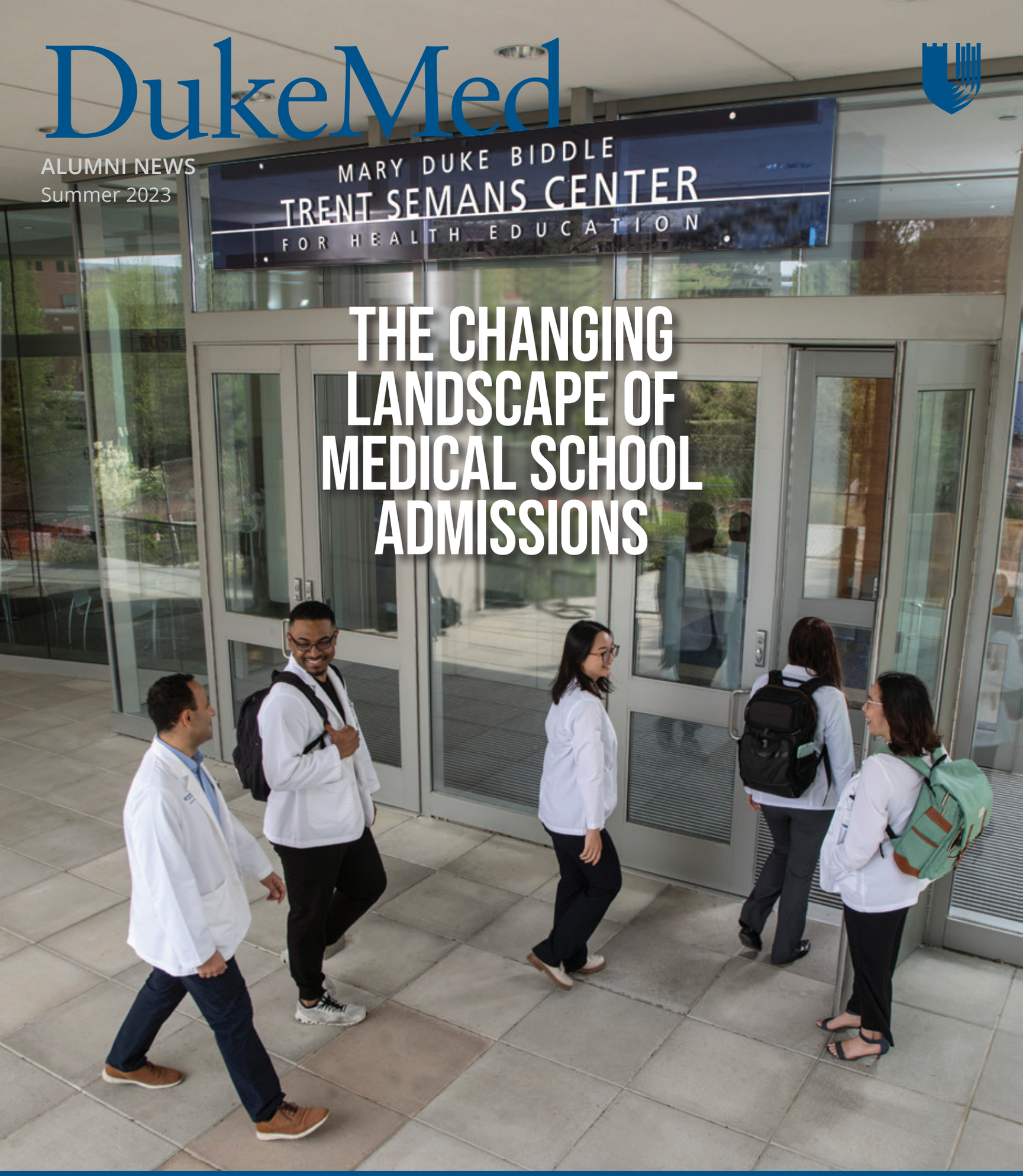
DukeMed
ALUMNI NEWS
Summer 2023



THE CHANGING LANDSCAPE OF MEDICAL SCHOOL ADMISSIONS

Excellence and Innovation Drive Duke's Organ Transplant Program

Dear Friends,

I hope this message finds you and yours in good health and good spirits. At this time of year, we celebrate the accomplishments of the students graduating from our wide array of health professions education programs. Their enthusiasm is palpable as they prepare for their internships, residencies, new careers, or the next phase of learning, and we all share in their excitement and optimism.

At the same time, we are looking forward to welcoming the incoming first-year students to our degree programs. Among the features you will find in this issue of DukeMed Alumni News is a behind-the-scenes look at the unique process our admissions teams use to select our students from among a large pool of applicants. At the School of Medicine, we look beyond transcripts and test scores. Our admissions process is designed to provide a holistic view of our students, and the vast diversity of experiences, backgrounds, interests, and perspectives they bring with them enriches our community.

We continue to roll out our innovative Patient First curriculum, now in its second full year of implementation for MD students. The curriculum teaches the biomedical sciences within the context of patient care, integrating research and clinical skills from the first day of medical school. Our students have embraced this new approach as we prepare them to meet the evolving needs of a complex world.

Our research mission continues to accelerate through recruitment of prestigious faculty and critical investments in science. With Duke Science and Technology, we are expanding Duke's scientific leadership in areas where we can make the most transformational advances. By identifying our strengths and aligning our vision, Duke will be better equipped to address particularly intractable areas, such as cancer, Alzheimer's, infectious disease, and transplant immunology.

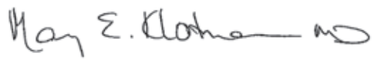
It has been two years since we launched our "Dismantling Racism and Advancing Equity, Diversity, and Inclusion at the School of Medicine" strategic plan. We have made great progress, and much more must be done. Each new step fortifies our resolve to continue the necessary work of creating and sustaining a more just and equitable environment.

This summer will mark the beginning of a new era for the School of Medicine and the Duke University Health System with the full implementation of the Duke Health Integrated Practice (DHIP). This new model brings the clinical practice into alignment with our research, education, and community health missions and will better equip the Duke Health enterprise to improve access, grow, and adapt while helping recruit and retain top providers and staff.

You — our alumni and friends — are important partners in our work. Your support provides essential resources that enable us to carry out our core missions and advance human health, and your engagement and service help the School of Medicine improve health and health care regionally, nationally, and around the world.

Thank you for everything you do for the School of Medicine. I encourage each of you to remain actively engaged with the School of Medicine as we work to fulfill our missions of patient care, research, education, and community partnerships to advance human health.

With warm wishes,



Mary E. Klotman, BS'76, MD'80, HS'80-'85
Dean, Duke University School of Medicine,
Vice Chancellor for Health Affairs, Duke University

In DukeMed Alumni News, the names of alumni of Duke University and its constituent schools and degree programs are printed in bold along with their degrees and class years. HS (House Staff) signifies residencies, fellowships, or internships. Names of current students are printed in bold.

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

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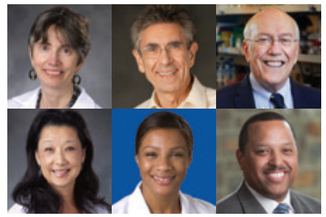
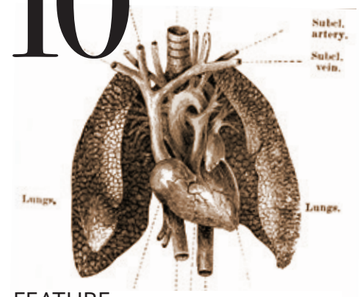




Medical student Shree Bose appeared on the cover of the DukeMed Alumni News magazine in 2018. Today she is on her way to the University of Chicago.

SUPPORTING SCHOLARSHIP ENDOWMENTS

JAQUILYN SHUMATE

Scholarship Support Opens Doors

"By providing scholarship funds I'm helping support people who have the capacity, have the talent, but may not pursue a career in medicine because of the cost."

Claire Spain-Remy, MD'85

Claire Spain-Remy, MD'85 planned on going to medical school in the Midwest. That is, until Duke invited her to apply and offered to waive her application fee.

"Duke was a great fit," recalled Spain-Remy. "Its unique curriculum was very attractive to me."

Spain-Remy attended the School of Medicine on a military scholarship and completed a tour of duty in South Korea before joining the faculty at Madigan Army Medical Center. After her military career, she entered OB-GYN private practice before moving into medical administration and health care consulting.

Spain-Remy is a longtime supporter of the School of Medicine. She is serving as Vice President of the Medical Alumni Council and recently endowed a scholarship fund.

Spain-Remy knows that financial limitations can be a real barrier to pursuing medicine, especially for people from underserved communities.

"By providing scholarship funds I'm helping support people who have the capacity, have the talent, but may not pursue a career in medicine because of the cost," she said.

Endowment gifts provide sustained funding in perpetuity to shape the future and are just one of many ways you can support Duke University School of Medicine. Please consider making a gift online at **gifts.duke.edu/dmaa**.

To learn more about how to support the School of Medicine, please contact **Sarah Nicholson,** assistant vice president, at **919-385-3160** or **sarah.nicholson@duke.edu.**

CHRIS HILDRETH

new transplant technology

Below, transplant surgeon **Jacob Schroder, MD, HS'01-'12,** shows a patient the new heart he is about to receive. New procedures and technologies have transformed organ transplantation, and Duke, as one of the leading transplant institutions in the nation, is at the forefront of recent advances. See more on the innovation and excellence that drive Duke's transplant program on ***pages 10-16***.

At left, Sarah Casalinova, assistant research practice manager and the transplant device manager. wheels a TransMedics warm perfusion device containing a donor organ toward the operating room.

SARAH CASALINOVA

THE CHANGING LANDSCAPE OF MEDICAL SCHOOL ADMISSIONS

If you want typical medical students, a typical admissions process might do.

But Duke University School of Medicine is not looking for typical medical students. That's why the admissions process is tailor-made to go beyond transcripts and test scores to identify students who will not only thrive at Duke but will also have a significant impact throughout their careers.

"There is no typical Duke medical student," said **Joseph Jackson, MD, HS'04-'07,** associate dean and director of the Office of Student Affairs. "That's the beauty of it. They don't all look a certain way, act a certain way, or have a certain background. But they all have a real sense of purpose and real drive to be leaders and change agents in the health professions field."

MORE ESSAYS + MMI = HOLISTIC VIEW

To help identify these change agents, the admissions committee has crafted an application and interview process designed to enable a holistic view of the applicants. "Duke's process is a lot more thorough than other schools," said **Braylee Grisel,** a third-year medical student from Utah who serves on the admissions committee. "We have a lot more essays. You get more diversity when you get a better idea of the experiences the applicants have had."

In place of a traditional interview, Duke uses multiple mini-interviews (MMI). Interviewees spend ten minutes at each of ten different stations, where they face challenging scenarios with no right or wrong answer, designed to elicit aptitudes related to ethics, critical thinking, cultural competency, emotional intelligence,

