

# DukeMed AlumniNews



FALL 2015



## In Search of the Secret Game

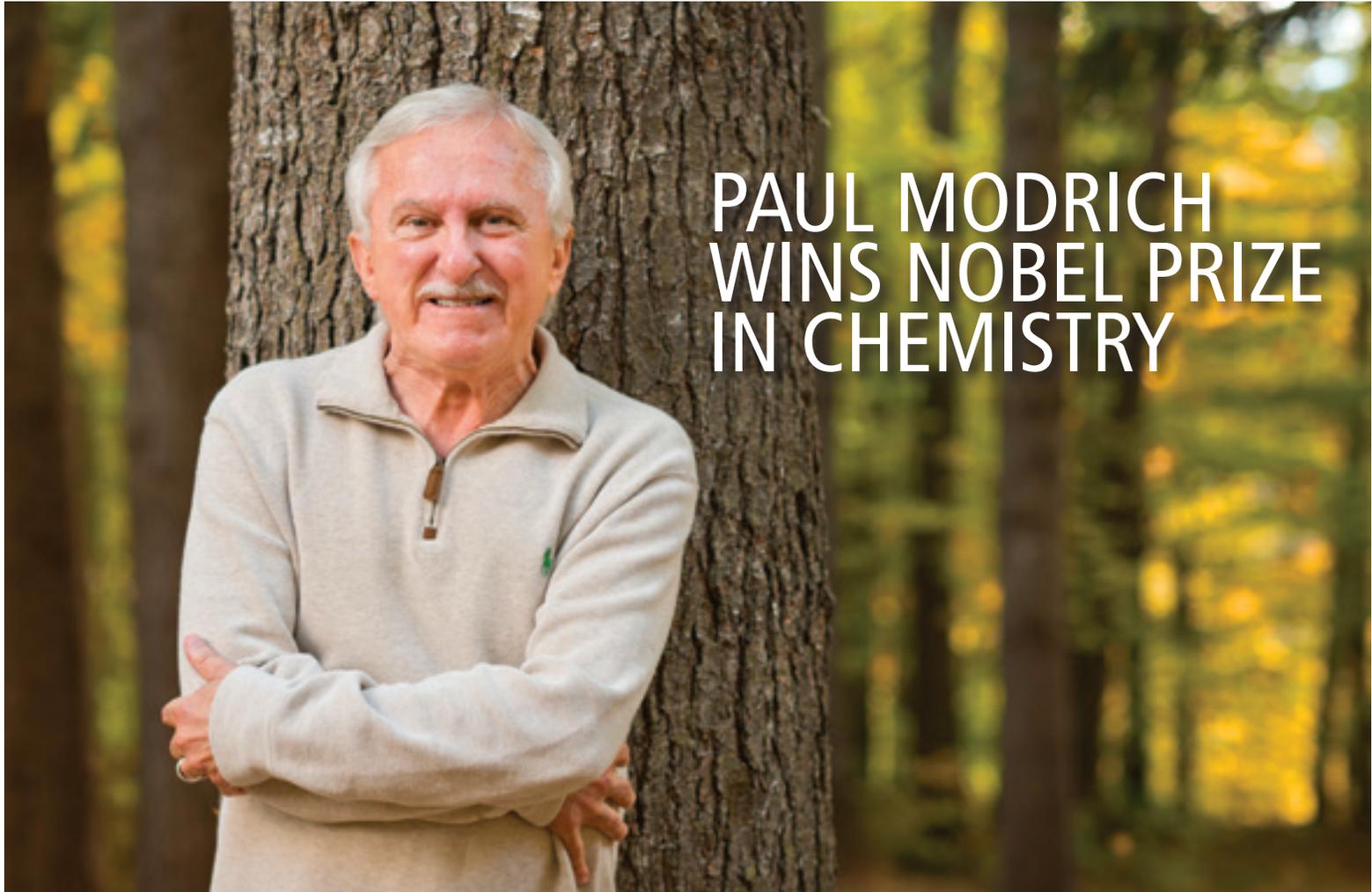
Civil Rights, World War II,  
and Duke's Lost Medical School  
Basketball Team



DUKE RESEARCHER  
WINS NOBEL PRIZE  
IN CHEMISTRY >

*“Paul’s groundbreaking work has been in the area of DNA repair—a fascinating area of basic biochemistry that is of fundamental importance to understanding cancer and other serious diseases. Please join me in congratulating Paul and his laboratory for this very exciting achievement.”*

Nancy C. Andrews, MD, PhD, Dean, Duke University School of Medicine



# PAUL MODRICH WINS NOBEL PRIZE IN CHEMISTRY

CALEB KENNA

PAUL MODRICH, JAMES B. DUKE PROFESSOR in the Department of Biochemistry in Duke University School of Medicine, has been awarded the Nobel Prize in Chemistry for his four decades of work on how mistakes in the DNA code are repaired.

The finding underlies the most common form of colon cancer and about 20 to 30 percent of other spontaneous tumors, as well as Huntington’s disease and other neurodegenerative disorders.

The Royal Swedish Academy of Sciences announced on October 7 that Modrich, 69, who is also a Howard Hughes Medical Institute (HHMI) investigator, will share the award with Aziz Sancar, the Sarah Graham Kenan Professor of Biochemistry and Biophysics at the University of North Carolina at Chapel Hill, and Tomas Lindahl of the Francis Crick Institute and Clare Hall Laboratory in the UK.

“We’re on vacation in New Hampshire, so this

was sort of a shock,” Modrich told the Nobel Prize press office the morning of the announcement, as his wife, Vickers Burdett, also a Duke biochemist, answered another phone in the background.

DNA’s fidelity is crucial to our well-being, for when it goes wrong, cancer and other diseases can occur. Misspellings in the genetic code are constantly happening due to ultraviolet radiation, free radicals of oxygen, and carcinogenic substances of all kinds. Thousands of these errors are estimated to occur each day across the human body’s 10 trillion cells.

So cells have built-in machinery to detect errors and correct them, and that has been the focus of the work being recognized by this year’s prize.

Starting on the question of DNA repair in the late 1970s, Modrich’s key contribution has been the identification of the mismatch repair (MMR) system, a key proofreading mechanism of proteins that identifies and corrects the errors that occur in the

**Biochemist  
has spent  
four decades  
researching how  
mistakes in the  
DNA code are  
repaired**

BY SAMIHA KHANNA  
AND KARL LEIF BATES

**learn more**

Video interview:  
[youtu.be/RzEMfSkYw2I](https://youtu.be/RzEMfSkYw2I)  
Campus reaction:  
[youtu.be/PPDFNvjcdIk](https://youtu.be/PPDFNvjcdIk)

Continued >

DNA code during chromosome replication.

"In human cells, MMR reduces the error rate by a factor of a thousand," Modrich told the HHMI website. In healthy cells, approximately one mutation occurs per cell division among the 3 billion letters of DNA being copied. MMR serves as a "copy editor" to catch and repair these misspellings, which would increase to about 1,000 in its absence.

Modrich's work also has shown that inactivation of this mismatch repair system is the cause of the most common form of hereditary colon cancer, and that repair errors also play an important role in the development of a number of neurodegenerative diseases and 20 to 30 percent of sporadic tumors found in many tissues.

"Paul's discoveries about mechanisms of mismatch repair transformed our understanding of this important guardian of our DNA," says Michael B. Kastan, MD, PhD, executive director of the Duke Cancer Institute. "DNA repair pathways are critical determinants of whether cancers arise, how cancers respond to therapies, and many of the side effects of cancer treatments. It is difficult to get more important than that combination of effects."

Modrich told the HHMI website that growing up in a small town in northern New Mexico instilled him with a love of the natural world.

"There was huge biological diversity around me," he says. "Within five miles, the ecology can change dramatically — it was very thought provoking."

His father, the local high school biology teacher, encouraged his curiosity. In 1963, when he was a junior in high school and the DNA double helix discovery was only 10 years old, Modrich remembers his dad giving him very important advice: "You should learn about this DNA stuff."

Modrich earned his bachelor's degree at Massachusetts Institute of Technology in 1968, and a PhD at Stanford University in 1973. He arrived at Duke in 1976 and is a fellow of the American Academy of Arts and Sciences and a member of the Institute of Medicine and the National Academy of Science.

"He always struck me as being very brilliant," says research technician Elisabeth Penland, who has worked in the Modrich lab since 1994. "Back then, one of his postdocs said, 'I expect Paul to get the Nobel Prize one day.' We've been waiting for this for 20 years. I knew this was coming. He's brilliant. He never lets go. He is 10 steps ahead of everybody in his head."

"He's worked on this his entire career — identifying the activities and characterizing the enzymes

that carry out mismatch repair and contributing to understanding the biomedical importance of the system," says colleague Lorena Beese, PhD, also a James B. Duke Professor of Biochemistry. "This prize speaks to the importance of fundamental basic science discoveries. Paul is an advocate for basic research and funding to support basic science."

"I'm a basic scientist," Modrich said by phone the morning of the announcement. "Understanding how living things function is intrinsically valuable. Many of the major health-related implications of science have been directly derived from basic science investigation — understanding how things work."

"I must say I am so thrilled for Duke to have another laureate," says Robert Lefkowitz, the 2012 Nobel laureate in Chemistry and James B. Duke Professor of Biochemistry at Duke. "Mine was first in the history of the institution, which seems strange, but then you wonder if we are going to have anyone else in the near future, and it's so great that we do, and that it's Paul. Paul is so worthy."

Modrich will receive a medal and meet the Swedish royal family in Stockholm on December 10 as part of a week-long celebration of the prizes in chemistry, physics, and medicine or physiology. He also will share one-third of a \$960,000 prize. ■

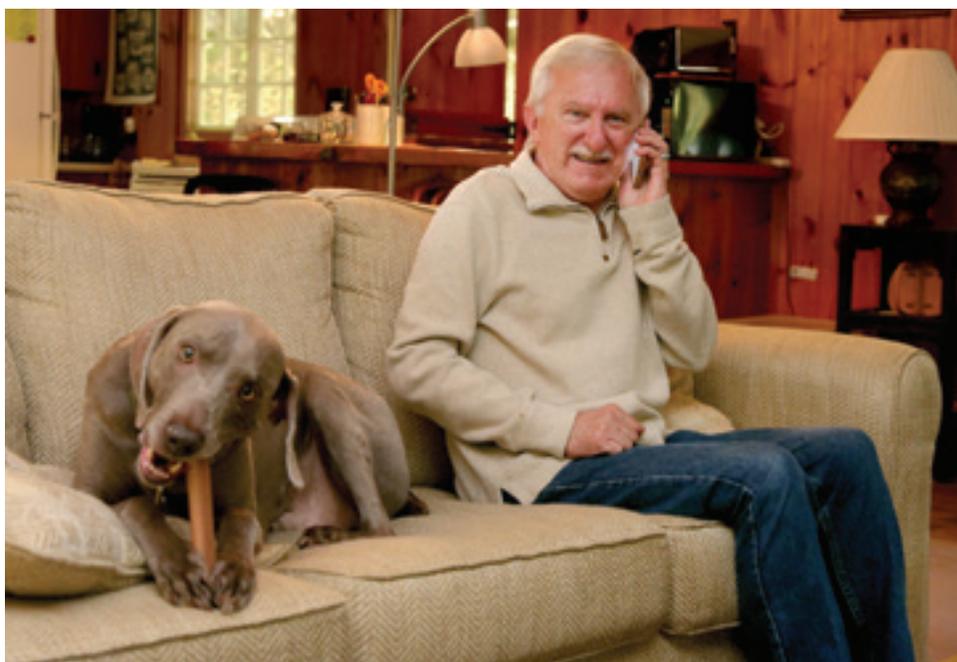


Lorena Beese, PhD, left, a colleague of Modrich, hugs Joanne Bisson, right, assistant to Modrich, after learning that Modrich was awarded the Nobel Prize.

"I'm sorry. I won an award. It's going to be a little crazy, and I wanted to apologize," said Modrich when he called his lab at Duke from New Hampshire where he was vacationing.

Curious, Joanne Bisson asked, "What award did you get?"

"I got the Nobel Prize," Modrich answered.



Paul Modrich takes a congratulatory phone call as he sits on the couch with his dog Dover at his vacation home in New Hampshire on Oct. 7.

MEGAN MENDENHALL

ASSOCIATED PRESS

COLLABORATIONS AND PARTNERSHIPS create energy and opportunities that propel us forward in today's research and academic medicine environment.

Our many centers and institutes are at the heart of the School of Medicine's commitment to collaboration. Among others, the nationally recognized Duke Cancer Institute, Duke Global Health Institute, Duke Institute for Brain Sciences, and Duke Clinical Research Institute each has its own unique focus. These centers and institutes create communities of faculty members and learners with common interests from across the school and university, providing a place to intersect, share knowledge, and find new collaborators.

But centers and institutes are not the only way we help talented people synergize, and we need other approaches for new areas and for areas that are under-studied. This summer we announced our fifth annual Request for Proposals for Interdisciplinary Colloquia. This program is designed to bring



together basic science, translational, and clinical faculty members to focus more narrowly on important areas in medicine and science. Interdisciplinary Colloquium grants support ongoing meetings, retreats, symposia, or other activities that coalesce people who would not normally meet and leverage the breadth of multidisciplinary collaboration in areas such as the epigenomics of maltreatment, heart regeneration, or traumatic brain injury, among many others.

Toward a similar end, the school instituted our Partnership Hires program in 2011, to provide matching resources to recruit outstanding new

faculty members who bridge disciplines or pioneer emerging areas. An example is Sallie Permar, MD, PhD, who studies mother-to-child transmission of serious viral infections. Soon after arriving at Duke, Dr. Permar received the Presidential Early Career Award for Scientists and Engineers. This program also recruited Brandon Kohrt, MD, PhD, a medical anthropologist focused on global mental health—a burgeoning and tremendously important new area.

In this issue of *DukeMed Alumni News*, you will read about our newest collaborative initiative: MEDx. MEDx enhances existing ties and fosters new collaborations between the School of Medicine and Duke's Pratt School of Engineering. We share many common goals with Pratt: developing new therapies, diagnostics, and devices; accelerating basic science and its translation into clinical practice; creating innovative educational opportunities for students; and ultimately, improving the quality and effectiveness of patient care. MEDx will be a crucible for the exchange of ideas, creating new opportunities for physicians, scientists, engineers, computer scientists, and innovators to push the envelope.

All of these programs require funding and support. We are convinced that they are important investments—to expand the boundaries of research, to bring new research funding to Duke, to provide unique educational opportunities for our students, and ultimately, to use our knowledge in the service of society. Thank you for sharing in our vision of collaboration.

