. 8, 2015. He was 79. While an undergrad and medical student at Duke he was awarded the Roche Award for graduating at the top of his class and was a member of Alpha Omega Alpha Medical Honor Society. He joined the Palm Beach Medical Group in 1968, where he specialized in pediatric allergy. Subsequently, he started a solo practice in West Palm Beach. Upon his retirement from medical practice in 1995, he became a tree farmer with forests in Marion and Levy County, Florida.

Hugh M. McArn Jr., MD'53, of Laurinburg, North Carolina, died in his sleep on Aug. 4, 2015. He was 91. He served in the U.S. Marine Corps in Guam until his honorable discharge in 1945. He established a medical practice in Laurinburg in 1955, delivering babies, making house calls, and caring for some of the county's poorest people. He went on several mission trips to Mexico.

Rachel Nunley Meadows, G'55, PhD'75, of Canton, Ohio, died Feb. 1, 2016. She was 91. Most of her professional life was in academic and clinical teaching, and she retired from Duke University School of Medicine and the University of North Carolina, where she held joint appointments.

Francis A. Morris Jr., MD'52, died Aug. 27, 2015, at age 87. He trained in plastic surgery with a specialty in hand surgery. During the Korean War, he was a captain in the U.S. Army, where he was chief of surgery for the 34th MASH Hospital near the 38th parallel. He set up a medical practice in Austin, Texas, as Austin's first plastic surgeon. He became a mentor for many young doctors to follow. He served others elsewhere in the world through gifts of surgery and was instrumental in helping cleft palate patients in Haiti.

Daryl H. O'Brien Palmer, MD, HS'79-'82, of Montvale, New Jersey, died Oct. 21, 2015. She was 59. She worked at Metropolitan Hospital in New York City prior to joining Broadway Pediatric Associates in Westwood, New Jersey, 25 years ago. She was a board-certified fellow of the American Academy of Pediatrics, and *Inside New Jersey* magazine named her one of New Jersey's top doctors in 2013.

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Derek A. Persons, T'84, PhD'90, MD'91, HS'95-'97, of Memphis, Tennessee, died Sept. 28, 2015, after a long illness. He was 53. In 1996, he joined the faculty at St. Jude Children's Research Hospital in Memphis and directed a successful research program in the field of gene therapy for sickle cell anemia and beta thalassemia.

Adhemar W. Renuart III, T'52, MD'56, HS'56-'57, of Oxford, North Carolina, died Aug. 19, 2015. He was 84. Following a Duke residency in pediatric neurology, he worked at Duke and the Murdock Center in Butler before going into private practice at the Durham Clinic near the end of his career. He also served in the U.S. Air Force for two years, stationed at Maxwell Air Force Base in Montgomery, Alabama.

Benton S. Satterfield, M'62, of Raleigh, North Carolina died Dec. 14, 2015. He was 79. He was in medical practice for over 47 years, retiring in 2013 after delivering more than 5,000 babies. He served in the U.S. Air Force from 1966-1968.

George C. Schwarz, T'57, MD'60, of Augustine, Florida, died June 9, 2015. He was 79. He practiced pediatrics and pediatric psychiatry. In 1973, he was recruited by the White House Special Agency for Alcohol and Drug Abuse in Washington D.C., to establish a Youth Health Care Center in Frankfurt, Germany, for dependent adolescents stationed with their families in Europe. His career included a dual professorship at the University of Florida in pediatrics and child psychiatry. He served the Florida School for the Deaf and Blind for decades as a Psychiatric Consultant and was instrumental in implementing mobility training for grade school students.

David W. Sime, T'58, MD'62, named Duke's most outstanding athlete of the 20th century, died Jan. 12, 2016, at Mt. Sinai Medical Center in Miami Beach, Florida, following a long battle with cancer. He was 79. Sime was once described as "one of the fastest humans of all time" and was named by *Sports Illustrated* as "Superman in Spikes." He won a silver medal in the 100-meter dash at the 1960 Rome Olympic Games. He also was an All-American center fielder, turning down many Major League Baseball offers; ACC Athlete of the Year; and a football player for Duke who was drafted in 1959 by the Detroit Lions, but never played. Sime practiced ophthalmology in Miami, Florida, and was a pioneer in Laser Eye Surgery. He was the Miami Dolphins team physician during the 1972 perfect season, remaining close friends with Coach Don Shula and quarterback Bob Griese.