By Mary-Russell Roberson

Photos by Chris Hildreth

Duke Takes a Holistic Approach to Building a Diverse Class of Future Leaders

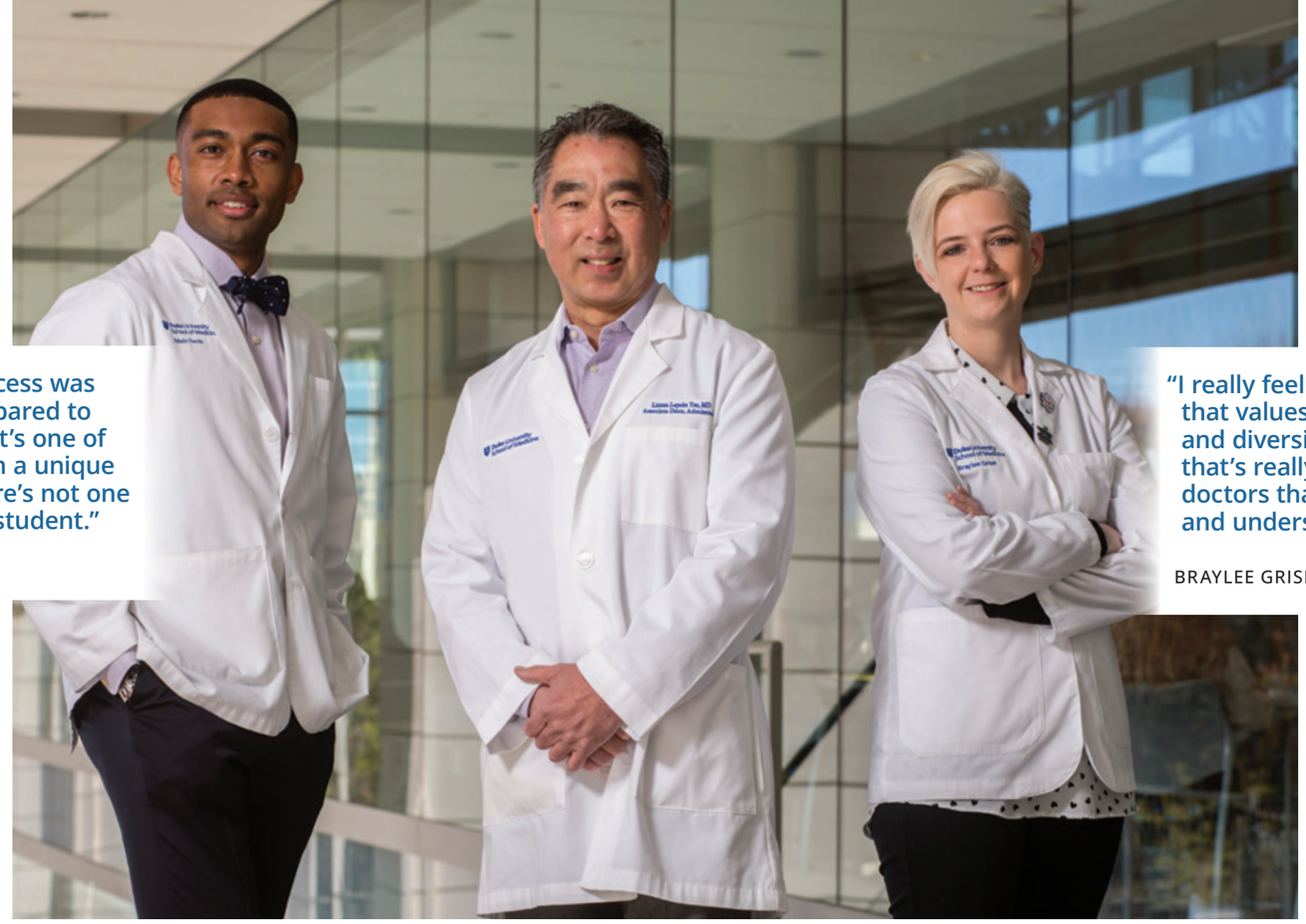
and teamwork. Duke began using the MMI about a decade ago in the medical school, and now uses it in all its health professions programs, including Physician Assistant, Physical Therapy, and Occupational Therapy.

Linton Yee, MD, associate dean for admissions, said using the MMI allows the admissions committee to evaluate characteristics necessary for succeeding at Duke and beyond, such as communicating well with others. It also removes the potential for bias, because the "raters" who evaluate MMI performance don't know anything about the interviewee except their name. Even at the one station that resembles a short traditional interview, the interviewer is not familiar with the interviewee's application.

Grisel said the MMI gave her a chance to demonstrate strengths not measured by grades or standardized test scores. "I went to a state school not really known for being a pre-med factory, and I came from a low-income background and struggled a lot in taking the pre-med path," she said. "[With the MMI], I felt like I could really demonstrate how well I understand patients from different backgrounds and my ability to think on my feet."

MAKING IT BETTER

Five or more students serve on the admissions committee each year. They evaluate applications, make presenta-



"Duke's application process was definitely unique compared to other schools, and that's one of the reasons it brings in a unique set of individuals. There's not one type of Duke medical student."

EDWIN OWOLO

"I really feel grateful to be at a place that values diversity of experience and diversity in general. I think that's really important for creating doctors that are able to relate to and understand their patients."

BRAYLEE GRISEL

Members of the admissions committee: Edwin Owolo, Linton Yee and Braylee Grisel

tions to the committee about applicants, and participate in the admission decisions.

"What surprised me was just how holistic the whole process was," said committee member **Edwin Owolo,** a third-year student from Norwalk, Connecticut. "We weren't super bogged down on any one detail, but we looked at them as a whole and what they could bring to the community at Duke."

Grisel appreciated being able to provide context when the committee considered applicants from limited-resource circumstances. "I know Duke provides support to people coming from a place of not having had as many academic privileges," she said, "so it makes me more comfortable to admit students from underprivileged backgrounds."

The students also help improve the process for the future. "Every year we do a debrief with the students: what worked and what didn't work," Yee said. The admissions committee usually changes at least one of the eight required essays each year, and often tweaks the MMI stations as well.

"We can never stop thinking about how to make our processes better," said Andrea Liu, assistant dean of admissions.

One change that's been spurred by students is to include a health-and-wellness lens when evaluating applications, not only in thinking about what applicants might need at Duke for their physical, emotional, and spiritual health, but also considering how applicants have navigated difficult situations in the past. "I've been in this arena for a while, and the dynamic of the students has changed," Liu said. "Health and wellness is a priority for them."

"We can never stop thinking about how to make our processes better."

— ANDREA LIU

Students and applicants are also demonstrating a growing interest in advocacy and health disparities.

GOING — AND STAYING — VIRTUAL

In 2020, the COVID-19 pandemic forced a sudden switch to virtual interviews. It wasn't easy. For example, the teamwork station previously had included a task involving Legos, which couldn't be replicated over Zoom. "We had to come up with other ways for people to work together in a virtual setting so we could understand how they interact, how they listen, how they share information," Liu said.

Virtual interviews turned out to have some distinct advantages, though. They ease the financial burden for students of traveling to multiple schools, for example. Grisel, who applied pre-pandemic, used funds provided by the Association of American Medical Colleges (AAMC) to help cover application fees, but there were no resources for travel. So she worked extra shifts at Starbucks, and her family started a GoFundMe site.

Even after most pandemic-related restrictions have eased, Duke and most other medical schools are still doing virtual interviews.

"It opened up our applicant pool and made it more diverse," said **Edward Buckley, BSE'72, MD'77, HS'77-'81,** vice dean for education. "Our experience is positive enough that I don't see us going back to face-to-face interviews."

WHY STUDENTS CHOOSE DUKE

Applicants are drawn to Duke not only for its excellence but also its renowned curriculum — which is now even more innovative with the ongoing rollout of the new "Patient First" curriculum. Applicants like the team-based learning that replaced the traditional lectures-and-exams curriculum a little more than a decade ago. And Duke is one of the only four-year medical schools that includes a full year for research. "When we ask [matriculants] why they chose Duke and not somewhere else," Buckley said, "that is the number one reason."

Owolo is spending his research year on three projects: investigating how breast cancer metastasizes to the spine, studying methods of decreasing health disparities among spine surgery patients, and improving diversity in the field of neurosurgery through outreach to undergraduate and high school students. "It's an exercise in self-management, too," he said, "trying to figure out how to balance a lot of different duties in the clinical and research space. It's a big year for career development."

Both Grisel and Owolo mentioned that Duke's generous financial aid package made a difference.

And, for many students, intangibles factor into the decision.

"A lot of it was seeing the culture here and how supported everyone felt," Grisel said. "Students seemed genuinely happy, and they made me feel welcome."

GROWING DIVERSITY

As a group, Duke medical school students are becoming more diverse by almost any measure. Underrepresented minorities make up 29% of the current first-year class, and students whose parents didn't complete a four-year degree constitute almost 7%.

At Duke, as at most other medical schools, a majority of applicants, accepted students, and matriculants are female — a dramatic shift from earlier eras. In 1980, only 25% of medical school graduates nationally were women. The current first-year class at Duke is more than 70% female. Buckley said that a large majority of students in the Physician Assistant, Physical Therapy, and Occupational Therapy Doctorate programs are female as well.

Yee speculates the shift could be due to the

STUDENT ADMISSIONS BY THE NUMBERS

PHYSICAL THERAPY PROGRAM

698 Total Applicants

99 Number Matriculated **14%**

24% Under-represented Minorities (24)

76% Others (76)

82% Female (81)

18% Male (18)

PHYSICIAN ASSISTANT PROGRAM

2,155 Total Applicants

91 Number Matriculated **4%**

35% Under-represented Minorities (32)

65% Others (59)

75% Female (68)

25% Male (23)

OCCUPATIONAL THERAPY PROGRAM

154 Total Applicants

44 Number Matriculated **29%**

41% Under-represented Minorities (18)

59% Others (24)

93% Female (41)

7% Male (3)

MEDICAL DOCTOR PROGRAM

5,330 Total Applicants

120 Number Matriculated **2%**

29% Under-represented Minorities (35)

71% Others (85)

71.1% Female (85)

28.3% Male (34)

0.6% Non-conforming to Gender (1)

proliferation of Science, Technology, Engineering, and Math (STEM) programs for girls and young women that began a couple of decades ago. He also said there are many more role models for women in medicine now. "Now you can find women in ortho or surgery where in the past there were very few," he said. "It's not a roadblock anymore."

Geographic diversity is increasing, with the largest group of first-year students coming from California, followed by North Carolina, Florida, Georgia, and New Jersey.

Applicants also have a greater diversity of experience, partly due to the increased popularity of gap years. About three-quarters of the current first-year students took one to three gap years. Sometimes the break is for travel; other times it's to gain research or clinical experience.

"The real value with the gap years is to do something to help you understand why you want to undertake this [demanding profession] for the rest of your life," Yee said.

Within all the diversity, one commonality unites Duke medical students, current and past: the desire to care for patients.

"[Students] have to really desire to care for patients and improve health care," Yee said. "You cannot teach that."

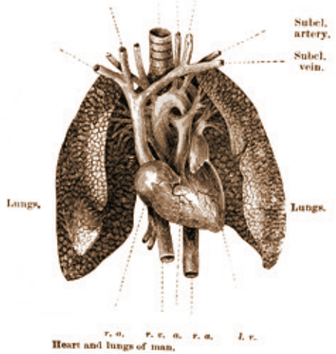
*Duke School of Medicine student **Brooke Schroeder** explains the use of a mannequin in the simulation lab.*

Braylee Grisel tells prospective students about the advantages of a Duke medical education.

Rhea Dash instructs prospective students on how to work through a team learning exercise.

Nicole Wills and Scott Palmer, seven years after her double lung transplant.

OUT WITH THE OLD, IN WITH THE NEW



Excellence and Innovation Drive Duke's **Organ Transplant Program**

By Dave Hart

Photos by Chris Hildreth

Nicole Wills knew she was in trouble.

For the previous two years, Wills had been under evaluation and treatment for pulmonary fibrosis as an outpatient at Duke University Hospital, making the trip to Durham every three months from her home in Cramerton, a small town near Charlotte. She had recently undergone a lobectomy, but she was otherwise young and fit, exercising regularly and raising an active 10-year-old son.

But one night in June 2016 she awoke with a high fever and an alarmingly low oxygen level.

Her husband hurried her to the local emergency room, where she was hustled into intensive care. The doctor there offered a grim prognosis.

"He said, 'Either you get a lung transplant or you're not going to leave this hospital,'" Wills recalled.

She was airlifted from Charlotte to Duke. On June 23, 2016 — two years to the day after her father died of lung cancer associated with pulmonary fibrosis — she was placed on the transplant list.

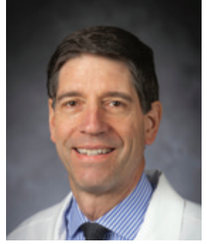
"And four days later," Wills said, "I had new lungs."

She came to the right place. By any reckoning, Duke is one of the top organ transplant centers in the world, a leader in patient care and outcomes, innovative research, and training.

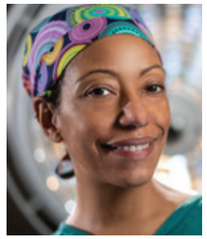
A SENSE OF PURPOSE

In the summer of 2022, Duke performed its 10,000th organ transplant, putting it among an elite group of

Allan Kirk



Stuart Knechtle



Lisa McElroy

institutions nationally. Duke ranks among the top five transplant centers by volume, with some of the shortest average wait times and best survival rates in the U.S. Duke teams perform more multi-organ transplants than any other center in the Southeast and take on complicated cases that other centers turn down.

Innovations in transplant surgery, immunology, and related fields at Duke have produced numerous "firsts" and other breakthroughs, and Duke researchers continue to push the frontiers of the possible.

Duke is also at the forefront nationally in tackling the vexing challenges that lie beyond the operating room and clinic: issues of equity, disparities, and social factors that play an outsized role in transplant access and outcomes.

"Transplant is among the features that differentiate Duke," said **Scott Palmer, MD'93, HS'93-'96, HS'99,** the Donald F. Fortin, M.D., Distinguished Professor of Medicine and clinical research director for the Duke Transplant Center. "One thing that sets us apart is the outstanding quality of care across all the organs and all the subspecialty areas. Good kidney transplant programs are fairly common. Livers, probably less so.

"We have historically been one of the most outstanding transplant research programs, and that certainly continues today. Between the quality of clinical care and research impact across all the organs, transplant is one of Duke's signature areas."

— SCOTT PALMER

A few big programs do heart, and top lung transplant programs are incredibly rare. We are extremely good at all of them. Very few places can say that.

"And in terms of research, I think Duke is unique. We have historically been one of the most outstanding transplant research programs, and that certainly continues today. Between the quality of clinical care and research impact across all the organs, transplant is one of Duke's signature areas."