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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 Top photo, the North Carolina College Eagles, 1943-1944. (Courtesy of the North Carolina Central University Archives, Records and History Center – James E. Shepard Memorial Library)  
 Bottom photo, the Duke Blue Devils, 1942-1943. (Courtesy Duke University Archives)

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*DukeMed Alumni News* is mailed two times a year to alumni, donors, and friends of Duke University School of Medicine.

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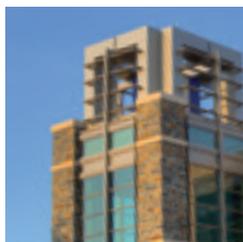
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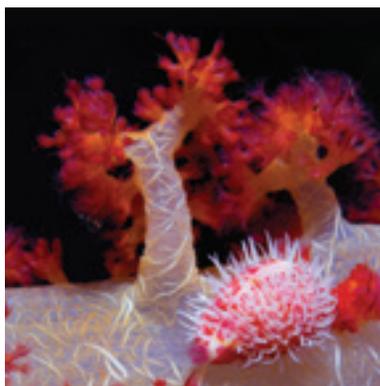
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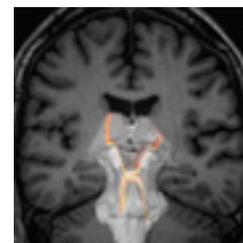
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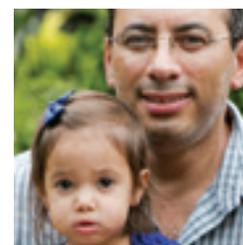
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JARED LAZARUS

## Duke Eye Center Opens New Hudson Building

A new four-story clinical pavilion that adds 116,000 square feet of clinical and administrative space to serve eye patients and others at the Duke Eye Center opened in June.

The \$45 million construction project was aided by \$16 million in donations from LC Industries, along with \$11.5 million from other philanthropic donors. The new building will allow the Duke Eye Center to expand its services by more than 15,000 additional patient visits a year.

The pavilion features a distinctive stone tower, valet parking, expansive exam and operating rooms, and the newest technology to treat glaucoma, retina, low-vision, and cornea patients.

The Hudson Building becomes the third facility in the Duke Eye Center complex, adding to the Wadsworth Building, which opened in 1973 and will continue to provide clinical services, and the Albert Eye Research Institute (AERI), which opened in 2004. Together, the facilities comprise 245,000 square feet of clinic and research space that will serve an estimated 180,000 patients each year.

# 116,000

square feet of additional clinical and administrative space

# 15,000

additional patient visits a year

# 180,000

total number of patients that can be seen each year

## Duke Endowment Funds Health Partnership between Duke, Wake, UNC, and HSSC

The Duke Endowment has granted \$15.3 million to Health Sciences South Carolina (HSSC) for a first-in-the-nation, dual-state health data and information sharing collaboration.

Minor Shaw, chair of The Duke

Endowment Board of Trustees, said the award is the third multi-million dollar grant made to HSSC by the private foundation, based in Charlotte, North Carolina.

“Health is our most precious commodity, and chronic diseases such as diabetes, stroke, and obesity threaten not just health, but also the economic and social



health of North Carolina and South Carolina,” said Shaw. “These problems are solvable, which is why The Duke Endowment has made a third investment in HSSC to further efforts to convene the best and brightest researchers, clinicians, and strategic partners across the two states. This grant empowers them with the technical infrastructure, data, and analytical resources needed to identify and implement meaningful solutions to the health-related challenges facing us today.”

## Ranking Rundown: Duke Best in State

Duke University Hospital was again included on the Honor Roll of top hospitals in the nation by *U.S. News & World Report*, ranking No. 14 in the magazine's 2015-16 listings.

Duke was also ranked No. 1 in North Carolina and No. 1 in the Raleigh-Durham area.

Honor Roll designations were awarded to just 15 hospitals out of nearly 5,000 evaluated by *U.S. News* for its rankings. Hospitals on the exclusive list achieved high scores in at least six of the 16 medical specialties that form the basis of the magazine's survey.

Among specialties receiving top scores at Duke were cardiology and heart surgery (6th), pulmonology (7th), ophthalmology (8th), urology (9th), rheumatology (12th), and nephrology (17th).

In addition, Duke University's Physician Assistant (PA) Program, which turns 50 this year, ranked No. 1 among PA programs in the country, according to new *U.S. News & World Report* graduate and professional school rankings released in March. Duke University School of Medicine ranked eighth among research intensive medical schools.

## U.S. News & World Report

# #1

Duke University Hospital  
ranking in North Carolina

# #14

Duke University Hospital  
national ranking

# #1

Duke University  
Physician Assistant (PA) Program's  
national ranking

## Conjoined Twins Separated at Duke

Duke surgeons separated conjoined twins during a 10-hour operation in June. Eight-month-old twins Josiah and Aryan Covington were attached at the hip and shared a liver. The two boys recovered rapidly and are expected to lead healthy lives.

The surgery was the first separation of conjoined twins at Duke, and the first in North Carolina in about 15 years. The surgery team was led by Duke pediatric surgeon Henry Rice, MD. "They should have relatively healthy, productive, very normal lives. Their development should be on par with everyone else," says Rice.



SHAWN ROCCO

Pediatric surgeon, Henry Rice, MD, (left) holds Josiah while mom Vanessa Covington cradles Aryan.

## Neurosurgery Becomes Full Department/Sampson to Chair



JARED LAZARUS

Chancellor Washington addresses the Duke Neurosurgery faculty.

Previously a division in the Duke Department of Surgery, Neurosurgery has been elevated to department status in the School of Medicine. **John Sampson, MD, HS'90-'91, HS'91-'95, HS'98, PhD'96, MHS'07, MBA'11**, is the inaugural chair.

Chancellor for Health Affairs A. Eugene Washington, MD, MSc, says that in addition to the neurosurgery faculty's international reputation for leadership in clinical practice, the department is also an innovator in global health, research, and classroom education. "We think the department will develop a model for teaching and training that will be used in other departments," Washington says.

Washington praised Sampson's leadership in getting the department off the ground.



DUKE MEDICAL CENTER ARCHIVES

## Duke's WWII 65th General Hospital Archives Now Online

A digital exhibit about the 65th General Hospital, Duke's World War II unit, is now available for viewing online. It features artifacts, photographs, documents, and audiovisual materials from the Medical Center Archives collections. Highlights include medical instruments used by hospital staff, an aircrew flak helmet worn by a patient treated at the hospital, original artwork depicting the unit's doctors and nurses, excerpts from an oral history with one of the unit's nurses, and a clip of a documentary by a 65th doctor.

learn more

Exhibit: [digitaldukemed.mc.duke.edu/sixty-fifth/](http://digitaldukemed.mc.duke.edu/sixty-fifth/)  
 Blog: [archives.mc.duke.edu/blog/remembering-65th-exhibit-now-online](http://archives.mc.duke.edu/blog/remembering-65th-exhibit-now-online)



## Duke Wins Federal Grants for HIV Vaccine Studies

Two research teams at the School of Medicine have received large, multi-year grants from the National Institutes of Health to pursue projects on HIV vaccine development.

A five-year grant totaling more than \$9 million was awarded to a team led by **Mary Klotman, T'76, MD'80, HS'80-'83, HS'83-'85**, chair of the Department of Medicine.

A second grant of more than \$11 million over five years was presented to a collaborative effort led by Sallie Permar, MD, PhD, associate professor in the Department of Pediatrics, and involving researchers at the University of North Carolina and the University of California, Davis.

Both grants draw on the longstanding expertise in the Duke Center for HIV/AIDS Vaccine Development led by **Barton Haynes, MD, HS'73-'75**.



Mary Klotman



Sallie Permar

## Duke Orthopaedics Researchers Earn Top Honor

A team of Duke Medicine researchers has earned the highest honor for research in orthopaedic surgery after more than a decade of investigation into arthritis caused by traumatic injury. Post-traumatic osteoarthritis accounts for about 12 percent of all cases, affecting about 6 million people in the U.S. each year.

The team of Steven Olson, MD; Farshid Guilak, PhD; Vir-

ginia Kraus, MD'83, HS'83-'89, PhD'93, PhD; Bridgette Furman, BS; and Janet Huebner, MS, received the Kappa Delta Award from the American Academy of Orthopaedic Surgeons and the Orthopaedic Research Society at a ceremony March 26 in Las Vegas.

Among their accomplishments, the researchers developed the first closed-joint experimental model of a knee fracture in mice to study post-traumatic inflammation and the onset of osteoarthritis.

## Blobe Receives 2015 Innovation Grant

Alex's Lemonade Stand Foundation (ALSF), a non-profit dedicated to finding better treatments and ultimately cures for all children with cancer, has awarded 2015 Innovation Grants to 22 leading oncologists across the country, including medical oncologist **Gerard C. Blobe**.



Gerard C. Blobe

**Blobe, MD'95, PhD'94**, a professor of pharmacology and cancer biology. Over a two-year period, each recipient will receive \$250,000 to pursue breakthrough projects. Blobe is investigating the use of heparin and its derivatives against neuroblastoma, the most common cancer in infancy.

## Dean Nancy Andrews Named to National Academy of Sciences

Dean Nancy Andrews, MD, PhD, is one of 84 newly elected members of the National Academy of Sciences. Andrews' research, which has been continuously funded by the National Institutes of Health since 1993, has led to important advances in understanding mammalian iron biology and human iron diseases.



Nancy Andrews

## Diet and Fitness Center Names New Director

**William S. Yancy Jr., T'91, MD, HS'99-'01**, associate professor in the Department of Medicine, is the new program director of the Duke Diet and Fitness Center. He will oversee the center's research and weight loss programs.



William S. Yancy Jr.

The Duke Diet and Fitness Center is the world's only medically supervised, residential-style weight-loss program within an academic medical center. Over the past 40 years the Duke Diet and Fitness Center has helped more than 50,000 people.

## Ginsberg to Lead New Medicine-Engineering Collaboration

Geoffrey Ginsburg, MD, PhD, will lead a new interdisciplinary collaboration between Duke University School of Medicine and the Pratt School of Engineering. Called MEDx (Medicine and Engineering at Duke), the new entity is the first part of an initiative by Provost Sally Kornbluth, PhD, to create opportunities at the intersections of academic units.



Geoffrey Ginsburg

A professor of medicine, patholo-

gy, and biomedical engineering and director of the Center for Applied Genomics and Precision Medicine at Duke, Ginsberg has worked extensively with faculty across both schools as well as with interdisciplinary university teams, including the Information Initiative at Duke, Duke Institute for Brain Sciences, and Duke Global Health Institute. He also brings perspectives on the research funding landscape through his leadership on committees of the Institute of Medicine and National Institutes of Health.

## Dewhirst Receives Radiation Oncology Award

Mark Dewhirst, DVM, PhD, Gustavo S. Montana Professor of Radiation Oncology and vice director for Basic Sciences for the Duke Cancer Institute, has received the 2015 John M. Yuhas Award for Excellence in Radiation Oncology.

Dewhirst has spent more than 30 years studying causes of tumor hypoxia, angiogenesis, and the use of hyperthermia to treat cancer. In collaboration with the Pratt School of Engineering he developed a novel thermally sensitive drug carrying liposome, which has been successfully translated to human clinical trials.



Mark Dewhirst

## Endowed Professorships Awarded to Eight

Eight members of the School of Medicine faculty were named in April to distinguished endowed professorships, the most prestigious faculty appointments at Duke. They are:

Hashim Al-Hashimi, PhD, James B. Duke Professor of Biochemistry

James A. Blumenthal, PhD, J.P. Gibbons Professor of Psychiatry

**Donald P. Frush, MD'85, HS'91**, the John Strohbehn Professor of Radiology

**Allan D. Kirk, MD'87, PhD'92, HS'95**, the David C. Sabiston Jr. Professor of Surgery

Richard J. O'Brien, MD, PhD, the Disque D. Deane University Professor

**Erik K. Paulson, MD'85, HS'85-'86**, the Robert J. Reeves Professor of Radiology

Ann M. Reed, MD, the William Cleland Professorship of Pediatrics

Cynthia A. Toth, MD, the Joseph A.C. Wadsworth Professorship

## Huang Named Chair of Pathology

Jiaoti Huang, MD, PhD, an internationally renowned surgical pathologist and prostate cancer researcher, has been named the new chair of the Department of Pathology. Huang is currently professor of pathology and urology, the Frances and Albert Piansky Endowed Chair, chief of surgical pathology, and director of urologic pathology at the David Geffen School of Medicine at UCLA. He is also a member of UCLA's Jonsson Comprehensive Cancer Center and Broad Center of Regenerative Medicine and Stem Cell Biology. His position at Duke becomes effective January 1, 2016.



JARED LAZARIUS

## Seven Join Emeriti Faculty Ranks

About 150 current faculty and emeriti faculty members attended the annual Emeriti Faculty Dinner in June, hosted by School of Medicine Dean Nancy Andrews and School of Nursing Dean Marion E. Broome. Receiving emeritus/a status were **Gordon Klintworth, MD, PhD, HS'62-'65** (posthumous); Dona Chikaraishi, PhD; John Falletta, MD; Stephen George, PhD; Robert Jones, MD; **J. Victor Nadler, T'66, PhD**; and Sidney Simon, PhD.

## Caron Elected to Academy of Arts and Sciences

Marc Caron, PhD, a James B. Duke Professor of Cell Biology, was among 197 leaders from academia, business, public affairs, the humanities, and the arts elected to the American Academy of Arts and Sciences.

Caron studies dopamine, serotonin, norepinephrine, and other key neurotransmitters in the central nervous system that regulate behavior and mobility. He seeks to find potential treatment avenues for a variety of behavioral issues. In a recent project, he and colleagues found that serotonin-deficient brains are more vulnerable to social stress and depression.



Marc Caron

## David Receives Hartwell Biomedical Research Award

Lawrence W. David, PhD, an assistant professor in the Department of Genetics and Microbiology, won a 2014 Hartwell Foundation Individual Biomedical Research Award in April.

David will receive \$100,000 in direct costs for three years for his project titled "Linking Oxygen and Bacterial Ecology in Necrotizing Enterocolitis."

Each year, the Hartwell Foundation invites a limited number of US academic institutions to nominate faculty members who are involved in early-stage, cutting-edge biomedical research that has not yet qualified for significant funding from outside sources.



Lawrence W. David

## Team Awarded \$9 Million to Study Valley Fever

The Duke Human Vaccine Institute has received an initial award of approximately \$5 million from the National Institute of Allergy and Infectious Diseases to support further research on valley fever pneumonia. Total funding could be up to \$9 million.

Valley fever pneumonia is caused by fungal pathogens that live primarily in soil. Valley fever is endemic in certain parts of the southwestern United States, including Arizona and California. The primary goals of the clinical trial are to assess the safety and efficacy of the anti-fungal medicine fluconazole as treatment for people in affected regions who develop pneumonia.