Otto H. Spoerl, MD, HS'60-'63, of Seattle, Washington, died August 19, 2015. He was 82. After residency at Duke he moved to Seattle to work at the University of Washington and at Harborview Trauma Center. In 1970, he was the first physician hired when the Group Health Cooperative opened its first mental health department. He spent several years in New Zealand working with the indigenous Maori population. He climbed Mt Rainier, built toilets in Nepal, and traveled to almost 100 countries.

Richard A. Stone MD, HS'72-'73, died Jan. 4, 2016, at his home in Rancho Mirage, California. He was 73. During a two-year fellowship in nephrology at Duke he was the first to isolate dopamine beta hydroxylase from human pheochromocytoma. His significant contributions in the fields of nephrology and hypertension have been published in multiple renowned medical journals and even the *National Enquirer*. He served on the faculty at the University of California, San Diego School of Medicine, followed by more than 30 years of private practice in nephrology and hypertension at Eisenhower Medical Center.



Passing of Chancellor Anlyan

WILLIAM G. ANLYAN, MD, HS'49-'55, who began his 40-year career at Duke as a medical intern and went on to become professor of surgery, dean of the School of Medicine, and chancellor for health affairs, died January 17, 2016. He was 90 years old.

Anlyan was a visionary leader over his four decades at Duke and was instrumental in achieving many of the university and its health enterprise's most important milestones. He was chancellor and professor emeritus as well as a trustee of The Duke Endowment.

During Anlyan's tenure as medical school dean and chancellor from 1964-88, he presided over a major expansion that included the construction of Duke University Hospital—the hospital's bed tower bears his name—and nearly 4 million square feet of new or renovated facilities.

He brought international attention to Duke and was known as an innovator in medical education and a mentor to trainees and colleagues. In 1995, he received the Duke Medical Alumni Association's inaugural lifetime achievement award, which was named in his honor.

Anlyan was raised in Egypt, the son of a British civil servant. He came to the United States in 1943 to enroll at Yale University, from which he received both his bachelor's and medical degrees. In 1949, he came to Duke for an internship in general and thoracic surgery. After completing residency training, he became an instructor of surgery and two years later became an assistant professor of surgery.

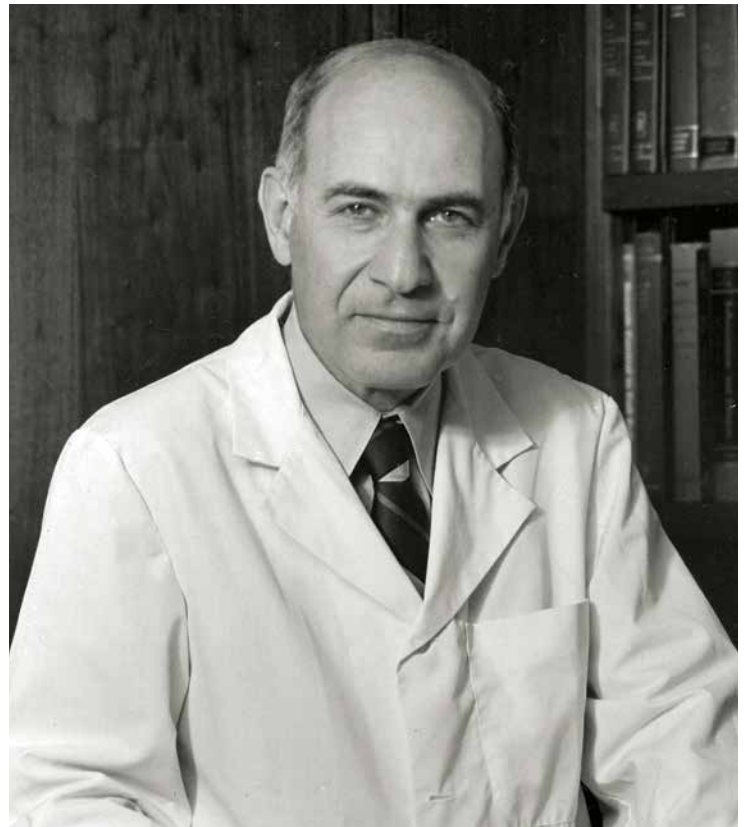
In 1961, he became a full professor of surgery, then associate dean of the School of Medicine in 1963. A year later, he became dean, a post he held until 1983. Anlyan then served as chancellor for health affairs—the first time that title was used—and from 1988-90 was executive vice president and chancellor for health affairs. From 1990-95 he was chancellor of Duke University.