The impact of Duke's transplant program is due in large measure to its being part of an academic health system, said **Allan Kirk, MD'87, PhD'92, HS'87-'95,** the David C. Sabiston Jr. Distinguished Professor of Surgery and chair of the Department of Surgery.

"There is great science and great clinical activity going on here, but we are also working to figure out how to take this precious resource and allocate it in a way that has humanity at its core," Kirk said. "That can only happen at a university that has the broad sense of purpose that Duke does. We're more than a hospital. We are physically attached to a university that thinks about the broader human implications of scientific achievement."

PAST, PRESENT, AND FUTURE

In the beginning, there was Bernard Amos.

Amos, a British-born immunologist who was recruited to Duke in 1962 as professor and chief of the Division of Immunology, built Duke into one of the world's first great clinical and research transplant institutions. His fundamental discoveries about the mechanics of the immune system helped pave the way for modern organ transplantation, and he established a culture of collaboration, organizing the first International Histocompatibility Workshop at Duke in 1964 and co-founding the Southeastern Regional Organ Procurement Program, the nation's first organ-sharing organization.

"The history of transplant at Duke is in many ways the history of transplant everywhere in the world," Kirk said. "Some of the fundamental advances that had to happen to make modern transplantation possible were done right here."

In the decades since, Duke has attracted many of the world's leading transplant scientists and clinicians. They have built on those foundations and pioneered and propelled numerous breakthrough advances.

The foremost medical challenge remains overcoming immune system rejection of new organs. Kirk, Palmer, and many other researchers at Duke are addressing this fundamental issue on numerous fronts: by developing more targeted immunosuppressant medications; genetically engineering more tolerant grafts; transplanting a portion of the donor's immune system along with the donated organ; even genetically improving damaged or defective organs and returning them to the patient, avoiding the need for transplant at all.

MEETING A GROWING NEED

Concurrently, Duke researchers are working to increase the supply of high-quality organs and make transplants available to more people. Clinical trials at Duke recently led to the approval of machine perfusion devices that circulate warm blood through donated organs during transport, providing an invaluable alternative to traditional cold transport. *(See sidebar on page 15.)*

"Perfusion devices give us better organ preservation, more control, and a longer window," said **Stuart Knechtle, MD, HS'82-'89,** William R. Kenan, Jr. Distinguished Professor of Surgery and director of the Duke Transplant Center. "It has made a huge impact and is a tremendous step forward."

"There is a huge disparity between the need for transplants and the supply of organs. We're still using an old system and, to put it mildly, it does not work very well."

— STUART KNECHTLE

Knechtle also is helping drive efforts to overhaul the national organ procurement system, which he says is antiquated and inefficient.

"There is a huge disparity between the need for transplants and the supply of organs," Knechtle said. "We're still using an old system and, to put it mildly, it does not work very well."

Knechtle and Eric Perakslis, PhD, professor in population health sciences and the School of Medicine's chief research technology strategist, have published a proposal for a system that would use information technology to create a seamless, faster, and more efficient way to match and distribute organs.

"We have a concept for how to redesign the information platform that would serve patients and the transplant community far better and take advantage of technological

1962

Bernard Amos, a pioneering immunologist, is recruited to Duke. His groundbreaking research on the human histocompatibility system helped pave the way for modern transplantation.

1964

The first International Histocompatibility Workshop is held at Duke.

1965

Duke surgeons perform the world's first kidney transplant between a recipient and a living related donor on the basis of organ matching.

1969

Bernard Amos and David Hume organize the Southeastern Organ Procurement Foundation, the nation's first organ-sharing program.

1984

Duke establishes the Adult Bone Marrow Transplant Program

1992

The Duke Comprehensive Center Center develops the nation's first outpatient bone-marrow transplantation program

Duke performs its first lung transplant. The lung transplant program will grow to become one of the highest-volume and best-performing programs in the U.S.

Duke performs its first combined heart/lung transplant.

2014

The Duke Heart Transplant program performs its 1,000th heart transplant.

2016

Duke surgeons perform the first hand transplant in North Carolina, attaching a limb to a patient whose hand was severed in a childhood accident.

2018

Duke performs the state's first liver transplant from an HIV-positive donor to an HIV-positive recipient.

2019

Duke performs the first Donation After Circulatory Death (DCD) heart transplant in an adult recipient in the U.S.

2020

Duke surgeons performs the nation's first pediatric DCD heart transplant in a 14-year-old patient.

2021

A Duke team led by pediatric heart surgeon **Joseph William Turek, MD, PhD, MBA'20, HS'02-'10,** performs the world's first combined heart/thymus transplant, in a 6-month old baby born without a functioning immune system. The thymus stimulates immune response, and implanting thymus tissue with the heart helps the immune system recognize and tolerate the new organ.

2022

A Duke team performs the world's first partial heart transplant, fusing living arteries and valves from a donor heart onto the newborn patient's existing heart. The procedure should enable the valves to grow along with the patient, eliminating the need for multiple followup surgeries.

Duke Transplant Center performs its 10,000th transplant, a milestone achieved by only 18 other institutions in the U.S.

advances that have occurred in recent years," Knechtle said. "These technological advances enable a seamless way to match and distribute organs, much like when ordering an Uber."

IT TAKES A VILLAGE

A great transplant program needs great surgeons, but it also requires great specialists in the vast number of other disciplines that care for the patient before, during, and after the surgery.

"I think transplant invented multidisciplinary care," Kirk said. "From the beginning, it was obvious that it can't be done just by surgeons or immunologists or anyone else in isolation. It can't be done without knowledgeable people in a whole range of fields. That's one of the best things about it."

One of the strengths of Duke's program is the quality of its programs and personnel across all those subspecialties: immunologists, pathologists, nephrologists, cardiologists, pulmonologists, hepatologists, anesthesiologists, infectious disease specialists, pharmacologists, nurses, rehabilitation specialists, physician assistants, physical therapists, occupational therapists, pharmacists, social workers, and many others.

"There's something in the water at Duke," said Sarah Casalinova, assistant research practice manager in the Division of Cardiothoracic Clinical Trials and the transplant device manager. "We come from a lot of different backgrounds, but we all have the same goal. Everybody is skilled and dedicated and ready when needed. There is no quit in any of us."

"What we know about each patient's social circumstances will help us make more informed decisions and deliver the best care to the most people ethically and efficiently."

— LISA MCELROY

Jeana Schneider, MHS'10, is the team lead for the lung transplant advanced practice provider group, which helps transplant patients prepare before their surgery and cares for them afterward.

"Every person on our multidisciplinary team, from the advanced practice provider group to the providers, the nurses, the therapists, all the way down the line — everyone here puts their whole self into this work," Schneider said. "We are all here to take care of the whole patient. And it is a privilege to do that. I can't tell you how wonderful it is help someone breathe again."

ADDRESSING DISPARITIES

Race, ethnicity, geography, economic status, and other social determinants of health play an enormous role in transplant access and outcomes. Lisa McElroy, the Onyekwere E. Akwari, MD, Endowed Professor of Surgery, is at the leading edge of efforts to understand the roots of transplant disparities and to improve access for people from all backgrounds.

"We are looking at equity in access to care," McElroy said. "We need to establish improved ways to ethically determine who is eligible for transplantation and expand our notion of what it means when we say someone is going to do well."

A given patient may recover from surgery well, but if they don't have a car to get to their follow-up appointments, or if they can't afford their medications, their outcome will suffer. McElroy and others are working to improve the incorporation of social determinants of health into transplant evaluations.

"There is not a lot of science on this right now," McElroy said. "We want to approach this information the same way we evaluate blood type or any other biological data. What

it takes a village

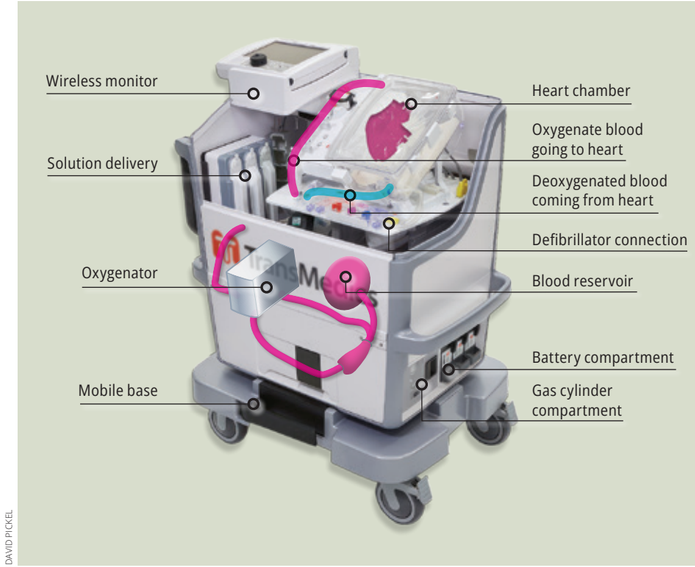
'Heart-in-a-Box' Device Revolutionizes Organ Transport

When organ transplants became a more frequent procedure in the 1950s and 1960s, the standard method of transporting the organs was to pack them on ice in a cooler no fancier than what you might use to pack drinks for a picnic.

These coolers limited the travel time to keep an organ viable for transplantation — for a heart, that window was about four hours — which in turn severely limited the distance a donated organ could be retrieved and transported. Also, organs transported in cold storage could get "freezer burn," since the temperature in the cooler was not regulated.

This remained the customary means of transporting organs until just a few years ago, when dramatic improvement were made in the process of transporting organs from donors to recipients. After many years of clinical trials, some of them conducted at Duke, the U.S. Food and Drug Administration approved the use of a superior device: a battery-powered container that maintains the organ in a functioning state, perfusing it with warm, nutrient- and oxygen-rich blood, using wireless technology to monitor the organ and allow longer time for transportation. TransMedics created and received approval for the "TransMedics OCS™ (Organ Care System)," which is currently available for hearts, lungs, and livers. FDA approval was obtained separately for the Transmedics devices for each organ: lungs in 2018, heart in 2021, liver in 2022.

The heart device is sometimes referred to as "heart-in-a-box," but it isn't really a box. It has a plastic chamber within a nearly 100-pound rolling cart that contains the donor heart, connected to tubes that pump medications, nutrients and blood through it. The heart is kept beating the entire time during transport from the donor to recipient, and its condition is continually monitored. The device contains batteries for up to 10 hours of use, but it can also be plugged into an electrical outlet. The electricity powers the oxygenator and a heater to keep the heart chamber at the correct temperature, as well as the monitoring system.



DAVID PICKEL

"These devices extend the life of organs once they are removed from the donor and introduce more flexibility into the system."

— STUART KNECHTLE

By keeping organs in better condition for longer, warm perfusion devices enable procurement teams to travel much greater distances to retrieve organs and dramatically extend the time that donor organs can be kept viable. And by monitoring the organ during transport, the device gives surgeons a better understanding of its condition. All of this makes more organs available for transplant — a critical advance, because currently more than 100,000 people are on transplant waiting lists in the U.S., and an average of 17 people die every day waiting for a transplant.

In 2019, Duke University Hospital, as part of a clinical trial, was the first institution in the U.S. to successfully use a Transmedics device for a "DCD" — donation after circulatory death – heart transplant.

"These devices extend the life of organs once they are removed from the donor and introduce more flexibility into the system," said Stuart Knechtle, William R. Kenan Jr. Distinguished Professor of Surgery and director of the Duke Transplant Center. "That's a real game-changer."

— *David Pickel*

we know about each patient's social circumstances will help us make more informed decisions and deliver the best care to the most people ethically and efficiently."

LIKE A MIRACLE

Amid the intensity of research, clinical care, and policy debates, it can be easy to overlook the fact that transplantation teams regularly perform something almost like magic.

"It's easy to love transplantation," Kirk said. "When transplant came into the world, it seemed like a miracle — and it still does. To take a heart that has stopped beating out of one person, and to re-animate that heart and put in another person and watch them walk out of the hospital — that will never stop being remarkable."

Nicole Wills can attest to the miracle of transplant. Seven years after receiving her double lung transplant at Duke, she is, she said, "living her life." She had a few scares in the first year, but she's only been hospitalized once post-transplant. She is mindful of her energy reserves and takes precautions against infection, especially during the COVID-19 pandemic.

But she hikes, works out at the gym, and has run 10-kilometer races. She has walked countless 18-hole rounds of golf cheering on her son, who will join Clemson University next year as a freshman and member of the golf team.

"I have no words to express my gratitude," Wills said. "From the donor and the donor family through everybody at Duke, they've been there every step of the way. There has never been a moment when I didn't feel like I was receiving the best care possible. I trust my Duke care team absolutely. I literally put my life in their hands."