## Gene Mutations Trigger Obesity and Diabetes

Duke researchers have shown that two different mutations in a gene called ankyrin-B cause cells to collect glucose faster than normal, eventually triggering Type II diabetes linked to obesity.

Nearly one million Americans carry the more severe of the two mutations. The milder mutation is shared by seven percent of the African American population and is about as common as the trait for sickle cell anemia.

"This is one of the first examples of a susceptibility gene that would only be manifested through a modern lifestyle," says Vann Bennett, MD, PhD, senior author of the study and George Barth Geller Professor of Biochemistry, Cell Biology, and Neurobiology.

The study was published in the July 13 edition of the *Journal of Clinical Investigation*.

## Air Pollution Controls Linked to Lower Death Rates

National and state air pollution controls that went into effect in the early 1990s coincide with decreasing death rates from emphysema, asthma, and pneumonia among people in North Carolina, according to a study led by Duke University researchers.

Using mortality trends from state public health data, along with monthly measurements from air-monitoring stations across North Carolina from 1993-2010, the researchers were able to draw a close association between improved air quality and declining death rates from respiratory illnesses.

**H. Kim Lyerly, MD, HS'83-'90**, professor of surgery, associate professor of pathology and assistant professor of immunology at Duke, is senior author of the study published online June 23, 2014, in the *International Journal of COPD*.

# Basic Science Day

Monday, Nov. 16, 2015

10:30 AM-5:30 PM

Great Hall, Trent Semans Center

## A Celebration of Basic Science Research at Duke University School of Medicine

FEATURING: Robert J. Lefkowitz, MD  
Distinguished Lecture 2015

**IMMUNE CHECKPOINT BLOCKADE IN CANCER THERAPY: NEW INSIGHTS, OPPORTUNITIES, AND PROSPECTS FOR A CURE**

For more information visit  
[medschool.duke.edu/research/basic-science-research/basic-science-day](http://medschool.duke.edu/research/basic-science-research/basic-science-day)

 **Duke University School of Medicine**

### SAVE THE DATE



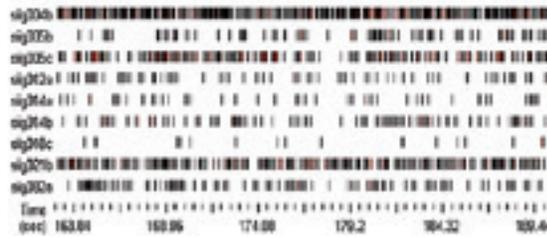
#### KEYNOTE SPEAKER:

James Allison, PhD  
Chair, Immunology Department  
University of Texas  
MD Anderson Cancer Center

## Neuroscientists Demonstrate First “Brainet”

Miguel A. Nicolelis, MD, PhD, director of the Center for Neuroengineering at Duke University, and his colleagues have demonstrated the first functional network of animal brains. They have dubbed the networks “Brainets.”

The new paradigm for brain-machine interfaces investigates how the brains of two or more animals (either monkeys or rats) connected by electrodes



can be networked to work together as part of a single computational system to perform motor tasks (in the case of monkeys) or simple computations (multiple rat brains).

In the two Brainet examples report-

ed in the July 9, 2015, issue of *Scientific Reports*, groups of animals were able to literally merge their collective brain activity together to either control the movements of a virtual avatar arm in three dimensions to reach a target (monkey Brainet),

or to perform a variety of computational operations (rat Brainet), including pattern recognition, storage and retrieval of sensory information, and even weather forecasting. These latter examples suggest that animal Brainets could serve as the core of organic computers that employ a hybrid digital-analog computational architecture.

## Old Bones Regain Youthful Healing Power

In studies using mice, Duke Orthopaedic Surgery researchers not only traced what signals go wrong when aged bones heal improperly, they also successfully manipulated the process by both circulating blood and transplanting bone marrow from a young mouse into an older mouse, prompting the bones to heal faster and better.

The findings, reported online May 19, 2015, in the journal *Nature Communications*, address one of the largest problems draining health care resources. According to the U.S. Centers for Disease Control and Prevention, fractures are the most common and costly nonfatal injuries to adults over age 65.

“It’s not that bone cells can’t heal as efficiently as we age, but that they actually can heal if they are given the right cues from their environment,” said senior author Benjamin A. Alman, MD, chair of the Department of Orthopaedic Surgery at Duke University School of Medicine. “It’s a matter of identifying the right pathway to target, and that’s what’s exciting about this work.”



## Bystanders Save Lives With CPR For Cardiac Arrest

Sudden cardiac arrest kills an estimated 200,000 people a year in the United States, but many of those lives could be saved if ordinary bystanders simply performed CPR, a new Duke study shows.

The early application of compression CPR only—no mouth to mouth resuscitation—by an average person nearby, combined with defibrillation by firefighters or police before the arrival of emergency medical services, was the one intervention that substantially increased survival from cardiac arrest, according to findings reported by Duke researchers and colleagues in the July 21 issue of the *Journal of the American*

*Medical Association*.

“We were surprised to learn that survival increased only for those who received bystander-initiated CPR, compared with those who did not receive bystander-initiated CPR,” said lead author Carolina Malta Hansen, MD, of the Duke Clinical Research Institute. “Also, patients who received bystander or first-responder CPR and defibrillation were more likely to survive compared to those who received CPR and defibrillation once EMS arrived. This suggests that the very earliest intervention is crucial, and is something anyone can do. It saves lives.”

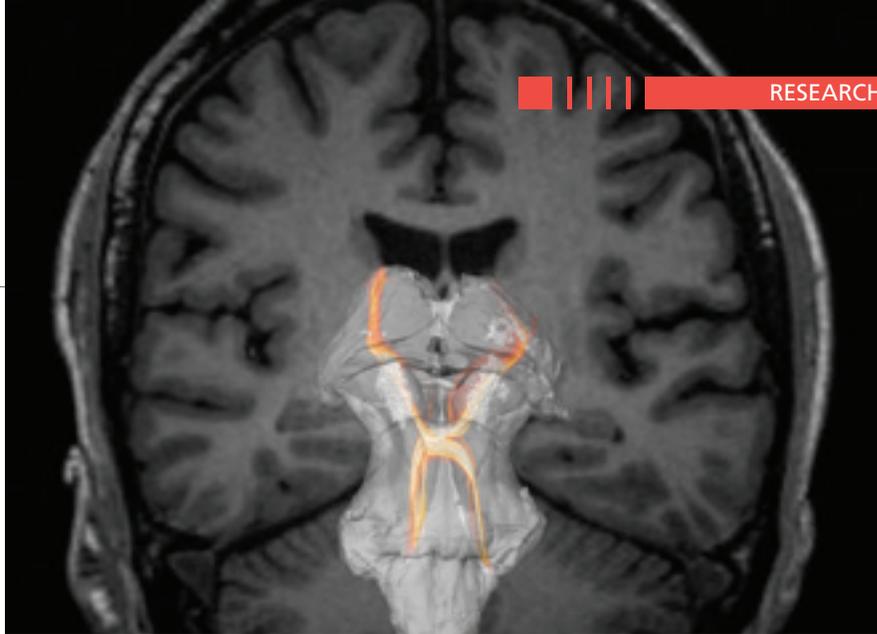
## Picky Eating May Signal Other Health Issues

Children who are fussy eaters may be suffering from depression and anxiety, a new Duke study finds.

Nancy Zucker, PhD, associate professor and director of the Duke Center for Eating Disorders, and colleagues found that moderate and severe picky eating often coincides with serious childhood issues such as depression and anxiety.

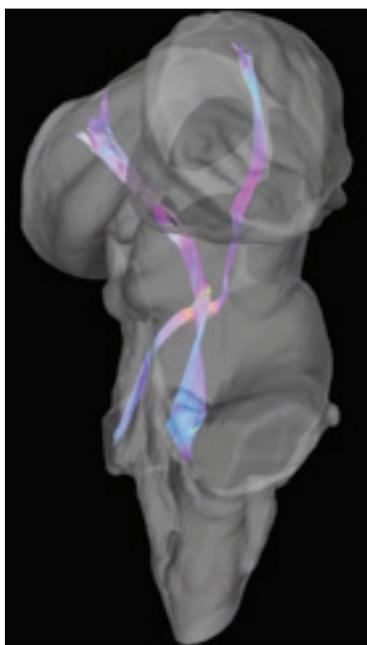
According to the study, published August 3, 2015, in *Pediatrics*, more than 20 percent of children ages 2 to 6 are selective eaters. Of them, nearly 18 percent were classified as moderately picky. The remaining 3 percent were so restrictive in their food intake that it limited their ability to eat with others.

Children with both moderate and severe selective eating habits showed symptoms of anxiety and other mental conditions. The findings also suggest that parents are in conflict with their children regularly over food. Zucker said some children who refuse to eat might have heightened senses, which can make the smell, texture and tastes of certain foods overwhelming.



DUKE CENTER FOR IN VIVO MICROSCOPY

## MRI Technology Reveals Deep Brain Pathways in Unprecedented Detail



Duke scientists have produced a 3-D map of the human brain stem at an unprecedented level of detail using MRI technology.

In a study published June 3 in *Human Brain Mapping*, the researchers unveil an ultra high-resolution brain stem model that could better guide brain surgeons treating conditions such as tremors and Parkinson's disease with deep brain stimulation.

The new 3-D model could eliminate risky trial-and-error as surgeons implant electrodes.

"On the conventional MRI that we take before surgery, the thalamus looks like a gray mass where you can see only the borders," said neurosurgeon Nandan Lad, MD, PhD, director of the Duke NeuroOutcomes Center and an author of the paper. "Now we will have actual detail. With this map, for the first time we're able to see the thalamus and that underlying circuitry that we are modulating."

## More Learned About Poliovirus Therapy for Brain Cancer

A modified poliovirus therapy that is showing promising results for patients with glioblastoma brain tumors works best at a low dosage, according to the research team at the Preston Robert Tisch Brain Tumor Center at Duke, where the investigational therapy is being pioneered.

The dosage findings for the first 20 patients in the phase 1 trial was presented at the American Society of Clinical Oncology annual meeting in

Chicago in June 2015.

"For chemotherapy, we are trained to give the largest dose possible with acceptable toxicity, because that is how the drugs work to attack tumors," says **Annick Desjardins, MD, HS'03**, lead author of the presentation and director of clinical research at the Tisch brain tumor center. "But that does not appear to be necessary with our therapy, and in fact a lower dose attacks the tumor as well and results in fewer side effects."

Come back to  
**revisit, reconnect, rekindle**  
November 12-15, 2015

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

## Medical Alumni Weekend



## Weekend Schedule

### THURSDAY, NOV. 12

- Medical Alumni Awards Dinner

### FRIDAY, NOV. 13

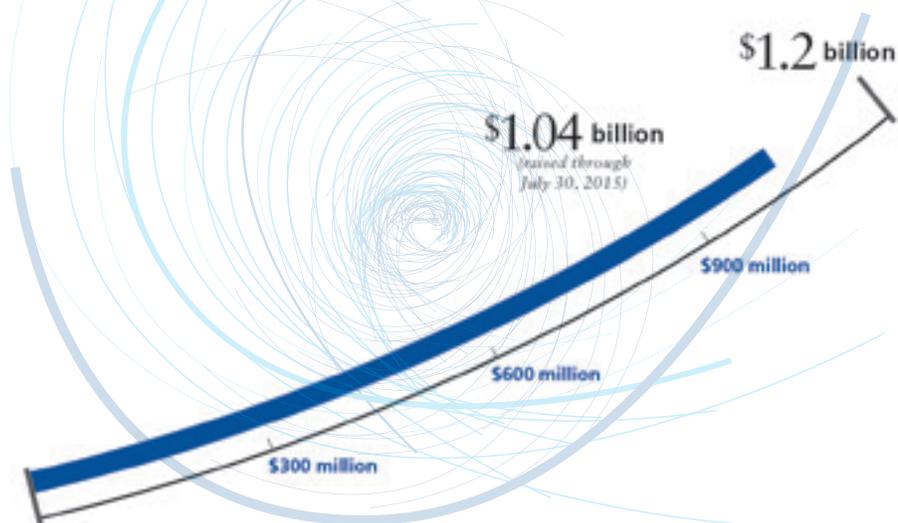
- 2nd Annual Women in Medicine Luncheon  
**Integrating Our Lives: Strategies to Find and Maintain Personal and Professional Inspiration**, featuring:  
Amy Groff, T'91, MD'95, HS'95-'99  
Mary Klotman, T'76, MD'80, HS'80-'85  
Claire Spain-Remy, MD'85
- Reunion CME Program  
**Perspectives on Health: From the Lab, the Clinic, and the Community** featuring:  
2015 William G. Anlyan, MD, Lifetime Achievement Award  
Keynote C. Thomas Caskey, MD'62, HS'63-'65

- 2015 Faculty Presentation  
L. Ebony Boulware, MD'95, MPH, FACP
- 2015 Alumna Presentation  
Eugenie Kleinerman, MD'75, HS'74-'75
- Book Discussion  
*The Secret Game: A Wartime Story of Courage, Change, and Basketball's Lost Triumph* with author  
Scott Ellsworth, MA'77, PhD'82  
(See cover story.)
- All Alumni and Davison Club  
Welcome Reception
- Duke Medicine Orchestra performance

### SATURDAY, NOV. 14

- Brunch with Dean Nancy C. Andrews, MD, PhD, with special guests:  
Stephen Lisberger, PhD  
Chair, Department of Neurobiology  
Richard O'Brien, MD, PhD  
Chair, Department of Neurology  
John Sampson, MD, PhD'96, HS'90-'95, '97-'98, MHSc'07, MBA'11  
Chair, Department of Neurosurgery
- Barbecue and Microbrew Tailgate Party
- Football Game – Pittsburgh vs. Duke

For more information,  
please visit  
[medalumni.duke.edu](http://medalumni.duke.edu).



## Campaign Progress!

As of August 31, 2015, Duke Medicine has reached \$1.04 billion toward its overall goal of \$1.2 billion to advance research, education, and patient care. The School of Medicine has received a little over \$946,000,000 toward its overall goal of \$970 million. We are grateful to all of the alumni and friends whose generosity has helped achieve this progress.

Duke Medicine's campaign is part of Duke Forward, Duke University's \$3.25 billion campaign, which includes all 10 schools. The campaign ends June 30, 2017.

## Recent Gift Highlights

Anonymous donors have provided \$11 million for programs in the Duke Global Health Institute and the Duke Center for the Study of Aging and Human Development.

The Duke Endowment has given \$4 million to the Department of Ophthalmology.

