

**FALL 2020**

**Physician-scientist trainees pursue tomorrow's scientific discoveries while caring for today's patients • 13**

**INSIDE** //////////////////////////////////////

**SPOTLIGHT ON JOHN LUMPKIN,  
'73 BMS, '74 MD • 30**





## Welcome to a New World

When the 160 students of the Class of 2024 stepped onto campus this month, they entered a new world of medical education. Following guidelines to slow the spread of COVID-19, students picked up their white coats with masks on and began attending their first socially-distanced and online classes.

Northwestern Medicine magazine is published quarterly for alumni and friends of Northwestern University Feinberg School of Medicine, Northwestern Memorial HealthCare, and the McGaw Medical Center of Northwestern University.

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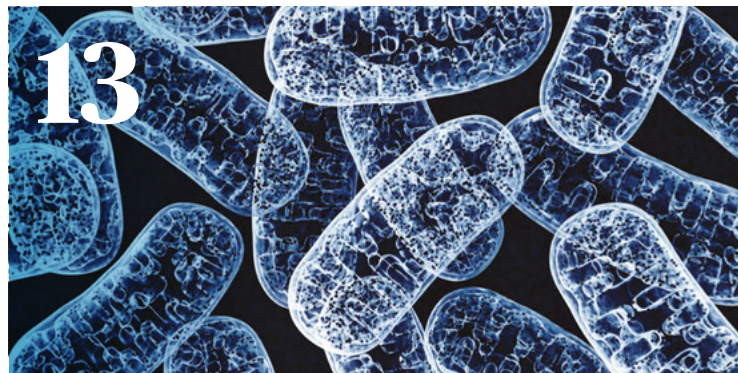
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A digital illustration of mitochondria. Read about Northwestern Medicine investigators studying the role of mitochondria in disease on pages 11 and 13. (3D Man/Shutterstock)

# The Path Ahead



## **I** N ACADEMIC TRADITION AUTUMN IS A TIME OF RENEWAL

As the air turns cooler along our lake and the campus leaves turn, we have already welcomed a new generation of students and trainees to campus. Their eagerness to learn a profession and ours to teach reminds us of shared values and commitments we offer each other. Their presence renews not only our many missions, but our spirits. Each generation brings new perspectives, new ideas, and new questions.

Indeed, the 2020 entering classes have joined our community at a critical point in history. We have worked relentlessly over the spring and summer months to address the COVID-19 pandemic. We have seen exceptional care at the bedside, extraordinary preparation and service by our clinical affiliates, and robust initiatives by many faculty responding to scientific and educational challenges.

Amidst this pandemic, our entering classes, students, and trainees also are bearing witness to a national reckoning on race and racism. I, along with many other leaders at Northwestern, have said, unequivocally, that social injustice and institutional racism are infectious diseases and a public health crisis. This summer, our entire Northwestern Medicine community has responded tangibly and with great urgency to confront institutionalized racism head on, examples you can read about on page 6.

Building on work taking place around the institution, in cooperation with our

academic community, Feinberg published a comprehensive report to the faculty on social justice initiatives at the medical school, which included ten usable recommendations from four dedicated advisory groups comprising faculty, staff, students, and residents on how we might move forward. These recommendations covered microaggressions and use of race in lectures, clinical presentations, and laboratory algorithms; evaluation bias; community engagement; and faculty recruitment. Work on these initiatives is progressing — it will require time and a collective commitment to equity. Our entire campus has shown a great willingness to embrace change and advance our cultural awareness.

”

*I have learned that the best way to be better is to make it a point to be a little better each day.*

But our work is not done. As we look ahead to the future for this new generation of physicians, allied health professionals, and scientists, we must ask ourselves, what have we learned? What have we done? How can we do better? I have learned that the best way to be better is to make it a point to be a little better each day.

As I read the pages of this issue, I felt immense pride in the many ways our medical school community lives up to this aspiration. Feinberg investigators across departments are working to make healthcare delivery in our country better by uncovering the data behind poor health outcomes for people of color (you can read about it in “In Pursuit of Equity” on page 16).