Surgeon Jacob Schroder prepares to transplant a donor heart into a recipient at Duke University Hospital.

it takes a village

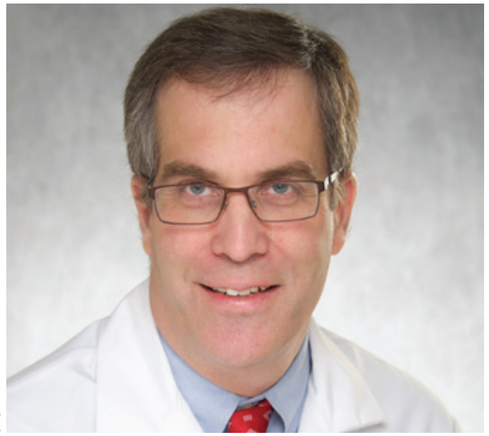
Pazoo Xiong, PA-C · *Amanda Schandert, PharMD, BCPS, CPP* · *Brandon Menachem, MC* · *Carrie Johnson, MD* · *William Jackson, HRT, RCP* · *Alicia Hays, PTA* · *Eric Smith, PTA* · *Erica Rao, PT* · *Cynthia Harrell, PT*

Alumni Making a Difference: David Axelrod, MD'96, MBA'96

Professor of Surgery-Transplantation and Hepatobiliary Surgery, University of Iowa

Surgical Director of Kidney/Pancreas and Living Donor Transplant, Department of Surgery

Associate Chief Medical Information Officer, University of Iowa Hospitals and Clinics.



UIHC

Much of your research explores the intersection of economics and medicine. How do economic factors influence transplant care?

I've always been interested in understanding the health care marketplace in the context of providing clinical care: How do we improve the clinical enterprise and efficiency so we can provide better care to more people? It's quite easy to deliver high-quality, cost-efficient care if you're dealing with a predominantly well-insured, economically advantaged population. But that's not the population that we care for in this country. How do we maximize efficacy without exacerbating racial, ethnic, economic, and other disparities?

Transplant has some unique characteristics. We don't have enough organs, so organ allocation, access, and cost are huge issues. We need to ensure that we have a system that ensures maximum use of donated organs without increasing the cost of care so much that hospitals are no longer willing to provide this service.

Transplant requires lifelong care. If I take out someone's gall bladder, they come back in two weeks and I say, "Your incision looks fine, go live your life." But in transplant we follow our patients for many, many years. I tell my patients, "You're trading the disease of end-stage organ failure for the disease of transplant. You'll need immunosuppressant medications permanently, and you'll still be at increased risk of infection and complications." Health systems need to ensure that all patients, and especially vulnerable populations, have the resources to get care and medications for life. I worked with Medicare and members of the transplant community to help pass legislation to pay for medications for the life of a transplant.

How did your time at Duke influence your career?

I chose Duke for medical school because I liked how the third year let you delve into something that focused your interest. Also, Duke even then was starting to use data in ways that many other institutions weren't. People were just starting to think about health services research and using data to understand and drive care. I was interested in that, and Duke was already one of the leaders.

In my second year of medical school, I decided to get an MBA during my research time. At the time there was no combined MD/MBA track. To my knowledge, I was the first.

Duke allowed me to build multiple sets of skills, and that has been instrumental to my career. And I credit Duke with instilling clinical excellence as the foundation of everything we do. I've taught a lot of house staff, and you can always tell the students from Duke: they're hard-working, they have been challenged clinically, and they are ready to step into important roles.

What are the next big things in transplant?

There are several paradigm-shifting things happening. Organ perfusion and preservation is dramatically improving the shelf life and quality of donated organs. I think we're getting close with xenotransplantation, in which non-human organs are successfully used. Finally, the science of immune tolerance is maturing, which will reduce or eliminate the need for immunosuppression medication.

One of the key barriers to tolerance will be determining a payment system that works. It's certainly cost-effective: society saves a lot of money if we spend an extra quarter of a million dollars up front to make a patient tolerant of a new kidney for life. But those savings will come 10 or 20 years down the road. That's not a care model insurance companies generally pay for, and we will need new systems of care to make sure that patients have access to the innovative work that Allan Kirk and others are doing.

What's the best thing about your job?

I'm a big-MD, little-MBA, which means that although I have some administrative roles, my primary responsibility is still taking care of patients. The fun part is going into the operating room, training residents and fellows, and seeing patients gain a new lease on life. Everything else is work. The operating room is where we have fun.

I really like teaching students and residents. That's one of the reasons I've stayed in academic medicine. I've done a lot of kidneys, so for me the operation itself isn't particularly novel. What's fun is helping the residents do it. I love seeing their eyes get big when they sew in a kidney and watch it turn pink. That is how we will entice the next generation of physician scientists to enter transplantation.

Alumni Making a Difference:
Roslyn "Roz" Bernstein Mannon, MD'85, HS'85-'90

Professor of Medicine, Professor of Pathology and Microbiology, University of Nebraska Medical Center

Vice-chair for Research, Department of Medicine

Associate Chief of Nephrology for Research

UNMC

You got your medical degree at Duke and completed an internship, fellowship, and residency — including chief resident — here before joining the faculty. How did Duke influence your career?

During the first month of medical school, we had a Clinical Pathology Conference where transplant surgeon **Ralph Randal Bollinger, MD, HS'74-'80, PhD'77, MBA,** brought in a patient who had end-stage kidney disease. He told us how he had been on dialysis and couldn't work or care for his family, and then he pulled up his shirt to show us the scar over his abdomen and also pointed to his AV fistula on his arm, and said, "I had a transplant, and now look at me: I'm back at work, doing great, and able to take care of my family." That stuck with me. When we had to choose a surgery rotation, I said, "I want to see kidney transplants." And, although I didn't wind up being a surgeon, Dr. Bollinger and that patient with his fistula really set me on my way for my whole career.

I went from Duke to NIH, where I was the medical director of transplantation, and then to the University of Alabama at Birmingham before coming to Nebraska, and everywhere I've been my Duke training and experience really came into play. I had incredible experiences and great teachers, and they made me the doctor that I am today.

You are past chair of Women in Transplantation, an international initiative of the Transplantation Society. What are the sex and gender issues in transplant?

Of course, being sure we have more women as practitioners in transplant, including surgeons and physicians. That's clear. But we have overlooked for decades the impact that sex has on transplant immunology, transplant access, and transplant outcomes. This is particularly true in low- and middle-income countries. I'm most proud of starting a research grant program to develop clinical and basic scientists internationally who are focusing on how sex and gender affect those issues.

Importantly, we just developed a third pillar that focuses on advocacy for women worldwide. For example, although most transplant recipients are men, most organ donors are women. Is that due to altruism, or are women being exploited? The answer varies widely depending on where you look in the world. We work to drive change where it's needed. Trying to change policy in the U.S. is hard, but it can be an even bigger challenge in countries that are unstable or economically disadvantaged. Trying to find enough voices and inspire people is part of what Women in Transplant does.

What are the biggest challenges in your field?

We must address the organ supply. I think we can actually eliminate a lot of the structural barriers, but we must solve this organ crisis so we can transplant more people and do it faster. The longer you're on dialysis, the worse your outcome gets. So getting people transplanted quicker is a huge challenge.

We need new therapeutics that address specific immunological processes after transplant, like antibody mediated rejection. And then there is xenotransplantation, which has its own regulatory hurdles, but to be successful, we need more FDA-approved therapeutics. Having appropriate therapeutics to address the immunological challenges is going to be critical.

Finally, when you have advanced kidney disease, you come with a lot of "medical baggage." Transplant can get rid of the kidney failure, but you're married to these other diseases. And then you add the burden of immunosuppression. So, we really need to develop ways to mitigate the immunosuppressive burden and give people a better chance for a normal life and long-term survival.

What do you like best about your job?

A big part of what I do now as vice chair of research at Nebraska is finding resources and encouraging faculty and fellows to engage in research. I like being a mentor and seeing the next generation of physician scientists come up.

I've always tried to share the lessons I learned when I was in their shoes. My first sub intern at Duke was in cardiology, and my first attending was **Robert Califf , BS'73, MD'78, HS'78, HS'80-'83.** Dr. Califf was data driven, and on rounds he would stop and say, "Why did you do that?" And if your answer was "Because the intern told me" or "Because it's on the order sheet," well, that was not the correct answer. He turned to me and said, "You need to know this. You need to understand that data and put it into practice." I've always remembered that moment and reinforce it whenever I'm seeing my patients or rounding with trainees.

Duke Lab Develops New Advanced Breast Cancer Drug

In January 2023 the U.S. Food and Drug Administration approved a new targeted therapy for hard-to-treat advanced breast cancers. Its development was made possible by research and advocacy from the lab of Donald McDonnell, PhD, Glaxo-Wellcome Distinguished Professor of Molecular Cancer Biology in the Department of Pharmacology and Cancer Biology.

The new drug, elacestrant, is the first and only treatment approved specifically to fight breast cancers with mutations in an estrogen receptor called ESR1, which make breast cancers resistant to standard endocrine therapy. These mutations are present in up to 40 percent of advanced or metastatic breast cancers that are positive for the estrogen receptor and negative for a receptor called HER2.

The drug was also approved for use in patients with metastatic disease whose tumors progress while on standard-of-care endocrine therapies.

FDA Approves First Treatment for Geographic Atrophy

The U.S. Food and Drug Administration (FDA) in February 2023 approved a groundbreaking treatment for geographic atrophy (GA), an advanced form of dry macular degeneration, based in part on results of a clinical trial at Duke.

Eleanora Lad, MD, PhD, HS'11-'12, director of clinical research and associate professor in the Department of Ophthalmology, was the lead investigator on the OAKS Phase 3 study at Duke.

The drug, pegcetacoplan, is the first treatment for GA ever approved by the FDA. Approximately 1 million people in the U.S., and 5 million worldwide, have GA, a progressive vision-threatening condition.

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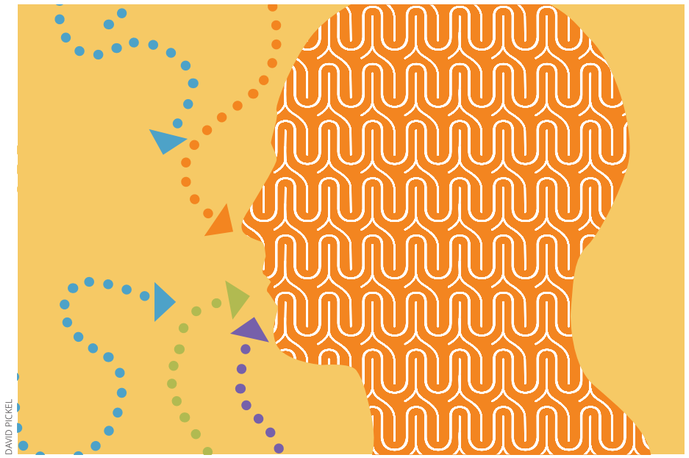


DAVID PICKEL

Study Reveals Why Loss of Smell Occurs in Long COVID-19

An ongoing immune assault on olfactory nerve cells and an associated decline in the number of those cells appears to be why some people fail to recover their sense of smell after COVID-19, according to Duke researchers.

The finding also sheds light on possible underlying causes of other long COVID-19 symptoms, including generalized fatigue, shortness of breath, and brain fog.

The study led by senior author Bradley Goldstein, MD, PhD, associate professor in Duke's Department of Head and Neck Surgery & Communication Sciences and the Department of Neurobiology, found a widespread inflammatory response in the olfactory epithelium, the tissue in the nose where smell nerve cells are located. This response persisted despite the absence of detectable SARS-CoV-2 levels. Additionally, the number of olfactory sensory neurons were diminished.

Goldstein said learning what sites are damaged and what cell types are involved is a key step toward beginning to design treatments.

Algorithms to Predict Stroke Risk are Worse for Black Americans

Recent research indicates that current medical standards for assessing stroke risk perform worse for Black Americans than they do for white Americans, potentially creating a self-perpetuating driver of health inequities.

Michael Pencina, PhD, professor in the Department of Biostatistics and Bioinformatics and director of AI Health at Duke University School of Medicine, and colleagues evaluated existing algorithms and two methods of artificial intelligence assessment aimed at predicting risk of stroke within 10 years.

The study found that all algorithms were worse at stratifying the risk for people who are Black than people who are white, regardless of the person's gender. The implications are at the individual and population levels: people at high risk of stroke might not receive treatment, and those at low or no risk may be unnecessarily treated.

School of Medicine Ranks 9th in NIH Funding

Duke University School of Medicine was awarded more than $527 million in federal funding from the National Institutes of Health (NIH) in 2022, ranking ninth nationally among academic medical centers, according to the Blue Ridge Institute for Medical Research.

The Blue Ridge ranking — an annual, independent analysis of NIH research funds to colleges and universities — reports eight clinical science departments and two basic science departments in the School of Medicine among the top 10 in the country:

- 1ST for Orthopaedics
- 1ST for Surgery
- 2ND for Anesthesiology
- 2ND for Pediatrics
- 5TH for Internal Medicine
- 5TH for Neurosurgery
- 8TH for Genetics
- 8TH for Pharmacology
- 8TH for Psychiatry
- 10TH for Ophthalmology

Duke has ranked in the top 10 in NIH research funding nationally in 19 of the last 22 years.