An estate gift from the Michel Bourgeois-Gavardin Trust is the largest gift ever to Duke HomeCare and Hospice. The late Michel Bourgeois-Gavardin was chair of the Anesthesia Department at Watts Hospital, now Duke Regional Hospital.

**William H. Spencer III, T'61, MD'65, HS'69-'72**, and his wife, Ann Long Spencer, have announced a bequest expectancy to benefit Duke Heart Center.

**Ritz C. Ray Jr., T'57, MD'61, HS'66, '71**, has made a planned gift for pediatrics and child psychiatry.

Duke University Professor of Orthopaedic Surgery emeritus **John A. Feagin, Jr., MD'61**, continues to support the Feagin Leadership Program in the Department of Orthopaedic Surgery.

## Gates Foundation Gives \$20 Million for Global Health

A \$20 million grant from the Bill & Melinda Gates Foundation will go to the Duke Global Health Institute (DGHI) to help educate future leaders and experts and build research capacity—both in Durham and with global partners worldwide—to address critical global health challenges including ebola, MERS, cancer, diabetes, HIV/AIDS, and other chronic diseases.

"The Duke Global Health Institute is committed to putting the expertise of faculty and students in service of addressing the most widespread health challenges," said Duke University President Richard H. Brodhead. "We're deeply grateful for this generous grant from the Bill & Melinda Gates Foundation, which will enable Duke to generate new knowledge needed to reduce health disparities—as well as expand learning opportunities for students at Duke."

The grant provides \$10 million in endowment support to sustain the growth of DGHI. The other \$10 million will support a challenge that will match one dollar for every dollar given—making the total impact of the grant \$30 million—and will allow other donors to partner with the foundation to:

- Build on Duke's recognized leadership in global health education, particularly its hands-on learning opportunities, to meet the growing demand of students interested in global health;
- Recruit and support faculty at Duke working across disciplines and schools to address global health challenges. Examples include HIV/AIDS prevention and treatment (medicine and public

*continued on page 12*

*continued from page 11*

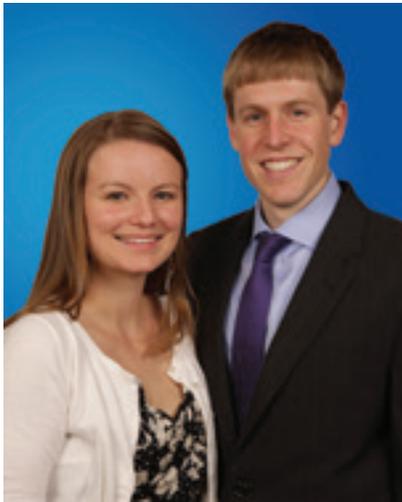
policy), mental health (psychiatry and psychology) and strengthening health systems (economics and management);

- Bolster financial aid for students, including graduate fellowships and support for international students; and
- Strengthen DGHI's partnerships with institutions and organizations in priority locations such as Haiti, Kenya, Tanzania, Sri Lanka, and South Africa. "I'm excited that our support can help

to increase the visibility of the institute as well as raise the capacity of the global health sector," said **Melinda Gates, T'86, B'87, H'13**, who is co-chair of the Bill & Melinda Gates Foundation and a Duke alumna.

The Duke Global Health Institute's projects in the United States—many in underserved populations in North Carolina—address a range of health care issues, including access to care, substance abuse, HIV/AIDS, and cancer. DGHI faculty members are also partnering with organizations and institutions on more than 300 projects in 54 countries.

"This significant gift enables us to continue to build and share our expertise in medical education, biomedical research, and innovative care delivery in some of the neediest areas globally," said A. Eugene Washington, MD, MSc, chancellor for health affairs at Duke University and president and CEO of Duke University Health System. "In collaboration with partners like the Gates Foundation, we will strengthen our work to address disparities and improve health care access and outcomes across the world."



Student Erik Knelson and wife Lauren



Student Robert Garmer; donors Michele Rauch, Dudley Rauch, Betsy Rauch Rainoff; and student Colin Kent



Donor William G. Anlyan with students Nicole Heimke, Whitney Lane, Nina Fainberg, Irene Pien, and Sarah Jo Stephens



Donor Jeanne Tannenbaum and student Fatu Bangura

## Scholarship Event Unites Donors and Students

More than 200 donors, friends, students, and faculty attended the first annual dinner celebrating scholarships and fellowships in the schools of medicine and nursing in April. Hosted by School of Medicine Dean Nancy Andrews and School of Nursing Dean Marion E. Broome, the event was called "Investing in Future Leaders" and featured student scholarship recipients from the School of Medicine, School of Nursing, and Physician Assistant Program.



MEGAN MENDENHALL

## Medical Families Weekend

Families of current Duke medical students visited campus in March to experience medical school firsthand. They heard about the learning process and the Duke medical curriculum and student support services, and participated in interactive

activities such as a mock team-based learning experience, the Surgical Education and Activities Lab, and the Human Simulation Center. During lunch, they heard from a panel of Duke MD alumni who chose non-traditional career paths, and they ended the day with the annual Student-Faculty Show, titled "Into the Wards."



CRYSTAL GRIMSHAW

## Welcoming the New Residents

About 175 guests attended the first Duke House Staff Summerfest in July at Durham Central Park. New medical residents and their families were welcomed with a picnic, including a DJ, games, and local vendors.



Author Scott Ellsworth in Card Gymnasium where the 1944 Duke medical school basketball team practiced.

BY SCOTT ELLSWORTH

# In Search of the Secret Game

The voice on the phone paused for what felt like forever.

It belonged to **Dave Hubbell, MD'46**, a thoracic surgeon living in St. Petersburg, Florida. I was hoping that he could help me solve a mystery—a mystery about basketball, World War II, and Duke. Two months earlier, an elderly coach had told me an incredible story, about a clandestine, racially integrated college basketball game, between an all-white team and an all-black team that had taken place in Durham in 1944.

**CIVIL RIGHTS, WORLD WAR II,**

**AND DUKE'S LOST MEDICAL SCHOOL**

**BASKETBALL TEAM**

Played in a locked gymnasium on a Sunday morning, with a referee and a scorer but no invited spectators, the game was a direct challenge to everything that segregation stood for. It was a barrier-busting, courageous act, one that took place a full decade before the dawn of the civil rights movement.

I knew who the African American team was. Coached by basketball wizard John McLendon, they were from the North Carolina College for Negroes, now North Carolina Central University. But for the life of me, I couldn't figure out who the white team was, other than having been told that it was from Duke. But every former Blue Devil basketball player from the war years that I'd contacted knew nothing about this "secret game." I was also running out of names. Then Hubbell gave me what I had been looking for.

"Yes," he said. "I played in that game."

The Secret Game had happened. Three years before Jackie Robinson pulled on a Brooklyn Dodgers uniform for the first time, a group of gutsy Duke medical students had made basketball—and civil rights—history.

Today, the idea of a Duke medical school basketball team seems far-fetched. Not so during World War II. In the frantic months that followed Pearl Harbor, military basketball teams sprang up from coast to coast. Most, like the Great Lakes Naval Station team from Chicago, were based on military installations. Others, like the Clodbusters, the Naval Pre-Flight team at the University of North Carolina, flourished on college campuses, where they were joined by scores of wartime undergraduate and graduate teams. Basketball had gone to war.

At Duke, by far the best team belonged to the medical school. Composed of former college stars who were now Army and Naval enlistees—and first- and second-year medical students—they were an exceptional aggregation. **Joe Walthall, MD'46**, was a third-team All

American from West Virginia, while **Dick Thistlethwaite MD'46**, was an All-Conference center from Richmond. Dave Hubbell had played on the Blue Devils varsity team that won the 1942 Southern Conference championship, **Dick Symmonds MD'46**, played forward at Central College in Missouri, and **Jack Burgess MD'47**, was a hotshot guard from Montana who had been recruited by Phog Allen at the University of Kansas.

"We were a bunch of guys," recalled **Lloyd Taylor MD'46**, another team member, "who needed to play basketball." Sandwiching their games between studying, doing rounds in Duke Hospital,

"YES, I PLAYED  
IN THAT GAME."

Dave Hubbell

and fulfilling their military duties, the Duke medical school team played in the evenings and on weekends against a collection of military teams, factory squads, and church teams. And they were good. In 1942, they went undefeated and won the 400-team campus intramural tournament. A year later, they played—and clobbered—the Blue Devils varsity team. They were no fluke.

*The Secret Game*, which was published by Little, Brown in March, tells their story—and that of the precedent shattering game they played against the North Carolina College for Negroes on March 19, 1944. It's a book about Durham, and North Carolina, civil rights and race relations, and the early development of basketball.

It's also a book about Duke, the medical school, and Duke Hospital.

For as I got to know these remarkable



Dave Hubbell, 1944



North Carolina College for Negroes Basketball Coach John McLendon

(Courtesy of the North Carolina Central University Archives, Records and History Center – James E. Shepard Memorial Library)

men, and their families, over what turned out to be nearly two decades of research, they also gave me a first class education about life at Duke during the early 1940s. Here was a world where penniless farm families, suffering from pellagra, paid for their hospital visit with a side of bacon or a basketful of eggs. Here was a world where racial segregation was so complete that even the cadavers in the anatomy lab were kept in separate closets, divided by race. Here was a world, as well, of cabin parties in Duke Forest, of the indomitable Wilburt C. Davison, MD, and of how medical students, assisted by nurses, would sneak into basement kitchens of the hospital and mix up a batch of a mind-numbing alcoholic concoction that they dubbed Purple Jesus.

In the end, the long-lost story of the Duke medical school basketball team is a story about change—and of a forgotten generation of American heroes, white and black alike, who, at great personal risk, directly challenged Jim Crow during the Second World War. Segregation, of course, did not end overnight. It would be a full two decades before the first African American students arrived at Duke and the “Whites Only” and “Colored Entrance” signs would disappear from restaurants, the bus terminal, and movie theaters downtown. But societal change rarely happens all at once. And in a locked gymnasium on a Sunday morning in the spring of 1944, a group of Duke medical students helped pave the way for a new kind of race relations, and a new kind of country. Their story is a part of a larger American story. And it’s our story, too. 🏀

**Scott Ellsworth, AM’77, PHD’82**, is the author of *THE SECRET GAME: A Wartime Story of Courage, Change, and Basketball’s Lost Triumph*, published by Little, Brown. Formerly a historian at the Smithsonian Institution, he now lives in Ann Arbor, where he teaches at the University of Michigan.



Players from North Carolina College for Negroes

(Courtesy of the North Carolina Central University Archives, Records and History Center – James E. Shepard Memorial Library)



Football Coach William Franklin Burghardt and basketball Coach John McLendon

(Courtesy of the North Carolina Central University Archives, Records and History Center – James E. Shepard Memorial Library)

# Despite Decades of Progress, Duke Continues to Aim for Diverse, Inclusive Climate



Although race relations have changed greatly in the seven decades since that historic integrated basketball game in Durham in 1944, the work to create a welcoming and inclusive environment at Duke University School of

Medicine continues today.

Created in 2011 under the leadership of Dean Nancy Andrews, the Office of Diversity and Inclusion leads the school's formal efforts to create a climate that encourages a sense of belonging among all students, faculty, and staff, and that attracts and retains a diverse pool of talented learners and leaders.

Judy Seidenstein, chief diversity officer for the School of Medicine, says among the office's numerous priorities, a major area of focus is educating school leaders, particularly equipping deans, department chairs, and others with the tools needed to foster a diverse, inclusive environment.

"If change is going to happen, then you have to have leadership commitment from the very start, and Dean Andrews has clearly role modeled this," Seidenstein says.

The Office of Diversity and Inclusion has provided support to the school's department chairs in creating diversity strategic plans for their respective departments. "I created a seven-point framework to help guide the creation of diversity strategic plans but it's not a one-size-fits-all formula," Seidenstein explains. "It was important and intentional to provide enough flexibility so that leaders could create plans to thoughtfully address the most meaningful goals and strategies for their unique departments."

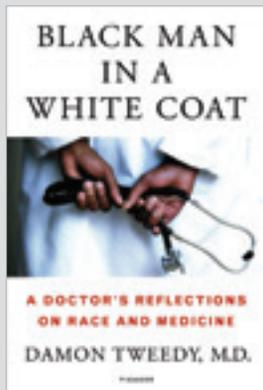
In addition to Seidenstein, the Office of Diversity and Inclusion is staffed by an administrative program coordinator. Also, two faculty members hold part-time appointments in the office, serving as diversity strategists who offer guidance to diversity councils and committees, including the School of Medicine Inclusion Council. Made up of department representatives who serve as liaisons, the Inclusion Council works to translate the school's diversity strategies at the department, center, and institute levels.

Also, the office frequently organizes events that aim to educate the School of Medicine community on topics related to diversity and offer opportunities for frank discussions. In April, the school hosted "A Conversation about Race."

Organized partly in response to students' growing concern for and desire to address recent national incidents of racism and police violence, the event provided an open forum for the School of Medicine community to engage in a dialogue about the complex topic of race.



Judy Seidenstein



Damon Tweedy

"I ALWAYS SAY THAT IF CHANGE IS GOING TO HAPPEN, THEN YOU HAVE TO HAVE LEADERSHIP COMMITMENT FROM THE VERY START."

Judy Seidenstein

Nearly 250 people attended the standing-room-only forum, making it one of the school's most attended recent events. Attendees of various backgrounds shared personal experiences from the past and present.

"It has been a particularly challenging year on the national landscape," Seidenstein says. "It was impactful to have such a diverse group of people who came together to reflect, share, and learn. It was a testament to how relevant and important the topic of race is and the value of engaging in dialogue across differences to deepen understanding of other experiences and perspectives."

Organizers surveyed attendees after the event. Of the more than 100 who responded, 64 percent rated the event as highly valuable in expanding their thinking and understanding about race. Feedback from the survey will help in planning future activities and initiatives.