Nationally, Anlyan played a leadership role in the Association of American Medical Colleges (AAMC), serving as the first chairman of the Council of Deans and chairman of the assembly. He was a founding member of the Institute of Medicine of the National Academy of Sciences and a recipient of the Abraham Flexner Award for his contributions to medical education.

He served as chair of Yale University Council's Committee on Medical Affairs, chair of the Cornell Medical College Board of Visitors, and member of the Emory Medical School Board of Visitors. Anlyan was chairman emeritus of Research! America, a national organization promoting public education in support of biomedical research, and a recipient of its inaugural Lifetime Achievement Award.

Anlyan also left his mark on the international medical scene. He was active in the World Health Organization, led Duke's delegation to the People's Republic of China in 1975 to consult on health care, and served as the U.S. delegate to a number of international conferences on medical affairs.

In North Carolina, Anlyan served as chairman of the North Car-



olina Governor's Commission for Better Health for North Carolinians, was a member of the Advisory Council on Comprehensive Health Planning and the Governor's Commission on Community Health Care, and chaired the Governor's Task Force on Health Objectives for 2000. He also served on the board of directors of the N.C. Institute of Medicine and as a trustee of the North Carolina School of Science and Mathematics in Durham.

“Bill Anlyan was a towering, beloved figure in the history of Duke Health. There is simply no question that the health enterprise at Duke would not be the world-class institution that it is today without Bill's vision and leadership.”

A. Eugene Washington, MD, MSc
Chancellor for Health Affairs, Duke University
President and CEO, Duke University Health System

In Durham, Anlyan was a founding member and served on the executive committee of the City of Medicine organization and chaired Durham Health Partners.

His numerous honors and awards included the Governor's Award for Distinguished Meritorious Service (1978), the Civic Honor Award from the Durham Chamber of Commerce (1981), the Award of Merit from the Duke University Hospital and Health Administration Alumni Association (1987), the Lifetime Achievement Award from the Duke



Anlyan and Mary Duke Biddle Trent Semans cut the ribbon for the Medical Center Library in 1975.

University Medical Alumni Association (1995), the Duke University Medal (2002), and the North Carolina Award for Science (2002).

Anlyan was a member of the American Association for the Advancement of Science, Phi Beta Kappa, a fellow of the American College of Surgeons, and a member of the Institute of Medicine of the National Academy of Sciences. He also was a member of the International Cardiovascular Society and of the International Society of Surgery and Sigma Xi.

Anlyan authored more than 100 medical articles and edited nine books published by Duke University Press.

A Tribute from Duke Medical Center Library

BY PAT THIBODEAU

ASSOCIATE DEAN, FOR LIBRARY SERVICES

Dr. Anlyan was many things to Duke for many years, but few probably know his strong role in the creation of the current Medical Center Library facility. In addition to many other buildings constructed during his time as chancellor and vice president of health affairs, the Mudd building was an outcome of his planning and leadership.

Serving as a member and chairman of the National Library of Medicine's Board of Regents, Dr. Anlyan understood the potential and importance of libraries in an academic health center and as part of the developments in biomedical communications. In 1970, he commissioned the architects to create a building with the concept of the library as the core of the communications center. Construction began in 1973 on the triangular shaped facility designed by Warner, Burns, Toan, and Lunde and was positioned near the old Duke South hospital. Ultimately, the new Duke North hospital was built on the other side, leaving it halfway between the two major clinical enterprises.

Working with the current library director and staff, Dr. Anlyan sought the funding and other resources necessary to build the Seeley G. Mudd Communications Center and Library building. The Seeley G. Mudd Fund, which supported a number of library and learning resource facilities across the country during the 1970s, provided a major grant. With additional funding from the Andrew W. Mellon Foundation, Frederick J. Kennedy Memorial Foundation, Nanaline H. Duke Fund, and The Duke Endowment, the new location for the library became a reality. When it opened in 1975, the library was the only unit in the building occupying the top four of the five levels, with the ground level shell space that would become the Searle Center.