The NIH is the largest public funder of biomedical research in the world, investing more than $45 billion in 2022 to advance research aimed at improving health.

DHVI Wins Contract to Produce Pan-Coronavirus Vaccine

The Duke Human Vaccine Institute has received a federal contract to manufacture a pan-coronavirus vaccine candidate that can be tested in a phase 1 clinical trial.

Awarded by the National Institute of Allergy and Infectious Diseases (NIAID), the base period of the contract provides $11.2 million

to support the program; additional provisions could increase the total funding up to $21.5 million if all option periods are exercised.

There are currently no approved vaccines capable of providing immunity to a wide array of coronaviruses.

Within months of the COVID-19 pandemic's spread in 2020, Duke developed a pan-coronavirus vaccine candidate. The DHVI published results showing proof-of-concept in preclinical studies for this potential three-dose vaccine.

Under the new NIH contract, the vaccine candidate will be manufactured and tested in humans to determine its safety and whether it generates protective antibodies against multiple coronaviruses.

Urology Elevated to Departmental Status

The Division of Urology within the Department of Surgery will be elevated to department status, effective July 1, 2023. The Duke University Board of Trustees approved the resolution in October 2022, followed by the Duke University's Health System Board of Directors' approval.

Elevation from division to department signals the growth and independence of the division, enhancing awareness and recognition nationally and aiding in the ability to recruit faculty in the specialty.

Gary Faerber, MD, chief of the division, will assume the role of interim chair of the new department. Faerber joined the Duke Division of Urology in 2018 and has served as the associate chair of Ambulatory Surgery for the Department of Surgery.

The Division of Urology currently comprises 22 faculty members involved in patient care, research, education and training, and community engagement.

Child Traumatic Stress Center Renewed at $40 million

The UCLA-Duke National Center for Child Traumatic Stress (NCCTS) was awarded $40 million over five years to continue raising the standard of care and increasing access to services for children and their families across the U.S. who have experienced trauma.

Funded by the U.S. Substance Abuse and Mental Health Services Administration, the NCCTS is responsible for the collaboration, coordination, and leadership of the National Child Traumatic Stress Network (NCTSN).

The NCTSN includes 164 child trauma centers (expanded from 140 in 2022) and nearly 200 formerly funded affiliate centers and individuals.

Immunology Changes Name to Integrative Immunobiology

The former Department of Immunology at Duke University School of Medicine has changed its name to the Department of Integrative Immunobiology. The Duke University Executive Committee of the Academic Council approved the change on April 26, 2023.

The name change reflects the department's new direction in expanding the scope of research areas under the umbrella of immunity-related sciences and will better integrate research activities with the clinical enterprise to translate basic sciences discoveries into therapies. The PhD training program will remain the Graduate Program in Immunology.

Under Chair Raphael Valdivia, PhD, the department will form stronger bonds with other units and will expand its focus on recruiting investigators whose research programs span basic research to translational science.

For More News, see
bit.ly/SOMnews

Albanese Named CEO of Duke University Health System

Craig Albanese, MD, an accomplished health care leader and distinguished academic pediatric surgeon, has been named chief executive officer of Duke University Health System (DUHS).

In assuming the role as CEO, Albanese is responsible for strategic and operational oversight of DUHS and its senior leadership.

Albanese joined DUHS as executive vice president and chief operating officer on January 17, 2022. As chief executive officer, Albanese will oversee the timely execution of DUHS goals and strategic priorities and be dedicated to ensuring that Duke's clinical enterprise continues to thrive and lead.

Valdivia Named Chair of Integrative Immunobiology

Raphael Valdivia, PhD, was named chair of the Department of Integrative Immunobiology, formerly known as the Department of Immunology. He joined the School of Medicine faculty in 2002 and has served in multiple roles including director of graduate studies, director of the Center for the Genomics of Microbial Systems, and most recently vice dean for basic science.

An internationally renowned microbiologist, he will oversee a restructuring of the department to reflect the increased importance of immunity and inflammation in human health.

Zou Named Chair of Pharmacology and Cancer Biology

Lee Zou, PhD, is the new chair of the Department of Pharmacology and Cancer Biology.

Prior to coming to Duke, he was professor of pathology at Harvard Medical School, scientific co-director of the Massachusetts General Hospital Cancer Center, the James and Patricia Poitras Endowed Chair of Cancer Research, and a co-leader of the Cancer Cell Biology Program of the Dana Farber/Harvard Cancer Center.

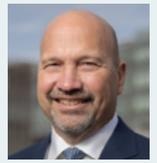
His research is focused on understanding how DNA damage and DNA replication problems are detected by the ATM and ATR checkpoint pathways in human cells.

Essif Named Vice Dean for Communications and Advancement

Mason Essif has been named vice dean for communications and advancement and chief communications officer for Duke University School of Medicine.

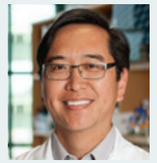
Essif leads communications in support of Dean and Vice Chancellor for Health Affairs Mary Klotman, MD, her executive leadership team, and the School of Medicine at large. He is responsible for developing and implementing communications strategies in support of the school's missions of education, research, patient care, and community partnership.

Prior to coming to Duke, Essif was the assistant vice provost for communications and public affairs at Weill Cornell Medicine.

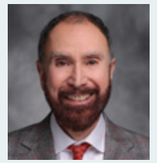


Craig Albanese

Raphael Valdivia



Lee Zou



Mason Essif

Nicole Calakos

Calakos Elected to NAM

Nicole Calakos, MD, PhD, a professor of neurology and the Lincoln Financial Group Distinguished Professor of Neurobiology, has been elected to the U.S. National Academy of Medicine (NAM).

Election to the Academy is considered one of the highest honors in the fields of health and medicine and recognizes individuals who have demonstrated outstanding professional achievement and commitment to service.

Calakos has pioneered approaches to studying basal ganglia circuitry; detailed fundamental concepts for the molecular, cellular, and circuit basis of habit and compulsion; and discovered a unifying pathway mechanism for the movement disorder dystonia.

Blobe, Haas Elected to AAAS

Two School of Medicine faculty members were elected as 2022 fellows by the American Association for the Advancement of Science (AAAS), the world's largest general scientific society. Elected were **Gerard C. Blobe, MD'95, PhD'94,** professor of medicine, pharmacology & cancer biology, and cell biology; and Steven B. Haase, PhD, professor of biology and cell biology and associate professor in medicine. AAAS Fellows are recognized for their scientifically and socially distinguished achievements.

Also elected from Duke was Yiran Chen, professor in the Department of Electrical and Computer Engineering.

Four SOM Faculty Receive Strong Start Awards

Four School of Medicine faculty members received 2023 Physician-Scientist "Strong Start" awards. The awards program, funded with a gift from the Nanaline H. Duke Fund, supports promising early career physician-scientists at Duke. Each recipient will receive $75,000 annually for three years to support their research programs.

This year's recipients are:

- **Leah Acker, MD'17, PhD,** Assistant Professor, Department of Anesthesiology, Division of Neuroanesthesiology, Otolaryngology & Offsite Anesthesiology
- **Oleg Alekseev, MD, PhD,** Medical Instructor, Department of Ophthalmology, Division of Vitreoretinal Disease
- **Ammon Fager, MD, PhD, HS'10-'16,** Assistant Professor, Department of Medicine, Division of Hematology
- **Daniel Nussbaum, MD, HS'11-'19,** Assistant Professor, Department of Surgery, Division of Surgical Oncology

The Strong Start program is administered by the School of Medicine's Office for Physician-Scientist Development and integrates with other physician-scientist development programs, including the Medical Scientist Training Program (MD-PhD students) and the Lefkowitz Society (clinical residents and fellows).

SOM Faculty, Staff Win Presidential Awards

Three individuals and two teams within the School of Medicine are among the winners of Duke's 2022-23 Presidential Awards, Duke University's highest faculty and staff honor.

The 2022-23 Presidential Award Winners from the School of Medicine are:

- **Joseph William Turek, MD, PhD, MBA'20, HS'02-'10,** Chief of Pediatric Cardiothoracic Surgery, Duke University Medical Center
- John Purakal, MD, Assistant Professor, Emergency Medicine, Duke University Medical Center
- Sheba A. Hall, Administrative Coordinator for the Office of Student Affairs, Medical Education
- Duke Regional Hospital Tracheostomy Team
- Thymus Transplant Regulatory Affairs and Quality Team

The Presidential Awards honor teams and individuals who best demonstrate Duke's core values of respect, trust, inclusion, discovery, and excellence.

Lefkowitz Named Chancellor's Distinguished Professor

Robert Lefkowitz, MD, was named the inaugural recipient of the newly established Chancellor's Distinguished Professorship, which recognizes School of Medicine faculty members who have achieved the highest level of excellence and impact in scientific discovery and its translation.

Lefkowitz is a professor of biochemistry, pathology, and chemistry and was formerly James B. Duke Distinguished Professor of Medicine.

He has been elected to the National Academy of Sciences, National Academy of Medicine, and the American Academy of Arts and Sciences, and won the Nobel Prize in Chemistry in 2012, which he shared with his former trainee, **Brian Kobilka, MD, HS'84-'87.**

Kishnani Receives North Carolina Award

Priya Kishnani, MD, MBBS, HS'91-'95, Chen Family Distinguished Professor of Pediatrics and chief of the Division of Medical Genetics at the Duke University School of Medicine, received the North Carolina Award, one of North Carolina's highest civilian honors, for her contributions to science.

Her contributions translate laboratory science into treatment for people with lysosomal storage disorders, glycogen storage diseases, Down syndrome, and other rare inherited diseases.

The North Carolina Award was created by the General Assembly to recognize significant contributions to the state and nation in the fields of fine arts, literature, public service, and science.


Robert Lefkowitz


Priya Kishnani


Viviana Martinez-Bianchi


Charles Gersbach


Warren Grill

Five SOM Faculty Elected to ASCI

Five Duke University School of Medicine faculty members were among the 100 researchers recently elected to the American Society for Clinical Investigation (ASCI), one of the oldest and most esteemed nonprofit honor societies of physician-scientists.

Elected to the society from the School of Medicine are:

- **Gerald Bloomfield, MD, HS'12,** Associate Professor of Medicine
- Dennis Ko, MD, PhD, Associate Professor in Molecular Genetics and Microbiology
- Thuy Le, MD, DPhil, Associate Professor of Medicine
- Edward Miao, MD, PhD, Professor of Immunology
- **Jonathan Piccini, MD, MHS'09, HS'11,** Professor of Medicine.

Membership in ASCI is a recognition of a researcher's significant contributions, at a relatively young age, to the understanding of human disease.

Martinez-Bianchi Named to NC Institute of Medicine

Viviana Martinez-Bianchi, MD, associate professor in the Department of Family Medicine and Community Health, has been elected to the North Carolina Institute of Medicine.

Martinez-Bianchi serves as director of health equity for the department and is a co-founder of the Latinx Advocacy Team & Interdisciplinary Network for COVID-19, better known as LATIN-19. She was named North Carolina's 2021 Family Physician of the Year by the North Carolina Academy of Family Physicians.

Martinez-Bianchi joins over 150 North Carolinians who serve the state as health care providers, community health leaders, researchers, educators, policymakers, and business leaders.

Gersbach, Grill Named to National Academy of Inventors

Two School of Medicine faculty members were elected Fellows of the National Academy of Inventors (NAI) class of 2022.

Elected were Charles Gersbach, PhD, associate professor of surgery, orthopaedic surgery, and cell biology; and Warren Grill, PhD, professor in neurobiology and neurosurgery.

Duke chemist Matthew Becker, PhD, was also elected this year.

The NAI was founded in 2010 to recognize and promote the contributions of inventors to society.

where are they now?

In 2018, then-first-year medical student Shree Bose appeared on the cover of the **DukeMed Alumni News** magazine. Today she is on her way to the University of Chicago.


Shree Bose and her parents, Prarthana and Animesh Bose, celebrate Match Day.

This year **Shree Bose, MD'23, PhD'23,** was named one of Forbes magazine's 30 Under 30 for Science and received a Forever Duke Student Leadership Award.

She earned her way onto the cover of the Fall 2018 magazine because it was clear even as a first-year medical student that she was going to do great things. In 2011, she won the grand prize at the Google Science Fair. With the $50,000 scholarship she went to Harvard for her undergraduate degree. Then she selected Duke University School of Medicine and entered the Medical Scientist Training Program (MSTP).

This spring she matched at the University of Chicago, where the Physician Scientist Development Program will offer the opportunity to fast track through internal medicine training into clinical oncology.

She says, "My work would not have been possible without the fantastic mentors at Duke — particularly Dr. Chris Kontos, the director of the Duke MSTP and my PhD mentor, and Dr. Andrew Berchuck, the director of Duke Gynecologic Oncology."