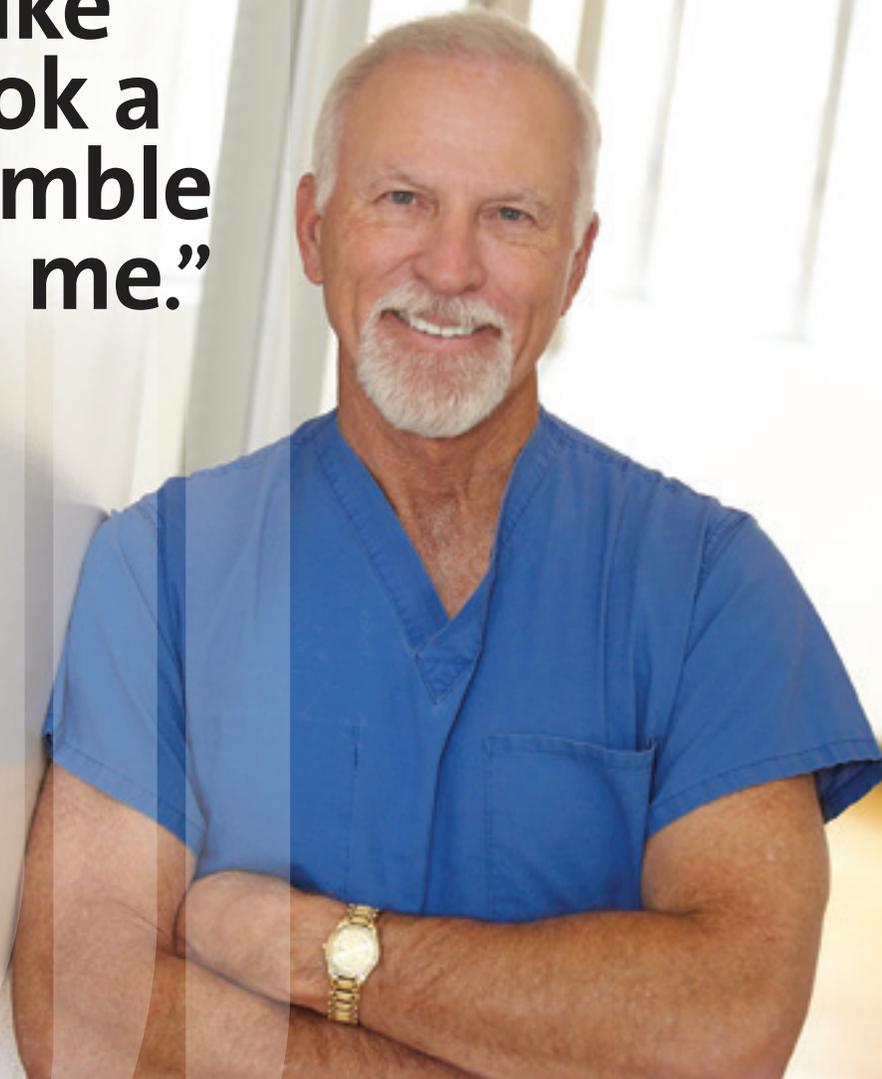
While Seidenstein and other school leaders were pleased with event turnout and survey responses, she says they recognize that "it starts with a conversation, yet a conversation in and of itself is not sufficient—the dialogue must inform specific actions."

The intention is that the "Conversation" series will evolve and expand to address multiple dimensions of diversity and create a ripple effect that stimulates smaller dialogues within departments.

Other upcoming events sponsored by the Office of Diversity and Inclusion include a book reading and discussion with **Damon Tweedy, MD'00, HS'03-'07**, Duke assistant professor of psychiatry and behavioral sciences and author of *Black Man in a White Coat: A Doctor's Reflections on Race and Medicine*.

— Bernadette Gillis

# “Duke took a gamble on me.”



## Planned Giving

To learn more about planned giving opportunities at Duke, please contact:

Joseph W. Tynan, JD  
Executive Director of Gift  
and Endowment Planning  
919-385-3114 or joseph.  
tynan@mc.duke.edu

One day in 1973, Richard “Rich” Schatz, MD’77, was looking over blueprints in his role as a Department of Defense building inspector in California when his phone rang. It was a call that would change not only Schatz’s life, but ultimately the lives of millions of people with heart disease.

Schatz was working for the Department of Defense the summer before returning to SUNY at Buffalo for his senior year of college. He had applied to Duke University School of Medicine as a sophomore but was placed on the wait list for admissions. As the end of summer neared without word, he had given up on getting in when Shirley Osterhout, WC’53, MD’57, HS’57-’59 then in charge of admissions, dialed his number. “She said, ‘We have a spot for you, if you can be here in three days,’” Schatz recalls.

He dropped everything and headed east. At Duke he found an institution and scientific environment that shaped his career. Schatz fell in love with cardiology and research working in

the lab of Joseph Kisslo, MD, who was pioneering the field of echocardiography. Schatz went on to build a remarkable career and become a pioneer in cardiology himself as the co-creator of the first balloon expandable cardiac stent. He is currently research director of cardiovascular interventions and director of cell therapy at Scripps Health in California.

Schatz recently made a bequest gift to Duke to establish two permanent research endowments, one for students and one for the Division of Cardiology.

“Duke took a gamble on me, and I’ve never forgotten that,” says Schatz. “Every good thing that has happened to me in my career traces straight back to Duke. Not a day goes by that I don’t think about how lucky I was and how much I owe the university and School of Medicine. I want to do what I can to help somebody else have the same opportunities I had.”

A woman with brown hair and glasses is shown in profile, looking to the right. She is wearing a black top and a large, colorful shawl with a geometric pattern in red, grey, and blue. The background is a bright, out-of-focus interior space with large windows.

# NEWS WITH

**E**ver since news of her latest research reached the mainstream media, Carol Colton's phone won't stop ringing. Letters arrive in her office every day, sent by people from all over the world. In English, in Italian, in French, they plead with her.

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BY DAVE HART



**Carol Colton  
and Matthew Kan  
Discover a Potential  
Cause of  
Alzheimer's Disease**

“They say, ‘Can you please help my mother, my father, my grandmother?’” says Colton, PhD, professor of neurology at Duke University School of Medicine and a member of the Duke Institute for Brain Sciences. “It’s heartbreaking. We’re at least a year away from even coming close to starting human trials, but people keep calling me going, ‘Please do this today.’ And all I can tell them is, ‘We’re working as hard as we can.’”

The study that has people knocking on Colton’s door has to do with the role the immune system plays in Alzheimer’s disease, the devastating and irrevocable

neurodegenerative disorder that progressively robs its victims of their memory, cognition, bodily functions, and ultimately their lives. More than 5 million Americans, and tens of millions of people worldwide, have Alzheimer’s disease, and those figures are expected to climb dramatically as the population ages.

Colton and MD/PhD student Matthew Kan have discovered that in mice with Alzheimer’s disease, a particular immune system enzyme consumes unusually large amounts of an amino acid called arginine, depleting arginine levels in the brain. When Colton and Kan

gave pre-onset mice a drug that blocks the arginine consumption process, they prevented Alzheimer's from developing; the mice did not develop the pathology and cognitive impairment of the disease.

Colton and Kan's work, published in April 2015 in the journal *The Journal of Neuroscience*, suggests the possibility that blocking arginine consumption in the human brain might prevent or even reverse Alzheimer's disease in humans as well.

If that proves to be true—and that is a huge “if,” Colton cautions—the implications could be monumental. Thus far, there is no cure, no preventive therapy, and no treatment that can even slow the progress of Alzheimer's disease.

“If this works, that would be great,” Colton says. “What we've found so far is encouraging. But I don't want to raise people's hopes falsely. We've seen so many trials where the researchers go, ‘Success! We've cured the mouse!’ But none of those have cured people. Have I cured a mouse? Yeah, I've cured a mouse. Is my mouse model the one that's really going to make a difference? Time will tell. We just need to keep taking the steps in the logical way to get there.”

#### BUILDING A BETTER MOUSE

Colton took the first of those steps almost 20 years ago, when she began to explore the role of microglia, the primary immune system cells in the brain, in the process of neurodegeneration. It's been an uphill climb, she says, not only because little was known about the microglia at the time, but also because most scientists—and research funding sources—dismissed the idea that the immune system had much, if anything, to do with neurodegeneration. For decades, most research instead has focused on what has long been the main suspect in Alzheimer's: a protein molecule called beta-amyloid, which accumulates in clumps known as “plaques” in the brains of people with the disease. Colton suspected early on that something else might be at work, and that the secret to this something might be hiding in the microglia.

Before she could find it, though, she had to build a better mouse model. For many years, the standard way for researchers to explore Alzheimer's disease in mice is to manipulate their genes to express a mutated amyloid precursor protein (APP). But as a model for Alzheimer's, those mice have limitations: although they form amyloid deposits in the brain just like people do, they don't develop the rest of the symptoms of Alzheimer's, such as the knots of tau proteins commonly called “tangles” or neuronal death.

“They never showed any of the downstream pathology,” she says. “They didn't show tau pathology. They didn't show neuron loss. They didn't show many of the MRI changes you see in humans. They had amyloid deposition, but nothing else. They didn't have the rest of the disease. That really bothered me. I didn't see the point of working on a model that has what's supposed to be the central feature of the disease, but that doesn't develop any of the downstream pathology.”

She wondered whether the different immune systems in mice and humans might explain that difference in downstream effects. One of the most significant of those immune differences lies in a microglial pathway in the brain in which two enzymes, called nitric oxide synthase 2 (NOS2) and arginase, use the amino acid arginine to fight infection and repair damage. In mice, the NOS2 pathway in particular operates very differently than it does in people.

Colton knocked out NOS2 in mice and swapped in human NOS2. When she then expressed the APP mutation in these mice, not only did they develop plaques, but they also showed all those downstream effects that had been lacking in earlier efforts: tau tangles, neuron loss, cognitive decline, and behavior changes. By tweaking one immune system molecule, Colton had created mice that developed something that looked much more like human Alzheimer's disease.

“This tells us that this immune system balance may be very important,” Colton says. “We've more closely mimicked human physiology, pathology, and immune response, and now we see in the end stages of the disease in mice the very same changes we see in humans. That was important, but we said, ‘OK, but what we're most interested in is not how the disease ends, but how it begins. Let's see if we can learn more about that.’”

#### 'POWERFUL AND SAD'

Matthew Kan was in his third year of the MD/PhD program at Duke, having just joined the lab of immunologist Michael Dee Gunn, MD, when he learned about Colton's work with the new mouse model. Kan had become interested in the brain's immune system in medical school, and when Gunn encouraged him to participate in Colton's research on Alzheimer's disease, he jumped at the chance.

Alzheimer's disease had been a part of Kan's medical school experience from the very beginning. The first autopsy and neuropathological exam he observed was of an otherwise healthy patient who had died of Alzheimer's, and during his second-year clinical rotation, the first patient he saw by himself was a woman with Alzheimer's. During World War II she'd been chosen to serve as an aide to a general in part because she had such an excellent memory for details. Now she couldn't remember what day of the week it was.

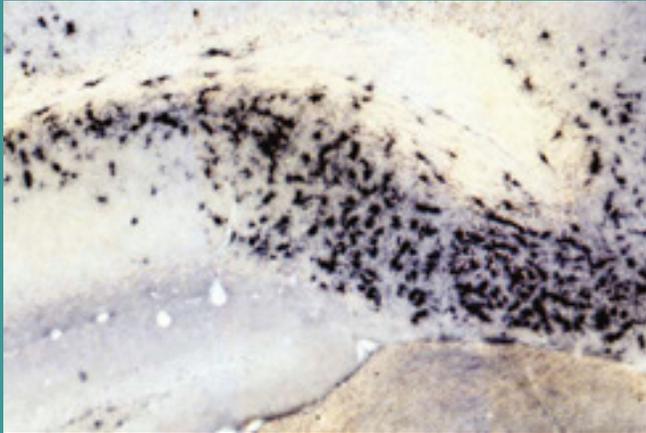
“And at the end of that year, during a rotation in palliative care, I cared for a couple in which the wife had severe Alzheimer's,” says Kan, a virtuoso violinist as well as a rising star in medicine. “Her husband pulled a black-and-white photo out of his wallet. It was a picture of her, taken 60 years ago, on the day they met. He had walked from Durham to Hillsborough to go to a dance, and that's where he met her. The difference in their cognitive states now is such that he remembers the day they met, and she doesn't remember who he is. It was such a powerful and sad experience.”

Kan joined Colton's lab, splitting time with Gunn's.

“Having Matt come on board made a huge difference,” says Colton. “He was able to do some things I couldn't do, and he was able to connect us with other collaborators at Duke that

“What we've found so far is encouraging. But I don't want to raise people's hopes falsely.”

CAROL COLTON



## TERMINOLOGY

**arginase** - an enzyme that converts naturally occurring arginine into ornithine and urea that is used to fight infection and repair damage in the brain

**arginine** - An amino acid that is a part of most proteins. In mice with Alzheimer's disease, the immune system consumes unusually large amounts of arginine.

**DFMO** - difluoromethylornithine (DFMO), a FDA approved drug that blocks arginase from consuming arginine

**microglia** - the primary immune system cells in the central nervous system

**NOS2** - an enzyme that converts naturally occurring arginine into ornithine and urea that is used to fight infection and repair damage in the brain

**tau tangles** - an accumulation of filaments composed of abnormally formed tau protein that is found chiefly in the nerve cells of the brain and especially the cerebral cortex.

hadn't occurred to me. He's been great. I could use six more of him."

Colton's new mice, called CVN-AD, allowed Kan and Colton to observe the changes that took place in the brain over time as the disease began and progressed.

"One of the difficulties in studying Alzheimer's disease in humans is that you can't predict who's going to get it," says Kan. "So you can't design a study that says, 'Let's look at this person who's going to get it, and at this person who isn't, and compare them.' The other thing you can't do is measure what happens in the brain over time as the diseases progresses. It would be too invasive; you can't do brain surgery on somebody year after year. With these mice, we knew exactly which ones would get the disease, and we could look at the changes taking place at various time points."

## SURPRISING RESULTS

What they found surprised them. The immune response generally has two phases: first it attacks and kills invading pathogens, and then it halts that attack and helps repair and heal the damage. It has been long recognized that in microglia, NOS2, a pro-inflammatory agent, does the attacking and killing, and arginase, an anti-inflammatory, does the repair work, building new cells and restoring tissue to normal.

In CVN-AD mice with Alzheimer's, Colton and Kan found that levels of NOS2 were low and levels of arginase were elevated. That ran directly counter to the conventional wisdom that the disease, at least in its late stages, was marked by pro-inflammatory activity in the brain.

"It didn't make sense," Colton said. "We're seeing the repair process cranked up, but not the attacking process. Why should that be? You think, 'Are our measurements wrong?' So you test that, and no, our measurements are right. So what's happening? That's when science gets really exciting: when you see something you don't expect and have to try to figure it out."

One key feature of arginase is that it consumes arginine in order to do its work. Arginine is a semi-essential amino acid found in many foods, a nutrient important in maintaining a variety of systems and processes within the brain and elsewhere in the body. Neurons need it to function properly.

Although certain organs, such as the liver, can produce arginine from other amino acids, the brain cannot; it relies on the bloodstream to deliver arginine. But the amount of arginine in the brain is limited; a protective system called the blood-brain barrier restricts the amount of arginine that can pass through from the blood.

"The first thing you would expect to see if arginase activity is elevated is a lower level of arginine in the brain," says Colton. "Arginase consumes it, and because of the blood-brain barrier you can't replenish it very quickly. So we looked at arginine levels in the mice. Sure enough, the brain arginine levels in early-onset mice were unusually low."