Another commitment to solving a seemingly intractable problem has been amply demonstrated by Richard D’Aquila, MD, who just assumed the helm of the Northwestern University Clinical and Translational Sciences (NUCATS) Institute. D’Aquila has been working toward a cure for HIV/AIDS for

the past 30 years, not resting on standard antiretroviral therapy — a treatment approach that he was instrumental in developing and that works — because he knows science can do better for quality of life. In his new position, he is bringing the same persistence to COVID-19 and community-based research, wherein NUCATS is doing its part to ensure that translational science affecting real people is not conducted in an academic bubble (you can read about it in “Basic Science Believer” on page 26).

The push to be better continues with the Socrates Project, spearheaded by Benjamin Singer, MD. He and his clever team of chief residents tackle difficult-to-diagnose diseases to help Northwestern Medicine physicians provide answers to patients who have found themselves at a loss for what is ailing them (“The Socrates Project,” page 20). Meanwhile, Northwestern Medicine’s new Gender Pathways Program was designed for patients who often feel marginalized by the traditional clinical setting — a better way to treat people on a difficult journey (“Becoming Jake,” page 22).

As I reflect on the lessons we take from what’s happening on campus today, and as tumultuous as times seem, I remain truly optimistic over our shared future. Together, we are learning how to be better — how to do better — for each other. Creating an intentionally inclusive institution free of bias will allow for more diversity of intellect, more powerful and challenging inquiries into the root causes of disease, caregivers who better reflect the entire patient population, and an academic health system that fully reflects our ambitions for each and every one of us who is a part of it.

The path ahead is not straightforward or easy, but, as we start off the academic year, let’s do so with a sense of renewal and resiliency. With a deep belief that it is never too late to be better.

With warm regards,

**Eric G. Neilson, MD**

Vice President for Medical Affairs  
Lewis Landsberg Dean



## ON CAMPUS

# Northwestern Medicine Hospitals Rank Among the Best

### NORTHWESTERN MEMORIAL

10

on the Best Hospitals Honor Roll

1

in Chicago Metro Region and Illinois for ninth year in a row

11

nationally ranked areas of specialty

### CENTRAL DUPAGE

8

in Chicago Metro Region and in Illinois

### McHENRY

9

in Chicago Metro Region and in Illinois

### LAKE FOREST

19

in Chicago Metro Region

### ABILITYLAB AND LURIE CHILDREN'S RECEIVE HIGH MARKS

The Shirley Ryan AbilityLab (previously known as the Rehabilitation Institute of Chicago) continues to be recognized as the national leader in rehabilitation, topping the *U.S. News* list for 30 consecutive years. The AbilityLab is the only hospital of its kind to hold this distinction.

Lurie Children's Hospital of Chicago continues to be the top children's hospital in Illinois, ranked in all 10 specialties by *U.S. News & World Report*. Its Urology program ranked seventh in the nation and its Neonatology and Cardiology and Heart Surgery programs eighth.

**F**our Northwestern Medicine hospitals have been recognized by *U.S. News & World Report* in its 2020–21 Best Hospitals rankings.

Northwestern Memorial Hospital has again been recognized as one of the top hospitals in the country, ranking 10th on the Best Hospitals Honor Roll — the only hospital in Illinois to receive top-ten honors.

Northwestern Memorial remained ranked first in both the Chicago Metro Region and Illinois for the ninth consecutive year. Northwestern Medicine Central DuPage Hospital was ranked eighth in the Chicago Metro region and eighth in Illinois. Northwestern Medicine Lake Forest Hospital was ranked ninth in the Chicago Metro region and ninth in Illinois. Northwestern Medicine McHenry Hospital was ranked 19th in the Chicago Metro region and 23rd in Illinois.

*U.S. News* also evaluated hospitals across 16 specialties and 10 procedures and conditions. Only 134 hospitals, or about three percent of the nearly 5,000 hospitals evaluated, were nationally ranked in even one specialty. Northwestern Memorial was nationally ranked in 11 out of 16 specialties and recognized as high performing in all 10 procedures and conditions.

"The *U.S. News* rankings are a reflection of a shared commitment to excellence and are why Northwestern Medicine is consistently viewed as one of the best health systems in the country," said Dean M. Harrison, president and chief executive officer of Northwestern Memorial HealthCare. "In these unprecedented times, our physicians, nurses, and staff have continued to provide world-class, compassionate care while working to advance treatments, clinical research, and understanding of this global pandemic."