2023 MEDICAL ALUMNI ASSOCIATION AWARDS

Established in 1968, the Medical Alumni Association Distinguished Awards were created to recognize those who make important contributions to the establishment and growth of the four-year medical school and to the world of medicine. The awards are designed to honor alumni and friends whose distinguished careers and unselfish contributions to society have added luster and prestige to the University and its School of Medicine. A committee appointed by the Dean of the School of Medicine selects the recipients from nominations solicited from alumni and medical school faculty.

WILLIAM G. ANLYAN LIFETIME ACHIEVEMENT

Robert J. Lefkowitz, MD

EDUCATION: Columbia University

TRAINING: Columbia University, Massachusetts General Hospital

CURRENT TITLE: Chancellor's Distinguished Professor of Medicine, Duke University School of Medicine; Howard Hughes Medical Institute Investigator

Robert J. Lefkowitz, MD is the Chancellor's Distinguished Professor of Medicine and a professor of biochemistry, pathology, and chemistry at Duke University School of Medicine. He is also a basic research cardiologist at the Duke Heart Center and a member of the Duke Cancer Institute. He has been a Howard Hughes Medical Institute investigator since 1976 and has spent most of his 50-year research career at Duke.

He and Brian Kobilka, a former postdoctoral fellow in Lefkowitz's lab, were awarded the Nobel Prize in Chemistry in 2012 for their seminal work on G protein-coupled receptors, which spurred an enormous field of pharmaceutical research and development. About a third of all prescription drugs target the family of receptors that Lefkowitz discovered and characterized, including beta blockers, angiotensin receptor blockers, and antihistamines, among many others.

Lefkowitz has made extraordinary contributions to the scientific understanding and applications of receptor biology, including research that established the beta receptor and rhodopsin as the first members of a new family of proteins — now known as the largest, most diverse, and most therapeutically accessible of all cellular receptors. There are almost a thousand members of this receptor family, and they regulate virtually all known physiological processes in humans. Lefkowitz also discovered the mechanism by which receptor signaling is turned off, a process known as desensitization.

More recently he has discovered novel mechanisms by which receptors function, which may lead to an entirely new class of drugs called "biased agonists."

Lefkowitz is also an outstanding mentor and educator. He has mentored over 200 trainees, many of whom have gone on to highly successful research and leadership positions.

He is a member of the National Academy of Sciences, the National Academy of Medicine, and the American Academy of Arts and Sciences. Other awards include the National Medal of Science, the Shaw Prize in Life Science and Medicine, the Albany Prize, and the Canada Gairdner International Award, among many others.

DISTINGUISHED ALUMNI

Mary Louise Markert, MD'82, PhD'81, HS'82-'84, HS'84-'87

EDUCATION: Duke University School of Medicine

TRAINING: Duke University School of Medicine

CURRENT TITLE: Professor Emeritus of Pediatrics, Division of Allergy and Immunology; Professor Emeritus of Immunology

Mary Louise Markert, MD'82, PhD'81, HS'82-'84, HS'84-'87, is professor emeritus of pediatrics in the Division of Allergy and Immunology and professor emeritus of immunology at Duke University School of Medicine.

A physician-scientist, Markert's pioneering research to develop Allogenic Processed Thymus Tissue (APPT) as a curative treatment for congenital athymia was a significant discovery that has been widely adopted. Prior to her work, fetal and postnatal thymic transplantation for congenital athymia was largely unsuccessful. Her methodology enabled consistently successful implantation of human allogeneic thymus tissue to reconstitute the T cell arm of the immune system in babies born without a thymus.

A 1999 editorial in the New England Journal of Medicine hailed her work on APTT as "a medical and scientific triumph." On October 8, 2021, the FDA approved a regenerative medicine based on her pioneering work as the only approved therapy for congenital athymia.

The implications of her work extend to organ transplant broadly by demonstrating the feasibility of establishing a donor's immune system with organ transplant to reduce transplant rejection across multiple organ types. The first APTT/heart transplant was performed at Duke in 2021.

Markert has received multiple awards in recognition of her life-saving work, including the AAAI Women Physician in Allergy Award; the Leonard B. Tow Humanism in Medicine Award; the Duke University Department of Pediatrics Michael M. Frank, MD, Research Prize in recognition of significant lifetime contributions to the field of pediatric immunology; the Duke Presidential Award for Executive Leadership; and the Lifetime Achievement Award from the Immune Deficiency Foundation.

She has served as a member of professional organizations including the American Board of Allergy and Immunology, including a year as chair; the FDA Recombinant DNA Advisory Committee; and the Institute of Medicine Committee to Review Adverse Effects of Vaccines.

DISTINGUISHED ALUMNI

Kurt D. Newman, MD'78

EDUCATION: Duke University School of Medicine

TRAINING: Brigham & Women's Hospital; Children's National Medical Center

CURRENT TITLE: President and Chief Executive Officer, Children's National Hospital

Kurt Newman, MD'78, is president and chief executive officer of Children's National Hospital.

During his 11 years as CEO, the hospital soared from No. 18 to No. 5 in the nation in U.S. News & World Report's Best Children's Hospital annual rankings, with neonatology maintaining the No. 1 spot for six consecutive years.

Today Children's National Research Institute is one of the most well-funded pediatric institutions in terms of NIH funding. Dr. Newman was instrumental in developing the Sheikh Zayed Institute for Pediatric Surgical Innovation at Children's National, inspired by the bold vision of making surgery minimally invasive and pain-free for children. When the institute was created in 2009 through a transformational $150 million gift, Newman served as its founding vice president.

A pediatric surgeon, Newman is widely recognized as a leader in pediatric health and health policy, having made contributions to the field in Washington, D.C., Maryland, Virginia, and beyond. In 2017, he authored the national bestselling memoir, "Healing Children: A Surgeon's Stories from the Frontiers of Pediatric Medicine." All proceeds from the book go to pediatric research.

In 2022, he was recognized as a Washingtonian of the Year by the region's premier magazine. In 2021, he was named the Washington Business Journal's CEO of the Year. Newman has served on the Economic Club of Washington, Greater Washington Board of Trade, Federal City Council, D.C. Chamber of Commerce, Fight for Children, and Corus International. He previously served on the Board of Governors of the American Pediatric Surgical Association and as chair of the Surgery Section of the American Academy of Pediatrics. For 12 years, he served on the Duke Medical Alumni Council, including two years as president.

DISTINGUISHED FACULTY

E. Shelley Hwang, MD, MPH

EDUCATION: University of California, Los Angeles

TRAINING: Cornell University; Memorial Sloan-Kettering Cancer Center; Singapore General Hospital

CURRENT TITLE: Mary and Deryl Hart Professor of Surgery; Vice Chair of Research of Surgery; Professor of Radiology; Disease Group Leader, Breast Cancer Program, Duke Cancer Institute

Shelley Hwang, MD, MPH, is the Mary and Deryl Hart Professor of Surgery, vice chair of research of surgery, professor of radiology, and disease group leader of the Breast Cancer Program at the Duke Cancer Institute.

A world-renowned surgeon-scientist and leader in the field of breast surgical oncology, Hwang currently is focused on formulating a translational framework in which to test the efficacy of non-surgical interventions for ductal carcinoma in situ of the breast. She is leading a global reassessment of what defines breast cancer and is revolutionizing the approach to this disease, highlighting non-surgical approaches.

Hwang is the first woman to hold a distinguished chair in the Duke Department of Surgery. Under her leadership and mentorship, the breast surgery group at Duke has been remarkably successful.

Hwang's work to study and mitigate the harms of overdiagnosis and overtreatment of early-stage breast cancer led to her being recognizing as one of the Top 100 most influential people by Time magazine in 2016.

She is a Fellow of the American College of Surgeons, the Society of Surgical Oncology, and an ELAM Scholar. She is one of only two surgeons to serve as co-chair of the NCI Breast Cancer Steering Committee and is past co-chair of the Human Tumor Atlas Network. She is the PI of the Precancer Atlas, a multi-center consortium to create molecular cancer atlases to guide future research.

To help women complete their surgical training in sub-Saharan African countries, Hwang summited Mount Kilimanjaro with her daughter in 2021 as part of a fundraising effort supporting the American College of Surgeons - College of Surgeons of East, Central, & Southern Africa Women Scholars Program.

EMERGING LEADER AWARD

Kanecia Zimmerman, MD'07, HS'12-'15, MPH

EDUCATION: Duke University School of Medicine; University of North Carolina at Chapel Hill

TRAINING: Duke University School of Medicine, Department of Pediatrics

CURRENT TITLE: Associate Professor of Pediatrics, Duke University School of Medicine

Kanecia Zimmerman, MD'07, HS'12-'15, MPH, is an associate professor of pediatrics in the Division of Critical Care Medicine in the Department of Pediatrics at Duke University School of Medicine.

She serves as scientific director and provides program oversight for the Pediatric Trials Network, a $98 million-dollar National Institute of Child Health and Human Development-funded alliance of clinical research sites cooperating in the design and conduct of pediatric clinical trials. She is principal investigator (PI) or co-PI for six federally funded or industry funded grants. Zimmerman is co-PI for the Duke Summer Training in Academic Research (STAR) Program and for the NIH-sponsored Duke-UNC T-32 Unified Program for Therapeutics in Children.

She is co-chair of the ABC Science Collaborative, a national initiative connecting scientists and physicians with school and community leaders to help understand the most current and relevant information about COVID-19 and child and family health and well-being.

She serves as the faculty mentor in the Bridging the Gap to Enhance Clinical Research Program, providing one-on-one career development guidance for post-graduate students. Zimmerman is a member of the American Academy of Pediatrics (Fellow), North Carolina Pediatric Society, Society of Critical Care Medicine, Society for Pediatric Research, and AAP Delegate to the United States Pharmacopeia.

She has served as a member of professional organizations including the American Board of Allergy and Immunology, including a year as chair; the FDA Recombinant DNA Advisory Committee; and the Institute of Medicine Committee to Review Adverse Effects of Vaccines.

2023 MEDICAL ALUMNI ASSOCIATION AWARDS

EMERGING LEADER AWARD

Kevin O'Neil Saunders, PhD'10

Kevin O'Neil Saunders, PhD'10, is an associate professor in surgery, molecular genetics and microbiology, and in immunology. He is the faculty chairperson for the Diversity, Equity & Inclusion Committee and associate director of the Duke Human Vaccine Institute (DHVI).

Saunders is trained in molecular genetics and microbiology and is an international leader in vaccine design and viral immunity. He takes an interdisciplinary approach to understanding the molecular biology underlying antibody recognition of glycoproteins to produce protective vaccines against viruses. In 2022 alone, he received three research awards totaling $30 million.

During the COVID-19 pandemic, Saunders shifted his focus to the coronavirus. The discoveries he made working on HIV laid the groundwork for him and his team at DHVI to develop a pan-coronavirus vaccine that may protect against any SARS-related coronavirus.

His work on coronavirus and HIV vaccine research has resulted in 25 U.S. provisional patent applications since May 2017. He has authored over 80 peer-reviewed publications including first-authored papers in the journals Science and Nature, as well as a senior-authored paper in Cell.

EDUCATION: Duke University School of Medicine

CURRENT TITLE: Associate Professor in Surgery; Associate Professor in the Department of Immunology; Associate Professor in Molecular Genetics and Microbiology; Associate Director of the Duke Human Vaccine Institute

Saunders's leadership transcends DHVI and the Duke campus. Over the last year, he has formed partnerships with North Carolina Central University and North Carolina A&T University to promote internships in vaccine research and manufacturing at DHVI for students from each institution. Additionally, he partnered with Meredith College to help develop curricula to teach vaccinology to students.

Saunders has been an invited speaker at the last four Keystone Meetings on HIV vaccines and presented the 2022 International Society for Vaccines Paper of the Year at the society's annual meeting. He was the 15th Marc J. Mass Memorial Distinguished Lecturer, an honor historically given to established leaders in their fields, and a recipient of the Outstanding Leadership Award from DHVI.

TRANSFORMATIONAL LEADERSHIP

LATIN-19 (Latinx Advocacy Team and Interdisciplinary Network for COVID-19) Executive Team

A diverse team of Duke faculty and community advocates created LATIN-19 in March 2020 to advocate for and bring awareness to the needs of the Latinx community in North Carolina during the COVID-19 crisis.

Early in the pandemic the Latinx community suffered significantly greater rates of COVID-19 (up to six-fold) compared to other groups. There was an urgent need to ensure that the Latinx community received trustworthy information and education, equitable health care, and access to preventive therapies as they became available. In response to this need, LATIN-19 created a powerful bridge between Duke and the Latinx community, becoming the primary conduit for the rapid distribution of information, education, improved access to care, and preventive strategies.

The LATIN-19 team is credited with helping bring about a significant decline in COVID-19 cases in the Latinx population in Durham and North Carolina. At one point almost 80% of cases in Durham and 47% of cases statewide were among the Latinx population. LATIN-19 played a central role in bringing those rates down to 22% and 28%, respectively.