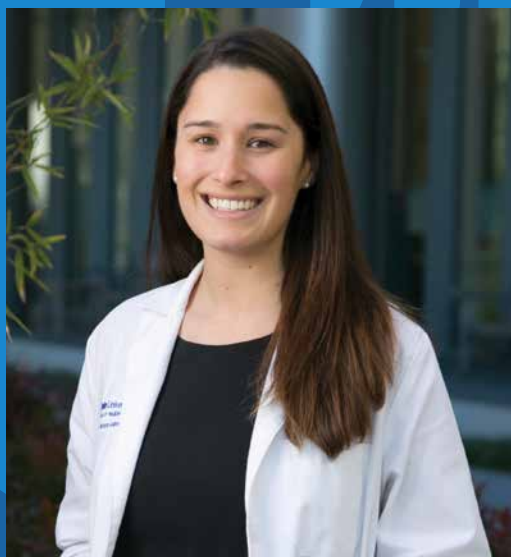
Under Dr. Anlyan, the library went from cramped quarters in the basement of the Davison building to a modern facility equipped with the technology of the day, including slide equipment, audio tapes, closed-loop film projectors, and microform machines. The plans also focused on closed-circuit television, video recordings, and the testing of computer-assisted instruction. Even though this was very forward thinking for its era, Anlyan also thought of the past and supported the inclusion of a greatly expanded History of Medicine Collection and Reading Room, as well as the move of the Trent Room (now Richmond Room) from Davison basement to Mudd.

Under his leadership, the library also received support to build a strong book and journal collection, becoming a major resource library for other health care institutions in North Carolina and the southeast region. The library continues to serve as a designated resource library in the National Library of Medicine's National Network of Libraries of Medicine.

When I first arrived at Duke, Dr. Anlyan was no longer the vice president, but he was still a major force and presence across the medical center and university, as well as within the Mudd building. I was told that when he retired as VP, he asked for his office to be located in "his building, his library," and he was a neighbor in the Mudd building for many years. I had many delightful conversations with him as he asked about changes in the library and where its future was going.

Probably little did he know the importance of the location that was chosen under his leadership. The Mudd building and library are now surrounded by expanded educational, research, and patient care facilities. The 1976 dedication materials stated that the "Communications Center and Library now has the potential to become a true intellectual hub from which can emanate a continuing flow of biomedical information." The students, researchers, faculty, and clinical staff who use our facility and digital resources today are a tribute to his vision when he pursued the construction of the library facility and Mudd building.

Supporting the Dream and the Next Generation



JARED LAZARUS

MEET ASHLEY ADAMS

The Shaws' gifts helped make the Duke experience possible for first-year medical student Ashley Adams. "Receiving this grant meant a lot to me because it told me the alumni community was supportive – financially, but even more than that," says Adams. "To me it showed the alumni care about us. It's nice to see those who have made it and are at the point where they can give back, and to know that we will be there one day, too."

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\$1,000 - Member

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 **Duke University**
School of Medicine



LAURIE CRUTCHFIELD

In high school, **Robert Shaw, T'72, MD'76**, dreamed of going to Duke University. When he lost his father, that dream hung in the balance. Then, the award of a full scholarship made everything possible again. "That was a big motivation to give back," he says.