When neurons are denied adequate arginine for a long enough time, they react the way most living things do when faced with insufficient nutrients: they adapt in various ways to try to survive, but eventually they die.

*continued on page 24*

“The immune system turns on this enzyme response for some reason, and the enzyme is destroying all the arginine around it,” says Kan. “The neurons starve.”

#### ‘IT WORKED’

As it happens, a decades-old small-molecule drug with the unwieldy name of difluoromethylornithine (DFMO) blocks arginase from consuming arginine. DFMO, now off-patent, has been used to treat an eclectic variety of conditions, including African trypanosomiasis (sleeping sickness), and excess facial hair in women.

Colton and Kan gave pre-onset CVN-AD mice doses of DFMO to shut down the arginase and prevent the depletion of arginine in the brain. When they did that, something remarkable happened.

“It completely blocked the development of Alzheimer’s disease,” says Colton. “These mice should have developed Alzheimer’s, and they didn’t. We saw no pathology. As a preventative, in mice, it worked.”

Colton and Kan haven’t yet completed analysis of similar studies in two other cohorts: mice with mild cognitive impairment, the equivalent of early-stage Alzheimer’s; and mice with advanced Alzheimer’s disease.

Will giving people DFMO to halt the depletion of arginine have the same effect it has in mice? There are some encouraging signs—other researchers studying human subjects with Alzheimer’s have found that, just as Colton and Kan’s work would predict, arginase is high and both NOS2 and arginine are low.

But until clinical trials can be done, the truth is that neither Colton nor Kan nor anybody else knows whether it will work in people.

“A lot of things support the hypothesis we built our mouse model work around,” says Kan. “I think it’s undeniable that the observations we’ve made in mice reflect things that also happen in humans. But what the biological consequences and outcome of that are, that remains to be explored. Our mice are great, but they still don’t fully recapitulate the human situation. So there are still a lot of things to chase.”

#### THE HUMAN COST

Given the obvious possible human applications, Colton and Kan’s work has drawn widespread attention. Colton is working with colleagues to plan eventual clinical studies. Because DFMO is

already FDA-approved, its toxicity and safety are already established, which should help speed clinical trials.

“It’s still a long haul, but that will help,” Colton says. “In humans, you’d have to start with the middle group, people with mild cognitive impairment, because you can’t predict who will get Alzheimer’s. But if it works, and if you could develop it at a low enough dose, you might be able to use it as a true preventative in people with high risk factors.”

Kan is entering the final year of his MD/PhD program, and he’ll be turning his attention to the area in which he plans to build his career: pediatrics.

“People joke to me about being a pediatric Alzheimer’s disease specialist, which would mean I’d have a whole lot of free time,” he says. “But you have to pick what speaks to you clinically. And where I see the most need is in the health of children,

because I think a lot of things that happen during childhood set up health problems that happen later as adults.”

Even as Colton works on developing human trials, she’s pursuing other questions at the molecular level: What, for example, triggers arginase to kick into overdrive and start gobbling up arginine?

“That’s the big mystery,” she says. “I think that’s going to be the reason Alzheimer’s disease starts. I have some ideas about it, but right now nobody knows why that happens. That’s obviously a target for future research, but I’m having to give a lot of time right now to DFMO because, well, you should see the letters I get.”

She understands the desperation, and she knows the human cost of Alzheimer’s all too well.

“People are so afraid of this disease, and with good reason,” she says. “My mom died of it. When you see your parent’s eyes go blank, there is nothing worse in the world. And when they stay blank, for

six, seven, eight years, you just can’t imagine how awful that is. And there are so many people affected by this.”

That’s why she’s stuck with the work all these years, pursuing a path she believed led to important answers even when that course ran counter to deeply entrenched prevailing views.

“You have to have a thick skin in this field,” Colton says. “I could have given this up a long time ago. I probably should have, if I had any sense in my head. But I truly believe this is right. I’m all in now, swimming through the mud.”



“Our mice are great, but they still don’t fully recapitulate the human situation. So there are still a lot of things to chase.”

MATTHEW KAN

# An Improbable Journey from Cuba to the School of Medicine



JARED LAZARIUS

Arturo Suarez, MD, and his family relish their life in Durham, including trips to the Sarah P. Duke Gardens.

**Arturo Suarez, MD, HS'14-'15**, says when he comes to work every day at Duke University Hospital, he makes a point to walk all the way down the hall so he can see the top of Duke Chapel from the window. "Just to remind myself I'm really here," he says.

Suarez may be Duke's biggest fan—from the hospital to Wallace Wade Stadium to Duke Gardens. When you hear the story of his trek to get here, you understand why.

Born in Cuba, Suarez had a happy childhood, swimming in the ocean and playing baseball. It wasn't until his teens that he began noticing the difficulties of making a life there. "But my father, a lawyer, told me that I was smart enough to rise to the top of the communist regime, that I just had to go with the flow," he says.

Suarez graduated from medical school in Guantanamo, Cuba, and began working very long hours as an anesthesiology resident. Despite his education and professional status, he earned a wage nearly the same as that of his friends with no education and menial jobs—about \$20 a month. On some weekends, he was forced to work in the sugar cane fields for no pay. "Refusing to do this would have been interpreted as a lack of support to the socialist regime, with consequences such as removal from my residency," he says.

"Finally, I said 'Enough,'" he says. "I didn't want to have kids there. I escaped to the U.S."

He declines to share the details of the journey, but he managed to reach Miami, arriving with no money. Unable to work as a doctor without his transcripts from Cuba, he made his way to Detroit, where his father knew of people. "I asked a gentleman to take me to the place Americans don't want to work," he says. "He took me to the slaughterhouse. There, they asked me what I did in Cuba. I told the interpreter to tell them I had worked in a slaughterhouse." He was hired.



He worked, mastered English, and made friends. He learned about football and earned extra money by working at Detroit Lions games. He went to a Monster Jam truck show.

Still without certification from Cuba, but yearning to get back into a hospital, Suarez began taking courses at night to become an EMT. After working a while for an ambulance company, he got a job as

a nursing assistant in the emergency department of Henry Ford Hospital. "One day a doctor comes and says, 'I heard you were a doctor in Cuba. Would you like to work for me in research?'"

The doctor was Emanuel Rivers, MD, a renowned emergency medicine physician and researcher. He became a colleague, mentor, and friend to Suarez.

Suarez kept his eye on his goal of once again working as a physician. "I could not start a residency until I got acknowledgement from the Cuban government that I was a physician. That took three years." Eventually, he became chief resident at Henry Ford. By the time he received a fellowship in critical care medicine at Duke, he was

married to Sherri Walker, a beautiful nurse he had met in the ED and asked to go salsa dancing.

Today, Suarez is assistant professor of anesthesiology and critical care medicine at Duke and the father of three girls, Alena, Maria, and Lucia.

*"I asked a gentleman to take me to the place Americans don't want to work. He took me to the slaughterhouse."*

Arturo Suarez

— Carol Harbers

# CROSSING THE CLINICAL DIVIDE

## New Clinic Offers Students Meaningful Lessons in Interprofessional Care

BY BERNADETTE GILLIS

One might argue that textbooks and coursework are the building blocks for a solid education and career in medicine. But nothing compares to real, hands-on clinical experience.

Just ask Duke medical student **Gabriel Neves, MSII**. His first-year basic science courses gave him the fundamentals on disease and the functions of the human body. However, it wasn't until he found himself face-to-face with a homeless patient that his education suddenly shifted from the theoretical and abstract to the complicated and quite real side of medicine.

One night while volunteering in Clinic 2A at Duke during the spring semester of his first year, Neves encountered a homeless patient seeking treatment for a skin abscess. The patient had endured more than a dozen abscesses in a year's time and ended up in Clinic 2A via Duke's emergency department.

Neves worked closely with his two preceptors—one a physician and the other a nurse practitioner—to come up with a plan for treatment and follow-up with the patient.

"The patient was very young, younger than me," Neves says. "It was interesting to see an individual who had no resources having to go to the emergency department for something so simple. It gave me perspective on the physical and social components of caring for patients who are underserved and patients with no health care."

Although gaining such insight into the complexities of clinical care is of great value to Neves and other students like him, the primary purpose of the clinical education experience in Clinic 2A is a bit different than those typically offered for learners at academic medical centers.

Established in December 2014, the 2A Interprofessional Clinic

is an after-hours care facility located inside Duke Clinic that aims to help learners gain a better understanding of and appreciation for providers who work in health professions outside of their own.

In addition to honing patient-care skills such as taking medical histories and suturing wounds, the medical, nursing, and physician assistant students who volunteer at the clinic have the chance to delve into an array of topics with their preceptors and each other. Topics can range from the differences between nursing and medical school education and training to what it's really like for providers from various disciplines to work together as a team in a clinic setting.

### A NECESSARY SKILL SET

Developing the skills to work in a collaborative environment is becoming increasingly necessary for today's students, as many hospitals and clinics take on a team-based approach to patient care, says Michael Zychowicz, DNP, ANP, ONP, FAAN, FAANP, associate professor of nursing and director of the master of science in nursing (MSN) degree program at Duke University School of Nursing.

"The health care needs of today's patients with multiple chronic conditions frequently require health professionals from differing disciplines to collaborate toward the collective goal of improved health outcomes for shared patients," he explains.

**Edward G. Buckley, E'72, MD'77, HS'77-'81**, one of the clinic founders and vice dean for education at the School of

Medical students Gabriel Neves and Krystina Quow gained real-world experience while volunteering at a new Duke clinic that focuses solely on preparing students to work in team-based care settings.



Medicine, says he isn't aware of any other school in the country that has been able to successfully launch a similar education-focused clinic.

"We're trying to put the learner at the center of the mix," he says, "and provide excellent patient care while giving the learner a chance to see how other professionals provide care and what their skill set is."

Run by School of Medicine and School of Nursing faculty members who oversee student volunteers, the clinic is open five days a week from 5 to 9 p.m. By day, Clinic 2A is an infusion clinic, but by night, the space becomes a clinic for urgent care patients from Duke's emergency room. Physicians in the ER give patients with less acute conditions such as neck pain or flu symptoms the option to be referred to Clinic 2A, where they can be seen sooner.

"The average wait time in the ER is five hours," says Buckley. "If you have a low acuity problem it could be much, much longer. Twenty-plus patients a day are showing up in the ER and then walking out. We felt this would be a way to try to address that."

Although delivering the same quality care that patients would receive in the ER is a major goal of the clinic—with the reduced wait times being an added bonus—Buckley, Zychowicz, and other medical and nursing school administrators established this clinic for the primary purpose of supporting interprofessional education.

"The goal was to have students from the various programs working together side by side in a clinic setting," Buckley says, adding, "I dare say that medical students don't have a clue about what nursing students know or are being taught or what their skill set is. And (they) probably (know) even less about physician assistants and nurse practitioners."

## REAL-WORLD EXPERIENCES

Interdisciplinary collaborations are nothing new to education, particularly at Duke. For several years, initiatives such as the university-wide Bass Connections have encouraged faculty from various fields to team up to solve complex problems and expose students to other disciplines. Students from the schools of nursing and medicine have previously come together for brief, small group activities focused on teamwork. But what sets the Clinic 2A experience apart is that it offers long-term, robust hands-on experience in a real-world setting.

"Most of the time when people do interprofessional education, it's in the same classroom or a small group or at a conference," Buckley says, "but it's not real interprofessional education and certainly not real clinical experience."

Zychowicz adds: "The clinic was conceptualized to be primarily a learning space where students can learn from real patients with real complaints. Unlike many clinical settings where there is a tremendous focus on productivity, which unfortunately can get in the way of time dedicated to clinical teaching, the 2A Clinic's focus is on education."

The clinic is supported by educational funds, not patient care dollars. Buckley says this relieves providers of the pressure to see a certain number of patients and allows them to devote more time than usual to education.

Buckley says a physician or nurse practitioner does not have to be "concerned if she's going to make enough money to pay the bills. We're paying the bills, and what I want her to do is teach." He adds, "Whether it takes five minutes to do part of the exam or an hour is irrelevant. I want (the students) to learn as much as they can during that time."

Neves has shadowed physicians in the past but says the time he spent with patients and the level of attention he received from the attendings and nurse practitioners at Clinic 2A were greater than

anything he had experienced previously.

"The attendings and faculty are there because they want to teach," he says, adding that he was even further encouraged by being included in every step of the patient-care process. "I was expected by my attendings to contribute fully to what was being done with the patient."

MSN student Brennan Davis volunteered in the clinic to help fulfill her clinical rotation requirement in the adult-gerontology nurse practitioner acute care program. Even though she already has patient care experience—having worked as an intensive care unit (ICU) nurse for five years, the last three at Duke—she says the clinic's intense focus on the learner's experience has been invaluable to her advanced practice nurse training.

"It's been good because it's a little bit slower paced than the outpatient clinic where I was completing my other clinical hours," she says. "So I had more time to ask questions."

The slower pace, which allows for extra time with patients and preceptors, has given Davis freedom to concentrate on improving certain skills, such as suturing wounds or conducting patient

**"She was understanding of my frustrations and provided helpful criticisms that allowed us to help the patient."**

KRYSTINA QUOW



## 1950s

**Dean McCandless, MD'50, DC**, had a full career as a family physician with Kaiser Permanente in Fontana, California. He retired in 1980, then covered the practice of a busy family physician who was undergoing cardiac surgery. When the physician did not return, McCandless ran that practice for eight years before selling it to another physician—"One who cared more about patients than money!" he writes. His wife Polly died in 2012. He has three children, five grandchildren, and seven great-grandchildren. He lives in La Quinta, California.

**Simmons Patrick, MD'50**, is retired and living in Kinston, North Carolina, where, he says, his health is "reasonably good," aside from "the usual problems that we all have at 89." He is married to Patsy Burns Cozart, and he has quite a crowd to keep up with: three children, two stepchildren, two grandchildren, four step-grandchildren, and three great-grandchildren.

**Beverly Jackson, WC'47, MD'51, HS'51-'52**, recently moved from a big house into an apartment and says that although her "memory bank account is overdrawn," she is proud of having been one of six women in her School of Medicine graduating class. Her husband Murray, a radiologist, died in 1994. She has four children and nine grandchildren and lives in Fuquay-Varina, North Carolina.

**Henry Burks, MD'52**, is retired and living in San Diego, California. He and his wife Linda, a retired registered nurse, have four children and four great-grandchildren.

**Ben McCarley, MD'52**, retired after 50 years practicing as a pediatrician and is now a full clinical professor at Southwestern Medical School in Dallas, Texas, where he recently received an award from the Dallas Pediatric Society "mainly for hanging on so long," he says. He and his wife Alice live in Oklahoma City, Oklahoma. They have four children—**Meda Elizabeth Billys, MD'82**, Hannah, Ben, and Luke—and nine surviving grandchildren.