LATIN-19

EXECUTIVE TEAM MEMBERS:
Viviana S. Martinez-Bianchi, MD
Gabriela M. Maradiaga Panayotti, MD
Leonor Corsino, MD, HS'06-'09, MHS'09
Rosa M. Gonzalez-Guarda, PhD, MPH, RN, FAAN
Irene C. Felsman, DNP, MPH, RN
Pablo Friedmann
Rosa Solorzano, MD, MPH
Gabriela A. Nagy, PhD, HS'16-'17
Alejandro Peña

LATIN-19 is a trusted resource in the Latinx community. This trust was key to mitigating the disparate impact of COVID-19 and improving Latinx health and quality of life.

LATIN-19 has grown into a multi-sector group of over 700 participants with representatives from government, public school systems, public health, and more. It is now focused on filling the critical need for greater health advocacy for the Latinx community. The team is highly regarded at the local, state, and national level for its outstanding level of collaboration between a diverse and multidisciplinary group of stakeholders.

Founding member and co-director Viviana Martinez-Bianchi received the 2022 Foundation for Health Leadership & Innovation Community Achievement Award for her work with LATIN-19. She shared the award with all LATIN-19 partners.

SUPPORTING PLANNED GIVING

REMEMBERING HIS ROOTS

"I owe a great deal to my Duke diploma, and it behooves me to give something back. I hope other graduates will consider doing the same."
Emile Gebel, BS'58, MD'62, HS'62-66

When **Emile Gebel, BS'58, MD'62, HS'62-66,** was an undergraduate, medical student, and chief resident in the Department of Ophthalmology at Duke, he loved the beauty and tranquility of the Sarah P. Duke Gardens.

And after almost three decades in a successful ophthalmology practice, he decided to make that passion for plants his second career. Together with a business partner, Gebel opened Shagreen Gardens, a plant nursey and garden center in Shelby, North Carolina. For many years, he drove truckloads of ornamentals back to Durham as a vendor at Duke Gardens' plant sales.

He has never forgotten his roots in medicine, however. Gebel is a charter member of the Davison Club and a longtime donor who recently established a planned gift to the School of Medicine.

"The foundation of the physician's contribution to society and financial success is the medical school diploma they have prominently displayed on their wall," says Gebel. "I owe a great deal to my Duke diploma, and it behooves me to give something back. I hope other graduates will consider doing the same."

Planned gifts provide meaningful support to Duke while helping you achieve your personal and financial goals.

To learn more about how to support the School of Medicine with a planned gift, please contact **Suzie Ferrero,** Senior Executive Director for Planned Giving, at **suzanne.ferrero@duke.edu.**

Trudy Oliver Tracks a Deadly, Shapeshifting Tumor

Trudy Oliver, PhD'05, studies a type of cancer that has a 5-year overall survival rate of just 7%. Its biological drivers are different from most other cancers, so it's harder to develop targeted treatments. In addition, research into this tumor is under-funded.

Oliver, professor of pharmacology and cancer biology at Duke University School of Medicine, investigates small cell lung cancer. Small cell lung cancer is a shapeshifter. Her recent research has found that it evolves nimbly, changing identities to survive.

Increasingly, scientists are finding that many cancers have this "plasticity" to some extent. Because of that, small cell lung cancer has more in common with other cancers than previously thought. "In order to understand how to treat any kind of cancer, we have to study them all," Oliver said.

Oliver joined the Duke faculty in July 2021 as a Duke Science and Technology Scholar. She earned a PhD at Duke in 2005, and after a faculty position at the Huntsman Cancer Institute at the University of Utah, she returned to Duke to forge new collaborations. "I really wanted to be exposed to new science and new ways of thinking," she said.

SYSTEMATIC PROFILING

Oliver has made progress with small cell lung cancer by systematically profiling it. For the past 30 years, all patients with the disease have been treated the same, with chemotherapy. Recently Oliver and other researchers have shown that they can divide the disease into at least four different subtypes, each of which responds differently to treatment.

Some of this work has been translated into human clinical trials. In 2017 her lab showed that one subtype responds best to a class of drugs known as aurora kinase inhibitors, and in a clinical trial published in 2020, other researchers showed that a specific aurora kinase inhibitor worked better in patients with this subtype.

But the difference was small, extending survival only about two or three months. "That's the scale of things people see in small cell, because it's so deadly and aggressive," Oliver said. "I believe we can do better than that."

ALEX BOERNER

The key to doing better, Oliver believes, is harnessing this cancer's ability to shapeshift. In a 2020 study published in Cancer Cell, Oliver and PhD student Abbie Ireland and colleagues reported that small cell lung cancer can cycle through different identifies with ease, and that multiple subtypes are present within a single tumor.

Oliver works to predict and then control what form the cancer will take at any given time by looking for clues in stem cell biology and early lung development. "The different identities that small cell lung cancer takes on are mimicking the same identities that it had access to during embryonic development," she said. Cancer seems to remember and make use of those identities to survive.

"Certain cancer cell fates have particular needs and demands, and if you really shut down who they are, they just convert to something else," Oliver said.

NEW COLLABORATIONS

Oliver is now collaborating with MD-PhD candidate Jack Finlay and his mentor, Bradley Goldstein, MD, PhD, associate professor of head and neck surgery and communication sciences, who use computational biology to study a rare nasal tumor called olfactory neuroblastoma.

"That caught my attention because I knew that some of our mouse models we were using for small cell lung cancer were getting these olfactory tumors," Oliver said.

Early studies suggest that these olfactory tumors use some of the same means of survival as small cell lung cancer and treatment-resistant prostate cancer, Oliver said. And that suggests still more collaborations.

"We hope we're going to bring together people from the prostate cancer field and the lung field and the olfactory field to appreciate that we're all studying a very similar disease," Oliver said.

— *Angela Spivey*

Georgeanna J. Klingensmith and William C. Klingensmith, III

Klingensmith Gift Creates a Legacy of Innovation

Raised by two doctors, **Georgeanna J. Klingensmith, MD'71,** was no stranger to medicine when she arrived on the Duke campus in 1967.

Her four years at Duke gave her a strong foundation, and Klingensmith went on to a rewarding career as a pediatric endocrinologist. She recently retired as the director of the Pediatric Type 1 Diabetes Care and Research Program at the Barbara Davis Center for Diabetes at the University of Colorado.

"I had so many incredibly compassionate teachers while I was training at Duke," she said. "They truly cared about medical students. They taught us about the power of both clinical care and research to produce better patient outcomes."

It's this experience, her lifelong love of pediatrics, and her passion for hiring and promoting the best people possible that inspired Klingensmith and her husband, William C. Klingensmith, III, MD, a radiologist and former chief of the Division of Nuclear Medicine at the University of Colorado School of Medicine, to make a generous bequest to fund a professorship in pediatrics at Duke.

Their commitment to fund a professorship will enable the Department of Pediatrics to recruit and retain a highly skilled authority in academic medicine.

The Georgeanna J. Klingensmith, MD, and William C. Klingensmith III, MD, Professorship is uniquely flexible, allowing the department to invest the resources for either assistant, associate, or full professors, depending on the recruitment needs of the department.

Duke Family Commits to Making a Difference

Todd Brady, MD'99, PhD'98, and **Andrea Darling, MA'96, JD'99,** met as undergraduates at Dartmouth College and both came to Duke for their postgraduate education. Their son, Alex, started as a freshman at Duke in 2022.

Todd Brady and son Alex

At the School of Medicine, Brady didn't apply to Duke's MD/PhD program but instead, in his words, "cobbled together" the two degrees, focusing on research in the Department of Pathology but drawing on the expertise and experience of scientists in disparate fields.

His mentors included icons such as pulmonologist **James D. Crapo, HS'74-'76**; biochemist **Irwin Fridovich, PhD'55**; and Jo Rae Wright, PhD, former vice provost and dean of the Graduate School and a pioneer in cell biology.

Since 2012, Brady has served as the president and chief executive officer of Aldeyra, a biotech company he founded.

Brady and Darling have established a planned gift at Duke that will provide support for the next generation of PhD graduate students in pathology. Half of their legacy gift will provide endowed fellowship funds for the Graduate School to recruit leading candidates in pathology. The other half will support graduate education initiatives within the department.

Each year, Brady and Darling also provide current funds to meet needs within the graduate school and support today's trainees in the Department of Pathology.

The Todd Brady and Andrea Darling Scholarship for 2021-2022 was awarded to Asjah Wallace, a PhD student who started in the fall of 2021.

"I grew up as a beneficiary of other people's philanthropy, so it has always been a dream for me to pay it forward," said Darling.

Estate Gift Pays Appreciation Forward

George McLean, MD'73, spent his happiest years as a medical student and resident.

In his third year at Duke University School of Medicine, he found his calling in endocrinology, doing research on growth hormones with Robert Fellows, MD, PhD. After graduating, he went on to complete his residency and a fellowship at Vanderbilt University.

He treasured his research experiences at both Duke and Vanderbilt and found the work stimulating and critical to his professional development. Following his fellowship, McLean accepted a faculty position at the University of Tennessee, Chattanooga, where he practiced and taught before entering private practice for the remainder of his career.

McLean was an excellent physician and such a skilled diagnostician that other doctors frequently asked him to weigh in on difficult cases — even those in areas outside endocrinology. He credited his education at Duke for honing his skill as a diagnostician.

McLean died on March 30, 2022. He is survived by his son Russell McLean and his close friend and ex-wife **Susan McLean, MD'75**.

In appreciation of the gifts of knowledge and training he received at Duke, the George W. McLean estate has funded an endowment to support endocrinology research by young investigators.

"In this spirit, we will use funds from this gracious endowment to help young investigators in our division, from fellows to junior faculty, establish and grow their research projects," said David D'Alessio, MD, chief of the Division of Endocrinology and Metabolism in the Department of Medicine. "Oftentimes discrete, targeted support at a critical time in career development can provide the boost young investigators need to be successful in their research endeavors."

1950s

Alan Solomon, MD'57, retired from the University of Tennessee Graduate School of Medicine in 2013 as professor of medicine and head of the Human Immunology and Cancer Program. He was also an American Cancer Society clinical research professor. During his 47-year tenure, his scientific activities involved elucidating the structural features of human antibodies, and he also served as a medical oncologist/hematologist. After his retirement, he serves as stonemason and plantsman on his 20-plus-acre estate, which will be maintained in perpetuity as the University of Tennessee/GATOP Arboretum & Education Center. He lives in Knoxville, Tennessee, and has five grandchildren, three step-grandchildren, and one great-grandson.

1960s

David S. Walton, MD'61, won first place in the 2021 Marblehead Sailing Regatta. He is a pediatric ophthalmologist and clinical professor of ophthalmology at Harvard Medical School. He says his family is "fulfilled, happy, and healthy." He lives in Boston.

Tolbert Wilkinson, MD'62, HS'62-'64, reports that he spends quiet time at his ranch now after being granted 100% disability by the Department of Veterans Affairs as a result of Agent Orange and back surgeries. A former professional-level polo and pentathlon competitor and coach, he edited and published three best-selling textbooks on plastic surgery. He and his wife, Suzanne, recently celebrated their 40th anniversary. He lives in Bandera, Texas.

Ernest C. Borden, MD'66, is professor emeritus at the University of Wisconsin. His professional career was in academic medicine, doing research focused primarily on tumor immunology and interferons, and clinical care in medical oncology, melanoma, and sarcoma. He lives in Sun Prairie, Wisconsin.

Gerald L. Brown, AB'63, MD'67, HS'68-'72, professor emeritus at the University of Virginia School of Medicine, received the Award for Services to Veterans from the Sons of the American Revolution. He started three clinics for veterans after he retired from UVa. He lives in Free Union, Virginia.

1970s

Glenn C. Davis, MD'72, HS'72-'75, is retired after a career that included serving as professor, VAMC chief of staff, department chair, chief medical officer, and dean of the College of Human Medicine at Michigan State University. His wife, Naomi Breslau, died in October 2018. He met and married Margaret McGuinn in September 2021, and in April of 2022 they walked the Camino Portuguese from Porto, Portugal, to Santiago, Spain — a distance of 200 miles in two weeks — in April 2022. It was, he says, "the experience of a lifetime." He lives in Chapel Hill, North Carolina.

Tom Ewald, MD'72, retired three years ago after a multi-faceted 47-year career in family medicine, which included obstetrics with c-sections, reproductive health, abortion care, pain management, and neurosurgical assistance. He enjoys sailing and powerboat cruising, and says he's "blowin' sax in a down joint." He lives in Medford, Oregon, and has four children and five grandchildren.

Leonard A. Zwelling, AB'69, MD'73, HS'72-'75, recently published his first novel, "Conflict of Interest," with co-author Marianne L. Ehrlich. The book is based on his experiences in academic medicine, "where money has become king and fame and fortune seem to have pushed aside clinical care and patient welfare." He spent nine years at the National Cancer Institute and then served 29 years on the faculty at The University of Texas MD Anderson Cancer Center as professor of medicine and pharmacology and vice president for research administration. He was a Robert Wood Johnson Foundation Health Policy fellow in 2008-2009, working in the office of the Senate Committee on Health, Education, Labor, and Pensions. He and Ehrlich have written two previous non-fiction books about his time in Washington, D.C.