### ABILITYLAB

1

in rehabilitation in the nation for 30th consecutive year

### LURIE CHILDREN'S

1

children's hospital in Illinois



# Changes in Medical Education Leadership

*Diane Wayne steps down, Marianne Green named new vice dean, new associate deans named, and newly created assistant dean roles bring needed perspectives.*

**A**fter more than 23 years of distinguished leadership in medical education and following a trailblazing six-year term at the helm of medical education, **Diane B. Wayne, MD, '91**, the Dr. John Sherman Appleman Professor of Medical Education, indicated she would like to step down as vice dean for medical education, chair of the Department of Medical Education, and president of McGaw Medical Center, effective September 1.

A clinician-educator, Wayne will continue serving on the faculty at Feinberg as a physician

in the Northwestern Medical Group and as vice president of Human Resources at Northwestern Memorial HealthCare.

"We are tremendously grateful for Diane's transformational leadership in reshaping our approach to undergraduate and graduate medical education and her tireless dedication to supporting all our trainees during her tenure as vice dean," said Eric G. Neilson, MD, vice president for Medical Affairs and Lewis Landsberg Dean.



**GOLDSTEIN NAMED  
NEW SENIOR  
ASSOCIATE DEAN  
FOR GRADUATE  
EDUCATION**

**Joshua Goldstein, MD, GME '02**, has been elevated to senior associate dean for graduate medical education. Goldstein, formerly associate dean for graduate medical education and associate professor of Pediatrics in the Division of Neurology and Epilepsy, has served on Feinberg's faculty since 2002. In his clinical work, he focuses on pediatric neurocritical care, especially as it pertains to epilepsy, status epilepticus, coma, brain injury, and neurophysiology.



**SANGUINO  
NAMED NEW  
SENIOR  
ASSOCIATE  
DEAN**

**Sandra Sanguino, '93 MD, '96 '99 GME, MPH**, succeeds Marianne Green, MD as senior associate dean for medical education. Sanguino has been at Feinberg more than 25 years, starting with her medical degree, and followed by a pediatric residency and fellowship at McGaw Medical Center of Northwestern University. She has served on faculty since 1996 and has specialized in the career advising of medical students throughout her time at Feinberg. Sanguino was honored in 2017 with the Exceptional Mentor Award from the American Medical Women's Association (AMWA).



*"We are tremendously grateful for Diane's transformational leadership."*

**Eric G. Neilson, MD**, vice president for Medical Affairs and Lewis Landsberg Dean

## GREEN NAMED VICE DEAN FOR MEDICAL EDUCATION

**Marianne Green, MD**, the Raymond H. Curry, MD, Professor of Medical Education and former senior associate dean for Medical Education, succeeded Diane Wayne, MD, to become vice dean for medical education, chair of the Department of Medical Education, and president of McGaw Medical Center. A practicing primary care clinician in the Northwestern Medical Group, Green started at Feinberg in 1997 as an instructor in the Department of Medicine and has since served in many leadership roles, including associate program director of the McGaw Medical Center Internal Medicine Residency Program and director of the Primary Care Clerkship. She has been director of the combined baccalaureate-MD program and has also served as associate dean for medical education and competency achievement. She was also recently named co-director of the Center for Medical Education in Data Science and Digital Health within the Institute for Augmented Intelligence in Medicine at Feinberg.

*“Marianne is a perfect fit to serve as our new vice dean for Education based on her long record of excellence and innovation.”*

**Eric G. Neilson, MD**, vice president for Medical Affairs and Lewis Landsberg Dean

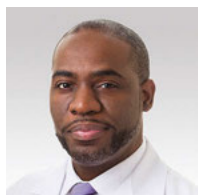


## NEW ASSISTANT DEANS FOR MEDICAL EDUCATION



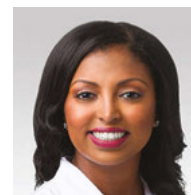
**Khalilah Gates, MD, '10 GME**, assistant professor of Medicine in the Division of Pulmonary and Critical Care and of Medical Education, will be

responsible for leading Feinberg's faculty and student council on racism, justice, and equity for the Augusta Webster, MD, Office of Medical Education (AWOME); reviewing curriculum in real-time for bias; educating faculty on best practices for discussing bias in education; representing Feinberg on Association of American Medical Colleges national committees for diversity and inclusion; serving as Feinberg's Student National Medical Association chapter advisor; and being a mentor for students from underrepresented groups and an additional resource for confidential consultation about student concerns. "I am excited to help lead Feinberg as we continue our journey for change in social justice, equity and advocacy," said Gates.