**Donald R. Kernodle, MD'53, DC**, retired in 1991 after practicing ophthalmology/otolaryngology at the Kernodle Clinic in Burlington, North Carolina, for more than 30 years. He and Lucy Wilson Kernodle, BSN, RN'58, live in Burlington and have five children and 13 grandchildren.

**Buna Joe Wilder, T'51, MD'55, DC**, is director of the epilepsy program at Florida Hospital for the Developmentally Disabled in Gainesville, Florida, as well as professor emeritus, neurology and neuroscience, at the University of Florida. Wilder received the Epilepsy Recognition Award from the Florida Epilepsy Society in 2013. He and his wife **Evelyn Vance Wilder, WC'52**, live in Gainesville. They have three children: Terry Wilder, B. Joe Wilder Jr., and **Karen Wilder Scott, T'80**, and a grandchild, **Allison Courtney Scott, T'09**.

**George Edgar Bacon, MD'57, HS'57-'58, MS, DC**, is professor emeritus in the Department of Pediatrics at the University of Michigan. He and Grace Graham Bacon have been married for 58 years and have three children and two grandchildren. They live in Ann Arbor, Michigan.



▲ **Henry Freye, MD'59, HS'60-'63**, retired in 2004 and has enjoyed locum tenens positions post-retirement in California, Connecticut, Rhode Island, and Maine. He has three children: **Christopher, MD, T'81**, Kurt, and Kirsten.

**H. Courtenay Harrison, MD'59, HS'59-'60, HS'63-'66**, retired from his endocrinology group practice in 2008. He and his wife Bobbie live in Virginia Beach, Virginia.

**Thomas H. White, MD'59, HS'59-'64, DC**, retired from private obstetrics and gynecology practice in 2000. He recently survived a stroke, heart attack, and prostate cancer and is doing well. He stays active spending time with grandchildren and friends. He and his wife Susan live in Charlotte, North Carolina.

## 1960s

**Larry H. Parrott, MD'60**, is a clinical professor of pathology at Medical University of South Carolina in Charleston. He and his wife Joy live in Camden, South Carolina. They have three children and six grandchildren.

**Donald H. Frank, MD'62, DC**, is retired from neurological practice. He volunteers teaching neurosurgery in less developed countries through the Foundation for International Education in Neurological Surgery. He spent February 2015 participating in Nicaragua's only neurosurgical residency at the Fonseca Hospital in Managua. He and his wife Cynthia have three children and three grandchildren and live in New York.

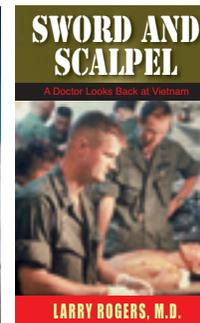
**Norman B. Ratliff Jr, MD'62, HS'62-'63, HS'65-'69**, writes that his first wife, Diane, died in 2000 from complications of Alzheimer's. He is remarried, and he and his wife Linda have a blended family of five children, their spouses, and ten grandchildren. They keep busy traveling to visit them in Colorado, New Mexico, Nevada, Minnesota, and Illinois. The couple lives in Montrose, Colorado.

**Alton Everette James, MD'63**, has published a novella, *Knights in White*, and a book of short stories, *Deep Fried Southern Tales*. He and his wife Nancy live in Chapel Hill, North Carolina, and have three children.

**Philip T. Shiner, MD'64, HS'64-'66**, is a physician with Carilion Consultants in Cardiology in Roanoke, Virginia, where he practices with **John Starr, MD'72, HS'72-'75, '77**, and **David Sane, MD'83, HS'83-'96**. He received a lifetime achievement award from his

local medical society in 2013. He and his wife Linda live in Roanoke. They have two sons, **Mark Shiner, T'00**, and **Keith Shiner, T'90**.

**Carl Eisdorfer, MD'64, HS'64-'67, PhD**, is a professor emeritus of psychiatry at the University of Miami and lives in Asheville, North Carolina. In 2011, his textbook, *Mental Health and Aging*, was published by Johns Hopkins Press. He is a volunteer faculty member at the UNC-Asheville Center for Lifelong Learning, where he also is a student. He is a member of the Institute of Medicine and the National Academy of Sciences. He and his wife Susan have four grown children.



▲ **Larry Rogers, MD'65, HS'65-'67, DC**, has published a memoir of his time serving in Vietnam—*Sword and Scalpel: A Doctor Looks Back on Vietnam*. His experiences include reviving a soldier left for dead in a makeshift morgue and resuscitating another by rigging a defibrillator from an auxiliary generator and strips of radio-antenna wire. For more information about the book, visit [swordandscalpel.com](http://swordandscalpel.com). Rogers practiced neurosurgery in Charlotte for 27 years.

**Gerald LaVonne Brown, T'63, MD'67, HS'68-'72**, retired from the University of Virginia in 2006. Since then, he has started a psychiatry service in three Virginia veterans' clinics—in Harrisonburg, Lynchburg, and Staunton. He works full time among the three clinics. He and his wife Sima Peyton Brown have seven children and 12 grandchildren. Their children range in age from 13-48, and their grandchildren range in age from 3-22. The family lives in Free Union, Virginia.

Roger J. Porter, MD'68, DC, has been named the 2015 recipient of the Lifetime Accelerator Award from The Epilepsy Foundation in recognition of his commitment and pioneering contributions to bringing new therapies to people living with seizures. Porter is an academic and pharmaceutical industry consultant and past chief scientific officer of the foundation. The Epilepsy Foundation, a national non-profit with nearly 50 affiliated organizations throughout the United States, has led the fight against seizures since 1968. Porter lives in Devon, Pennsylvania.

## 1970s



▲ Leonard A. Zwelling, T'69, MD'73, HS'73-'75, DC, has published his first book after a 29-year career in academic medicine as a professor of medicine and pharmacology at The University of Texas MD Anderson Cancer Center. The book is called *Red Kool Aid Blue Kool Aid: How Partisan Politics and Greed Undermined the Value of Obama Care*, and is available on most book purchasing web sites including [amazon.com](http://amazon.com) and for the Kindle. Zwelling also was the vice president for research administration from 1995-2007 before taking a sabbatical as a Robert Wood Johnson Health Policy Fellow in 2008-2009. He lives in Bellaire, Texas.

Jared Naphtali Schwartz, MD'74, PhD'75, HS'73-'77, has been named consulting chief medical officer for Quality Star, an independent quality assurance consortium and subscription service for anatomic pathology. Schwartz was formerly the chief medical officer for Aperio and Leica Biosystems and previously served as president of the College of American Pathologists and director of pathology and laboratory medicine at Presbyterian Healthcare in Charlotte, North Carolina. He lives in Charlotte.



*Serratovolva dondani* at 90 feet near Balicasag Island, Philippines

## Rawlings' *Living Shells* receives recognition



learn more

You can find *Living Shells* on Amazon at: [amzn.com/1571975098](http://amzn.com/1571975098)

Charles E. Rawlings III, MD'82, HS'83-'89, has been recognized as an internationally acclaimed author whose underwater photography book, *Living Shells*, has won multiple awards. *Living Shells* recently won a Readers Choice Award for photography as well as winning in the Beverly Hills Book Award contest. His most recent book, titled *It Really Is That Complicated*, a relationship book, has also garnered multiple international awards, including the Beverly Hills Book Award and Paris, San Francisco, Amsterdam, and New York Book Festivals. Rawlings has also been awarded the Neptunea Award for service to the scientific interest in shells and recently was listed as one of the top lawyers in North Carolina. He lives in Winston-Salem.

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## 1980s

Carroll 'Cap' Lesesne, MD'80, recently started a practice in London, United Kingdom. He took the written and oral exams some 30 years after finishing his medical education at Duke and says he was pleased to find "that my Duke education stayed with me very well and allowed me to take all of my exams and pass them at the first attempt."

Robert C. Harland, MD'83, HS'86, '87-'92, has joined the University of Arizona (UA) Department of Surgery Division of Abdominal Transplantation as professor, vice chair of academic affairs, and surgical director of solid organ transplantation at Banner-University Medical Center in Tucson. Harland comes to UA from East Carolina University's Brody School of Medicine, where he served as professor of surgery and division chief of surgical immunology and transplantation. He previously was associate professor and director of the Kidney and Pancreas Transplant Program at the University of Chicago School of Medicine. He also has been on the medical faculty at Duke, the University of North Carolina at Chapel Hill, and the University of Massachusetts. He is board certified in internal medicine, as well as surgery, and has more than 20 years of experience in the management of

complex patients with end-stage organ failure. He is a fellow of the American College of Surgeons and a member of the American Society of Transplant Surgeons, the International Pancreas and Islet Transplantation Association and the International Xenotransplant Society.



▲ Joseph Hill, MD'87, PhD'87, has been selected as the upcoming editor-in-chief for the American Heart Association's principal scientific journal, *Circulation*. He will assume leadership of *Circulation* on July 1, 2016, and will hold that position for five years. Hill is chief of the Division of Cardiology and director of the Harry S. Moss Heart Center at the University of Texas Southwestern Medical Center. He also holds the James T. Willerson, MD, Distinguished Chair in Cardiovascular Diseases and the Frank M. Ryburn Jr. Chair in Heart Research.



▲ Alexander Eaton, T'82, MD'87, has been named one of the nation's top doctors in ophthalmology by Castle Connolly Medical Ltd. The honor is given to the top one percent of physicians in their field and is based on nominations submitted by other physicians and reviewed by Castle Connolly's doctor-led research team. Eaton is the founder and director of Retina Health Center and has practiced ophthalmology in Southwest Florida since 1993.

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## 2000s



▲ Andrew Kayes, MD'00, medical director of Maui Diagnostic Imaging, in January 2015 was named the Intersociety Private Practice Representative for the American College of Radiology. He is the first Hawaii radiologist to hold this title. "It's an honor to be chosen to represent the private practice sector, and it's a special moment to have radiologists from Hawaii involved in shaping our field of expertise nationally," Kayes writes. He lives in Maui with his wife, WanYu, and their three children, William, 7; Nikki, 5; and Henry, 2.

Aarti Asnani, T'04, MD'08, and her husband Antione Dubois-Rande welcomed their son Ishaan last November. They live in Cambridge, Massachusetts.



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## 1960s



▲ Jack W. Bonner III, MD, HS'69, professor emeritus of clinical neuropsychiatry and behavioral science at the University of South Carolina School of Medicine-Greenville, received the American Psychiatric Association's 2015 Distinguished Service Award at its 168th annual meeting in May in Toronto, Canada. Bonner has served in numerous leadership roles, including membership on the APA Board of Trustees and chair of the APA Finance and Budget Committee. He has been president of The American College of Psychiatrists, the Group for the Advancement of Psychiatry, the North Carolina Psychiatric Association, the National Association of Private Psychiatric Health Systems, and several other professional organizations. Bonner and his wife, Myra, spend time in Greenville, South Carolina, and Asheville, North Carolina.

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## 1970s

Robert A. Saul, MD, HS'76-'79, has published *My Children's Children: Raising Young Citizens in the Age of Columbine*. Among those praising the book is Samuel L. Katz, MD, Wilburt Cornell Davison Professor and Chairman emeritus of Duke's Department of Pediatrics, who writes, "*My Children's Children* provides a unique and hopefully lasting approach to both parenting and community involvement." Learn more at [mychildrenschildren.com](http://mychildrenschildren.com).

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## 1980s

Kenneth Ellenbogen, MD, HS'83-'86, has been honored by the Heart Rhythm Society with its Distinguished Teacher Award, one of its five annual recognition awards. Ellenbogen is professor and chair of the division of cardiology and director of clinical cardiac electrophysiology and pacing and holds the Hermes A. Kontos, MD, Professorship in Cardiology at the Virginia Commonwealth University School of Medicine. He lives in Henrico, Virginia.

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## 1990s

Lee F. Allen, PhD, HS'87-'94, was featured in the Spring 2015 issue of *Profile Magazine*. In the article, "Building Hope Through Medicine," he discusses the complexities of his role as chief medical officer, a position he holds at Spectrum

Pharmaceutical, where he also is head of the Medical Development Organization. Prior to that, he was CMO and executive vice president of medical development at AMAG Pharmaceuticals, and he has also held leadership positions with Wyeth Research, Pfizer, and BASF/Knoll Pharmaceutical Company. Allen received his PhD from the University of Medicine and Dentistry of New Jersey (UMDNJ) Graduate School of Biomedical Sciences and his medical degree from the UMDNJ Medical School. He completed a medicine internship, internal medicine residency, and hematology/oncology fellowship at Duke, where he also was a research fellow in the Howard Hughes laboratory of Nobel Prize laureate Robert Lefkowitz, MD. He lives in Ladera Ranch, California.

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 the Hospice and Palliative Care Center Foundation and currently serves as senior warden of St. Paul's Episcopal Church.

Tejal K. Gandhi, MD, MPH, CPPS, HS'94-'95, '97, president and chief executive officer of the National Patient Safety Foundation (NPSF), has been named one of the United States' Top 25 Women in Health Care by *Modern Healthcare*. Gandhi has served as president and CEO of NPSF and president of the NPSF Lucian Leape Institute, the foundation's think tank, since July 2013.

Previously, she was chief quality and safety officer at Partners HealthCare and executive director of quality and safety at Brigham and Women's Hospital. Gandhi received her MD and MPH from Harvard Medical School and the Harvard School of Public Health. She lives in Needham, Massachusetts.



▲ Eric Rohren, MD, HS'97-'02, has been named chair of radiology at Baylor College of Medicine. His appointment is effective Oct. 1. He previously served as a professor in the Departments of Nuclear Medicine and Diagnostic Radiology, Division of Diagnostic Imaging, at the University of Texas MD Anderson Cancer Center and chief of the Section of Positron Emission Tomography (PET).

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## CORRECTION

The House Staff Notes in the Spring 2015 *DukeMed Alumni News* misidentified the wife of Russell Kaufman, MD, HS'73-'78, FACP, FCPP. His wife's name is Jane.



# Education Gives Wings to Dreams



PAUL RUBIERA

Robin Gary Cummings

## Robin Gary Cummings Named UNC Pembroke's New Chancellor

**Robin Gary Cummings, MD'83, HS'83-'92**, still remembers one of the last conversations he had with his father, who was suffering from dementia.

"It was a Sunday afternoon when I went to visit him," he says. "He was in his room, and I said: 'Well, Dad, what do you have to tell me?' And it was really strange, but all of a sudden, a switch went on, and he just looked at me and said: 'Help people if you can,' and then he laid back down. That was his philosophy, and that is mine as well."

Cummings' father was the first full-time American Indian Methodist minister in Pembroke, North Carolina, in Robeson County.