James (Jim) Parsons, MD'76, trained in radiation oncology at the University of Florida and remained on the faculty for 18 years as a professor and the Rodney R. Million Professor of Radiation Oncology. He has subsequently been in private practice in Boynton Beach, Florida, and carries a full clinical load.

1980s

Justine Strand de Oliveira, BHS'81, retired from Duke in 2017 as vice chair in the Department of Community and Family Medicine and longtime head of the Physician Assistant program. She moved to London, where she helped establish the first PA program at Barts and The London School of Medicine. In 2019, she and her husband moved to Portugal, where she is mostly retired but teaches part-time at the University of Algarve's medical school. She has a new career as a novelist, having recently published "The Moon is Backwards," a historical fiction set in mid-20th century Brazil.

Sidney Gospe, PhD'80, MD'81, recently received the Roger and Mary Brumback Lifetime Achievement Award from the Child Neurology Society. The award recognizes a lifelong commitment to child neurology, patient care, and humanism in medicine. Gospe lives in Durham, North Carolina.

Alice Ormsby, MD'82, recently celebrated 20 years of private practice in a medical dermatology practice with the same two women. They are extremely busy and just added a fourth physician. She is also celebrating 35 years of marriage to her husband, Robert. Their twins are almost 25 years old. She lives in Woodinville, Washington.

Virginia (Ginny) Gibbons Barber, MD'85, recently retired after 31 years in private practice. She lives in Crozet, Virginia.

Your fellow DukeMed alumni want to hear about you! Please email updates and photos for Class Notes to
dukemed@duke.edu

Robert Wayne Alexander, MD'69, HS'74-'76, died on January 6, 2023. He was 76. He served as the director of the Division of Cardiology and long-term chair of the Department of Medicine at Emory University School of Medicine. He trained many future leaders in the field and had an enduring impact on the study of cardiology. He had a deep passion for cardiovascular research.

Linny Baker, MD'60, HS'60-'63, died on June 29, 2022. He was 88. He practiced for many years at the Cabarrus Pediatric Clinic and later at the Cabarrus Health Alliance. He also served as chief of the medical staff at Cabarrus Memorial Hospital, captain and physician in the U.S. Army National Guard, and chair of the Cabarrus County Board of Health and the Northeast Foundation Board. The Cabarrus Health Alliance honored him by naming its children's clinic the Linny M. Baker Pediatric Clinic, and in 2016 he was awarded the Order of the Long Leaf Pine, the state's highest civilian honor.

David (Bill) William Brooks Jr., MD'59, died on November 11, 2022. He was 89. He graduated from Harvard University and Duke University School of Medicine and served in the U.S. Army before becoming a founding partner of Mori, Bean and Brooks Radiology PA.

Gene A. Butcher, MD'65, died on April 30, 2022. He was 86. His military activity included an ROTC commission in the U.S. Army Reserve, a tactical officer role at the U.S. Army Chemical Corps School, and promotion to U.S. Army Reserve captain. He and his wife, **Suzanne R. Butcher, MD'65,** both attended medical school at Duke. He held several positions at Western Reserve Care System/Forum Health and retired as the senior vice president of medical and academic affairs. He served as associate dean for clinical education for the Northeast Ohio University College of Medicine.

Allen Easley Cato, AB'61, MD'69, PhD'67, died on July 25, 2022. He was 82. He was a senior physician and principal clinical investigator at Mead Johnson and was a director of two cystic fibrosis clinics, chief of pediatrics, and director of the Neonatal Intensive Care Unit. He later led the clinical research group at Burroughs Welcome. He taught a course on drug development at the UNC School of Pharmacy and served as an assistant clinical professor of pediatrics in the Pediatric Pulmonary and Cystic Fibrosis Clinic at Duke. In 1988, he founded Cato Research, Ltd., a drug development organization.

Harry John D'Agostino Jr., MD'83, died on August 8, 2022. He was 65. At the University of Florida/Shands Hospital, he performed the first heart transplant in Jacksonville and established the Thoracic Oncology Program. He was a pediatric cardiac surgeon at Wolfson Children's Hospital and a cardiothoracic surgeon for the Aultman Deuble Heart and Vascular Hospital. He was a member of professional organizations including the American College of Surgeons, American Board of Thoracic Surgery, Society of Thoracic Surgeons, International Society for Heart and Lung Transplants, and Stark County Medical Society.

John Lambert Denby, MD'60, died on January 31, 2023. He was 89. From 1967-1969 he served as a commander in the U.S. Navy Medical Corps and became the world's last battleship surgeon aboard the USS New Jersey. His surgical career spanned 35 years as attending staff at Memorial Hospital, St. John's Hospital, and Abraham Lincoln Hospital. He was clinical professor of surgery and founding clinical faculty of Southern Illinois University School of Medicine and president of staff at Memorial Medical Center.

Gould Coates Garcia, MD'58, died on September 28, 2022. He was 89. He served a two-year commitment to the U.S. Air Force at Laughlin Air Force Base in Del Rio, Texas, and then joined Internal Medicine Associates in Emporia, Kansas, where he practiced internal medicine for 35 years until his retirement in 1999.

Ronald Schuyler Gooding, MD'64, died on December 3, 2022. He was 87. He graduated from the U.S. Military Academy at West Point in 1957 and served in the U.S. Army Corps of Engineers. He specialized in neurosurgery and practiced medicine in Lincoln, Nebraska.

James G. Harrison Jr., AB'44, MD'48, died in August 2022. He was 97. He established a successful 50-year medical practice in Hawaii that focused on treating people who needed psychiatric and mental health care, including treatment for substance abuse. In 2000 he and his family moved to California, where he continued working as a psychiatrist for 10 years before retiring.

William Mackey, MD'77, died on January 31, 2023. He was 72. He served his entire career at Tufts Medical Center and Tufts University School of Medicine, as professor of surgery, chair and surgeon-in-chief, and director of the surgical residency program. He was a past president of the New England Society of Vascular Surgery and the Boston Surgical Society and served on the editorial board of the Journal of Vascular Surgery. Among his honors were the Dean's Outstanding Mentor Award, the Distinguished Career in Teaching Award, and the 2019 Zucker Prize for Achievement in Clinical Education.

John Hugh Malone, MD'60, died on December 8, 2022. He was a founding partner of Ardsley Medical Group and had 30-year career practicing internal medicine in Concord, North Carolina. He continued his contribution to the medical community through involvement in continuing education programs for retired physicians in Cabarrus County and as chief of the medical staff at Cabarrus Memorial Hospital and president of the Board of Coltrane LIFE Center.

Leo Frank Mazzocchi, MD, HS'70, died on September 4, 2022. He served in Charleston, South Carolina, as a physician in the U.S. Navy. He completed his residency in radiology at Duke and then moved to Cary, North Carolina, where he joined Wake Radiology and served at Wake Medical Center for 25 years.

Michael Alvin McCall, MD'52, HS'53-'54, died on October 10, 2022. He was 95. He served in the U.S. Army and remained in the Army Reserves until the early 1960s. He co-established a private practice in Marion, North Carolina, and later joined the staff of Broughton Hospital in Morganton. He also worked as an attending physician at Hilltop House Nursing Home (now Autumn Care). He was director of geriatric medicine at Broughton Hospital and later worked at the J. Iverson Riddle Center and for 21st Century Oncology.

Jack McGowan, MD'54, died on November 4, 2022. He was 93. He served three years as medical officer at Tripler Army Hospital in Honolulu, Hawaii, and as regimental surgeon with the 25th infantry Division at Scofield Barracks, Hawaii. After military service he entered rural family practice in Newton Grove and Four Oaks, North Carolina. He began his pediatric practice in Fort Pierce, Florida, in 1962 and retired in 1988.

Alonzo (Lonnie) Harrison Myers Jr., AB'55, MD'59, died on October 20, 2022. He was 89. During the Vietnam War, he served as an orthopedic surgeon in the U.S. Army Medical Corps at Madigan General Army Hospital in Tacoma, Washington, and Camp Zama Army Hospital in Japan. He joined Lewis Gale Clinic and served as president in 1972. Post-retirement, he worked as a part-time orthopedic surgeon at the clinic. He was a fellow of the American Orthopaedic Association and the American College of Surgeons. He served as a councilor of the Southern Orthopaedic Association and Southern Medical Association.

Robert T. Osteen, MD'66, died on July 14, 2022. He was 81. He served in the U.S. Air Force from 1968-1970, primarily engaging in medical research focused on transplant surgery. He spent his entire career at Brigham & Women's Hospital as a surgical oncologist, cancer researcher, and educator, serving as vice chairman of surgery for education and program director. In recognition of his teaching at Harvard Medical School, there are two teaching awards in his honor.

Nina Musselman Page, AB'45, MD'49, died on December 14, 2022. She was 98. She met her husband, the late **Ernest Benjamin Page, MD'49, HS'49, HS'55,** during medical school. She worked as a physician at Dorothea Dix Hospital and the North Carolina State University Student Health Service, where she started a women's health clinic.

James Jerome Pence Jr., MD'59, died on October 4, 2022. He was 96. He served in the U.S. Army's 90th Infantry Division during World War II. He had a long and fulfilling career in family medicine in North Carolina and served as the medical director for numerous nursing homes in and around Wilmington. He was active in county and state medical societies and professional associations and served as president of the North Carolina Board of Medical Examiners in 1980.

John Murray Rich, AB'62, MD'66, died on December 5, 2022. He was 82. He served in the U.S. Army Medical Corps, and after receiving an honorable discharge as a major he became a board-certified fellow of the American College of Physicians and a fellow of the American College of Cardiology. He had a career that spanned 33 years of patient care with the Miami Valley Cardiologists practice group in Dayton, Ohio. He was at the forefront of innovation in interventional cardiology, and he taught medical students and residents and cared for patients at Miami Valley Hospital.

Elliott C. (Skeeter) Shull Jr., MD, HS'57-'60, died on February 8, 2023. He was 92. He served as a captain in the U.S. Army at Fort Stewart, Georgia, before returning to New Jersey to join his father's radiology practice, South Jersey Radiology Associates.

William Vance (Van) Singletary Jr., AB'71, MD'75, died on December 5, 2022. He was 73. He spent his entire life in Durham and graduated from Duke University and Duke University School of Medicine, where he completed his internship, residency, and fellowship training in gastroenterology. He joined his father in his practice at Durham Internal Medicine and was later associated with Durham Gastroenterology Consultants.

Roberta Smith, AB'62, MD '66, died on August 3, 2022. She was 82. After serving on the faculty of the Medical College of Virginia and Duke, she had a 25-year career at Memorial Medical Center in Savannah, Georgia. She helped develop the Neonatal Perinatal Outreach Education Program and played key roles for the Perinatal Update education program and the Neonatal Transport Team. She was a founding member and president of the Georgia Perinatal Society and founding member of the BioEthics Committee. Honors include a Physician Lifetime Achievement Award at Memorial and an award for Outstanding Contributions to Mothers and Children.

McKim Williams, MD'59, HS'60-'62, died on August 15, 2022. He was 89. He practiced anesthesiology at Riverside Hospital in Newport News, Virginia. He served in the U.S. Navy in Vietnam as chief of anesthesia for the First Medical Battalion, First Marine Division. He retired at the rank of commander and returned to private practice at Riverside Hospital. He was a member of the American Medical Association, the Southern Medical Association, the Virginia Medical Association, The American Society of Anesthesiologists, and the Virginia Society of Anesthesiologists.

Charles Alexander Woods, MD'62, died on December 28, 2022. He was 85. He served two years active duty in the U.S. Army Medical Corps at Fort Monroe in Virginia. He practiced pediatrics.

Sara Kay Shilling Zirkle, AB'61, MD'65, died on June 19, 2022. She was 82. While in medical school, she met and married **Lewis Greer Zirkle, MD'66, HS'67-'68.** They both practiced medicine in Richland, Washington. She was a developmental pediatrician, serving the Tri-Cities community for 37 years. She cared for children with behavioral and developmental needs and advocated for children, setting up the region's first sexual assault clinic and testifying on the behalf of those who had been abused.

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On March 17, 2023, 106 fourth-year medical students at Duke opened their envelopes and learned where in the country they will complete residency training. Duke medical students are headed to some of the nation's most prestigious residency programs. Watch the celebration at **bit.ly/SOM-MatchDay**

Most Matched Fields

Internal Medicine: **23**
Orthopaedics: **9**
Anesthesiology: **8**
Obstetrics/Gynecology: **8**
Pediatrics: **7**

Most Matched Institutions

Duke: **26**
Harvard-affiliated hospitals: **16**
Columbia: **6**
University of Pennsylvania: **6**

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