**Ike Okwuosa, MD, '13 GME**, assistant professor of Medicine in the Division of Cardiology, will be responsible for helping Feinberg's Office of Diversity and Inclusion

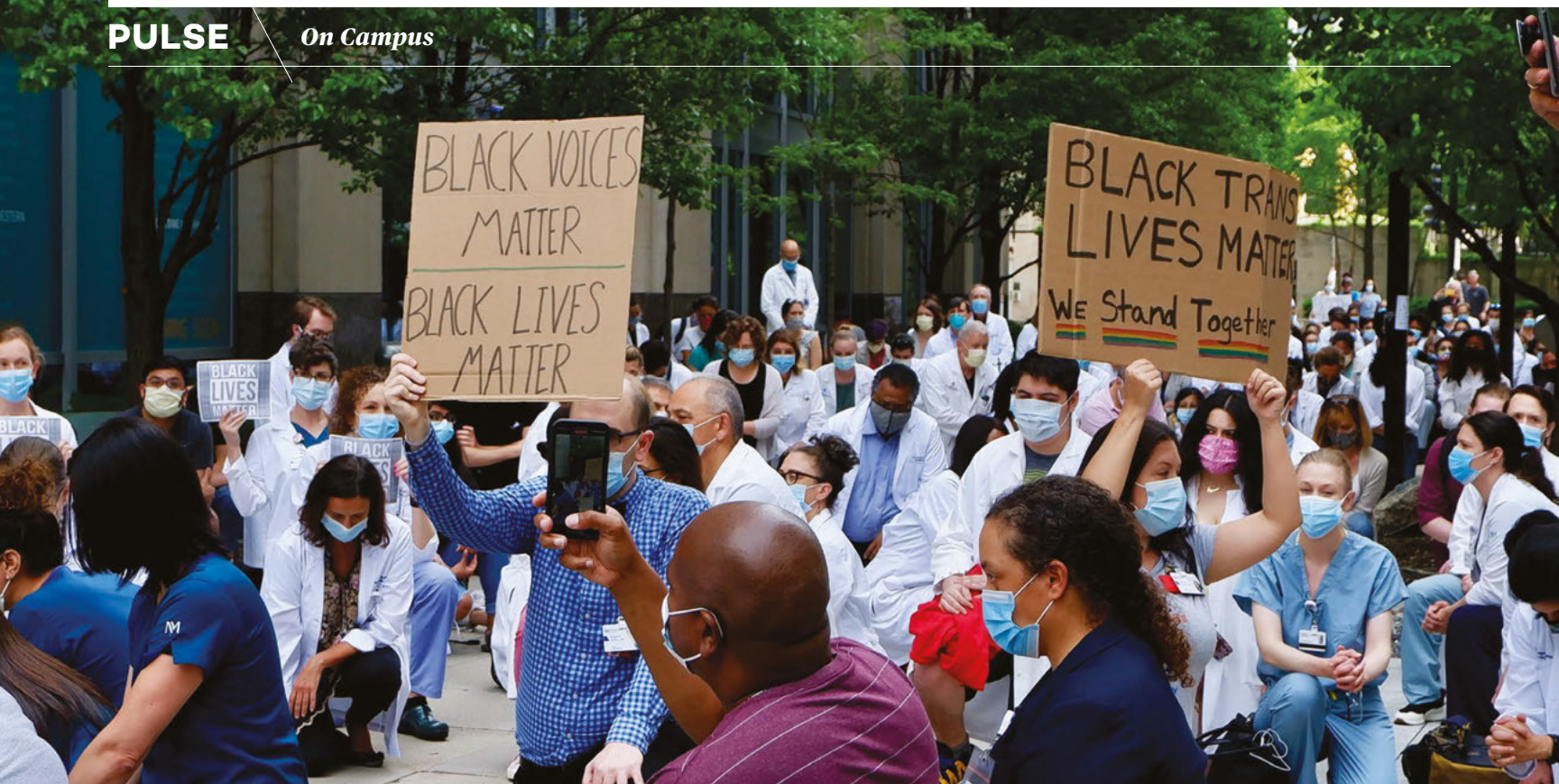
and Daniel Hale Williams Society in outreach to applicants, interviews, and recruitments; serve as a mentor for medical students in research and community service; assist in development of pre-matriculation program; and serve as a mentor for students from underrepresented groups and as an additional resource for confidential consultation about student concerns. "I am excited knowing that I will lead initiatives to foster relationships with our communities, continue to promote diversity on our campus through existing initiatives such as the Daniel Hale Williams Society, and in collaboration with community partners develop programs that stimulate medical interest in underrepresented youth," said Okwuosa.