"I saw how my dad worked with the people of his county and how he dedicated his life to them," he says. "I didn't realize that at that time, but he inspired me. He showed me the value of helping others."

Growing up, Cummings always knew he would help people one day by becoming a physician. But the concept of reaching many more people by becoming a university chancellor never crossed his mind.

"It never crossed my mind at all," says Cummings, who became chancellor of the University of North Carolina at Pembroke (UNCP) in July. "I grew up around the school and it influenced my life, but I went to medical school at Duke and had my cardiothoracic surgery training at Duke."

The second youngest of nine children, Cummings worked hard to make his way to the University of North Carolina at Chapel Hill for undergraduate studies in zoology and then to Duke University School of Medicine. He attended Duke as a North Carolina Board of Governors Medical Scholar and Henry J. Kaiser Merit Scholar, earning the Sandoz Award for Basic Science Research and the National Library of Science Award.

"I wanted to go to Duke medical school because of its reputation," he says. "I knew the name Duke had a potential to open a lot of doors."

After graduating from Duke and completing training, Cummings decided to practice at Moore Regional Hospital in Pinehurst, North Carolina.

In 2004, Cummings retired from practicing surgery and pursued a career in health care administration. He was the medical director and executive director of Community Care of the Sandhills, a regional health care organization that served to case-manage 75,000 Medicaid patients. In 2013, he joined the North Carolina Department of Health and Human Services as director of the Office of Rural Health and Community Care and later became the deputy secretary of the Division of Medical Assistance, where he oversaw Medicaid delivery for more than 1.8 million low-income people with disabilities.

Now in many ways Cummings' career has come full circle. He has returned home to his native Pembroke to lead one of the most racially diverse universities in the nation, with more than 6,200 students in 41 undergraduate majors and 17 master's degree programs.

He hopes to establish a doctorate program in physical therapy, the first doctorate program to be awarded by the university, and to add more degrees in health fields like podiatry, optometry, and occupational therapy, which will provide graduates with well-paying job opportunities serving the region.

Cummings, a member of the Lumbee Indian Tribe, also wants to

***"If you are willing to work hard, you can achieve dreams that are beyond what you have ever imagined."***

**Robin Gary Cummings**

emphasize the rich American Indian history of Pembroke. Founded in 1887 as the Croatan Normal School, its original mission was to educate the American Indians of Robeson County and to prepare teachers for the public schools. Between 1939 and 1953 it was the only state-supported four-year college specifically for American Indians in the country. Now Cummings hopes to turn UNCP's Southeast American Indians Studies Program into an independent school within the university.

To address health problems of the Lumbee and other Indian people in North Carolina, which has the largest population of American Indians of any state east to the Mississippi, Cummings and other American Indian physicians founded the North Carolina American Indian Health Board.

"Diabetes is a tremendous challenge for American Indians," says Cummings. "Other issues are high blood pressure, heart disease, alcoholism, and substance abuse. Those are challenges that affect American Indians in a slightly higher proportion than many other populations."

Cummings says his Duke education taught him that education and hard work eventually pay off.

"If you are willing to work hard, you can achieve dreams that are beyond what you have ever imagined. Education provides the wings on which dreams fly," he says. He feels that he has been blessed and was given the opportunity to do so many things. "I want to help others to fulfill their dreams and accomplish their goals in life and to change an area in North Carolina that deserves and needs a lot of positive change."

— *Aliza Inbari*

**William H. Anderson Jr., MD'53**, of Conneaut, Ohio, died April 14, 2015, of natural causes. He was 88. Anderson lived most of his adult life in West Springfield, Pennsylvania, where he practiced medicine for 35 years as a general practitioner, surgeon, and cardiologist. He was chief cardiologist at Brown Memorial Hospital in Conneaut. In 1978, he established an official School for Paramedic and Emergency Medical Technicians in association with Brown Memorial Hospital and served as its director. He also served as medical director at Inn Conn Nursing Home from its establishment in 1990.

**Morton D. Bogdonoff, MD, HS'52-'55**, of New York, New York, died March 1, 2015. He was 89. Bogdonoff was a professor of medicine at Weill Cornell Medical College for 40 years. Early in his career, he was a professor of medicine in the Division of Endocrinology and director of the Division of Behavioral Medicine at Duke. He also served as chairman of the Department of Medicine at Abraham Lincoln School of Medicine of the Illinois School of Medicine in Chicago.

**David H. Carver, MD'55**, died June 20, 2015, at his residence in Princeton, New Jersey. He was 85. His career included serving as director of the Division of Infectious Diseases in the Department of Pediatrics at Johns Hopkins in Baltimore, Maryland, where he established an international reputation as a pediatric virologist. He also was physician-in-chief at the Hospital for Sick Children in Toronto, Canada. Carver then went on to Rutgers Medical School and Robert Wood Johnson University Hospital, where he spent 12 years as chair before being appointed associate dean for faculty.

**Stanley L. Deckoff, MD, HS'51-'52**, died April 23, 2015, in Port Saint Lucie, Florida. He was 89. Deckoff was the first radiologist and department chair at Mid Island Hospital in Bethpage, New York. He spent his entire career in this position.

**Sewell H. Dixon Jr., MD, HS'64-'73**, of Charleston, South Carolina, died May 10, 2015. He was 76. Dixon practiced cardiovascular and thoracic surgery in Greensboro, North Carolina, for 20 years, performing more than 12,000 major operations. He was president of his practice corporation for fifteen years and grew it from three to eight surgeons with a staff of 40. He introduced physician assistants to the region; established the first private practice, non-invasive diagnostic vascular laboratory in North Carolina; and was an original national investigator for endovascular laser angioplasty.

**James E. Dunn, MD, HS'67-'71**, died May 18, 2015, in Ashland, Oregon, after a long illness. He was 80. An innovator in neurosurgery and pain management, Dunn started the first pain management clinic in southern Oregon in the early 1980s.

In southern Oregon, he was influential in the nonsurgical approach to spine and pain problems. He continued to perform neurosurgery until his retirement in 2003 and then became an expert witness in legal cases.

**John H. Farrer, MD, HS'79-'81**, of Olympia, Washington, died at his home on April 18, 2015. He was 60. In addition to being a physician, Farrer was an avid history buff who loved to travel.

**Robert F. Heimbürger, MD, HS'43-'45**, of Birmingham, Alabama, died June 9, 2015. He was 97. He joined the Indiana University Medical Center in Indianapolis in 1948 and spent 40 years on its faculty, during part of which he served as chief of neurosurgery. His interests included early repair of congenital spinal defects and spinal cord tethering, stereotactic neurosurgery for a variety of disorders, and neurosurgical capacity-building in Asian countries. He spent the final years of his career, 1983-1988, at Chang Gung Memorial Hospital in Taipei, Taiwan, training neurosurgeons.

**James B. Holloway Jr., MD, HS'45-'46**, of Lexington, Kentucky, died June 28, 2015. He was 94. Holloway served four years of active duty in the U.S. Navy, retiring as a lieutenant commander. In 1964, he started a private practice, and in 1970, he founded Surgical Associates, a multispecialty group. After retiring in 1987, he worked a year as medical director for Medicaid for the Commonwealth and medical director for Medicare for 10 years. He also served as chief of staff and chief of surgery at both Saint Joseph Hospital and Saint Joseph East.

**Laurena B. Japenga, MD'51, HS'51-'53**, died March 1, 2015, in Indian Wells, California, following a brief illness. She was 87. Japenga worked as a pediatrician in Glendora, Covina, and San Dimas, California. She served as chief of staff at San Dimas Community Hospital and was on staff at Foothill Presbyterian Hospital, Inter-Community Hospital, and Queen of the Valley Hospital.

**Kenneth R. L. Lassiter, MD'61**, of St. Petersburg, Florida, died March 16, 2015. He was 78. Lassiter initially practiced neurosurgery for two years in Birmingham, Alabama. In early 1973, he moved to Charlotte, North Carolina, where he practiced for the next 28 years. He was a member of the American Association of Neurological Surgeons and numerous other regional and national neurosurgical groups.

**Donald S. Littman, T'44, MD'47**, of Red Bank, New Jersey, died at home on May 28, 2015. He was 92. Littman practiced internal medicine in Little Silver, New Jersey, for 40 years, retiring in 1995. He was a veteran of World War II and the Korean War, leaving the U.S. Navy as a lieutenant (S.G.).

**James E. Lowe, MD, HS'73-'81**, of Hillsborough, North Carolina, died May 10, 2015. He was 68. Lowe served on the faculty at Duke in the departments of surgery and pathology as a professor. He also served as director of the Surgical Electrophysiology and Cardiac Metabolism Laboratories at Duke. He was a National Institutes of Health surgical scholar and an established investigator with the American Heart Association.

**George K. Massing, MD, HS'65-'66**, of Mobile, Alabama, died June 20, 2015, after having lived with Parkinson's disease for 15 years. He was 76. In addition to serving two years in the U.S. Air Force, Massing spent time as a faculty member in the Division of Cardiology at the University of Alabama at Birmingham. He later moved to Mobile, where he joined the cardiology division at the University of South Alabama, ultimately becoming chief of cardiology, before entering private practice in 1980.

**Henry C. Mostellar Jr., T'52, MD'56**, of Mobile, Alabama, died June 15, 2015, after an extended illness. He was 84. After serving for two years in the U.S. Air Corp as a flight surgeon and later completing training in neurosurgery in 1963, Mostellar went on to join a private practice in Mobile. He practiced there until retirement in 2000.

**William Stanley Myers, MD, HS'69-'71**, of Memphis, Tennessee, died May 8, 2015. He was 78. Early in his career, soon after starting a family practice, Myers was called to serve in the Vietnam War as a MASH unit doctor. He went on to open an allergy practice in Memphis, where he practiced for many years until retiring in 2006.

**Charles Philip Reynolds III, MD'70**, of Lakewood, Colorado, died April 20, 2015. He was 70.

**John P. Sheehan, MD, HS'68-'70**, of Colts Neck, New Jersey, died May 13, 2015. He was 74. A retired physician who practiced and was board certified in anatomic pathology, clinical pathology, and internal medicine, Sheehan was director of laboratories at Bayshore Community Hospital in New Jersey for 20 years. Prior to that, he was director of laboratories at East Orange General Hospital. At both hospitals, he was active in the medical staff organization and served on several committees with a special interest in quality assurance.

**Robert M. Sinskey, MD'48, HS'48-'49**, of Santa Monica, California, died June 21, 2015. He was 90. A world-renowned cataract surgeon, Sinskey patented the modified J-loop IOL and invented several surgical instruments, including his widely used Sinskey Hook. He served as president of the American Society of Cat-

aract and Refractive Surgery (ASCRS) from 1999-2000 and was inducted in the organization's Hall of Fame in 2005. He served as medical director emeritus of the Southern California Lion's Eye Institute, clinical professor of ophthalmology at the Jules Stein Eye Institute at the University of California at Los Angeles, and on the staff at St. John's Health Center in Santa Monica. Along with the ASCRS, he led the effort to establish an eye clinic in Addis Ababa, Ethiopia. He was also well known for his award-winning winery, Robert Sinskey Vineyards, in Napa Valley.

**Delford L. Stickel, T'49, MD'53, HS'53-'56, '57-'62**, professor emeritus in the Duke Department of Surgery, died on May 11, 2015. He was 87. Stickel was a nationally renowned surgeon who in 1965 performed the first kidney transplant in North Carolina and at Duke. He joined the faculty at Duke in 1962 as an assistant professor. His leadership roles included serving as director of postgraduate medical education for the School of Medicine, associate medical director of Duke University Hospital, and chief of surgery and chief of staff at the Durham Veterans Affairs Medical Center. Stickel also was the driving force behind North Carolina's passage of the Uniform Anatomical Gift Act.

**Albert S. C. Sun, MD, HS'75-'76**, died March 8, 2015, in Towson, Maryland, two weeks after being diagnosed with advanced gastric cancer. He was 75. He practiced medicine in Fallston, Maryland, for almost 40 years, even up until the cancer diagnosis.

**James McKnight Timmons, MD'41**, of Lexington, South Carolina, died April 9, 2015. He was 98. Timmons was in private practice in otorhinolaryngology with the Columbia Ear, Nose, and Throat group for 40 years. He was a diplomat of the American Board of Otolaryngology and a member of several professional societies, including the American Academy of Ophthalmology and Otolaryngology and the American Laryngological, Rhinological, and Otological Society.

**F. Stephen Vogel, MD**, professor emeritus of pathology and founding chief of Duke's Division of Neuropathology, died in Augusta, Georgia, on August 4, 2015. He was 95. Vogel led the neuropathology division from 1962-1991. Recognized as one of the foremost authorities in neuropathology, he trained more than 20 neuropathologists and published *Surgical Pathology of the Nervous System and Introduction to Disease*. He was involved in research projects on board the Apollo spacecrafts. He also served as president of the American Association of Neuropathologists and the International Academy of Pathology.

## Davison Club Levels

\$25,000  
Chancellor's Circle

\$10,000  
Leadership Council

\$5,000  
Dean's Circle

\$2,500  
Davison Fellow

\$1,500  
Family Membership

\$1,000  
Davison Club Member

\$500  
Recent Graduate Member

Gifts to the Davison Club provide critical unrestricted support for medical education at Duke.

# Driven by Davison's Legacy:



**Edwin T. Preston Jr., MD'60, HS'60-62**, feels fortunate to have entered Duke University School of Medicine when he did. As a first-year medical student in 1956, Preston was only beginning the journey toward becoming a doctor; meanwhile, the legendary career of founding Dean Wilburt C. Davison, MD, was just a few short years away from coming to a close.

Although his interaction with Dean Davison was mostly limited to a few course lectures, Preston says just being in Davison's presence had a lasting effect. He feels forever connected not only to the man—the visionary leader responsible for making a young medical school one of the best in the country—but also to his values.

"His office door was always open," Preston says. "When he came to Duke, he brought with him a wonderful tradition of medical education and a passion for students."

Preston wants all alumni, no matter when they graduated or whether they had the chance to meet Davison, to also feel linked to the dean's legacy and his commitment to helping deserving students realize their dreams of getting a Duke education regardless of their ability to pay. He says joining the Davison Club is a great way to do just that.

"I had tremendous respect for the Dean," says Preston, now a retired orthopedic surgeon living in Chapel Hill, North Carolina. "So when I was presented with the opportunity to join the Davison Club, which does wonderful things for students, I couldn't resist. I feel grateful—always have, always will. I feel a sense of obligation to the school that opened the world to me."



JON GARDNER

## Good guys wear white

The White Coat Ceremony is a symbol of entry into the profession of medicine. New Duke students, along with Philip Goodman, MD, associate dean for medical education (front row, center) celebrate this milestone on August 7, 2015, in the Bryan Center.