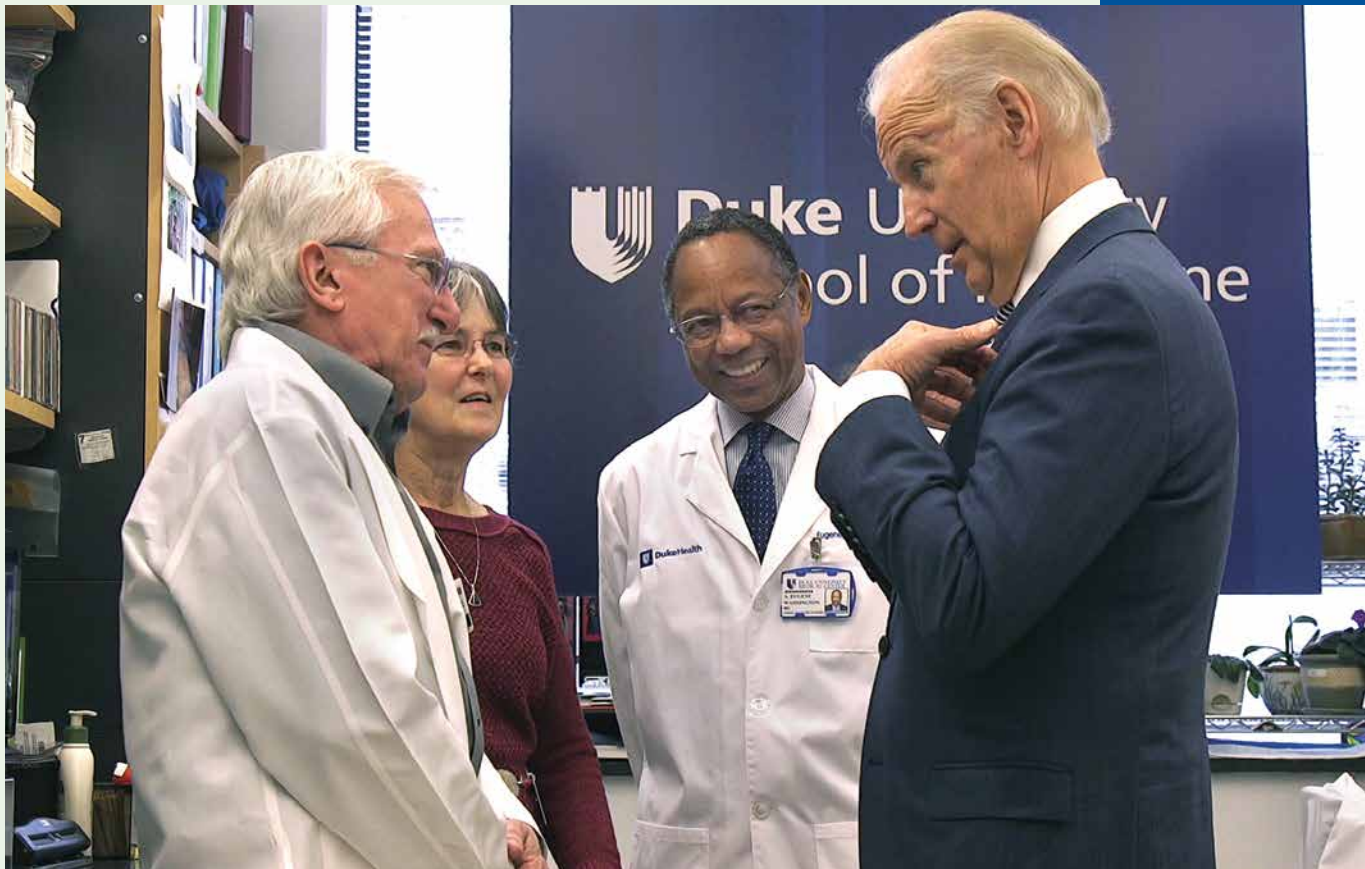
And give back he has. In addition to a planned gift, Shaw and his wife, **Jon Ward Shaw, WC'72**, have given to Duke every year since graduation, to support student scholarships.

The Shaws' affection for Duke goes deep, as the pair met in front of Duke Chapel as undergraduates. "When we go back, we like to remember,"

he says. "She was a music major who sang opera. We got married after my second year in medical school."

Today, Shaw is on the faculty at Brody School of Medicine at East Carolina University, after spending many years in private practice in pulmonary critical care in Greenville, North Carolina. He is furthering his education as a graduate student in liberal studies at Duke.

Gifts to the Davison Club provide critical support for medical education at Duke. Make your gift online at gifts.duke.edu/daa.



SHAWN ROCCO

VP Biden Visits Duke Cancer Institute

Vice President Joe Biden discusses his cancer “Moonshot” initiative with, from left, 2015 Nobel laureate Paul Modrich, PhD; Modrich’s wife, biochemist Vickers Burdett; and Chancellor Eugene Washington, MD, MSc. More information about Biden’s visit is on page 6.