**Linda Suleiman, MD, '17 GME**, assistant professor of Orthopaedic Surgery, Medical Education, and director of diversity and inclusion at the McGaw

Medical Center of Northwestern University, will manage policies and procedures related to diversity, inclusion, and equity; work with individual programs on best practices for recruitment; serve as a liaison to national organizations and Historically Black Colleges and Universities on behalf of Northwestern University's McGaw Medical Center; serve as a faculty advisor to McGaw's Underrepresented Residents and Fellows Organization; develop and provide implicit bias training for all house staff as part of the Residents as Teachers and Leaders (RATL) program; serve on national task forces and groups related to graduate medical education diversity and inclusion; and advocate for students and trainees from underrepresented groups.





# Responding to Racism

In the late spring of 2020, the school of medicine received ardent inquiries from students, residents, and faculty about social injustice and institutional racism at Feinberg and in the community. This, paired with the disproportionate impact COVID-19 has had on people of color, has mobilized the Northwestern Medicine community to advocate and act against racism.

From a community-wide protest to the publication of a comprehensive report by leadership outlining new social justice initiatives at the medical school, the Feinberg community has responded impactfully and intensely.

## KNEELING FOR RACIAL EQUITY

One of the most palpable responses happened in the early morning of Friday, June 5, on the medical campus, when hundreds of members of the Northwestern Medicine community —

doctors, nurses, leaders, administrators and students, wearing white coats and surgical scrubs — quietly knelt for 10 minutes to protest the killing of George Floyd and centuries of racism in America in a White Coats for Black Lives demonstration.

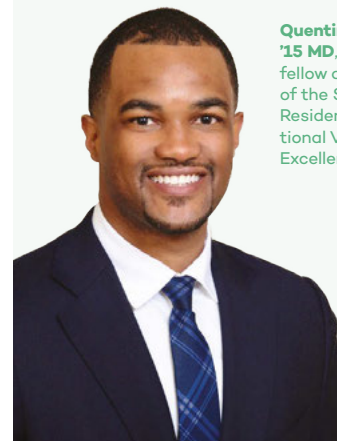
“Our community response compellingly demonstrates our strident opposition to racism and a resolve to craft a better and more equitable normal,” said Clyde Yancy, vice dean for Diversity and Inclusion, and one of the event organizers. “Northwestern Medicine will not allow, tolerate or condone racism.”

Quentin Youmans, '15 MD, a fellow in cardiology who graduated from Feinberg School of Medicine and completed his residency at Northwestern, said he was filled with emotion at the gathering that day.

“What was most touching about it was to be with colleagues in all aspects of medicine,”



*What was most touching about it was to be with colleagues in all aspects of medicine. The momentum behind what happened to George Floyd will hopefully lead to substantial change in this country.”*



**Quentin Youmans, '15 MD**, Cardiology fellow and founder of the Student to Resident Institutional Vehicle for Excellence program



he said. “It left me with a feeling of hope and that everyone is trying empathize with what has happened in the country for Black Americans, not just in the last year or decades but in the last centuries. The momentum behind what happened to George Floyd will hopefully lead to substantial change in this country.”

### **CALLS FOR SYSTEMIC CHANGE**

While the medical school has been working for the past decade on promoting equity in medical education, after the events of the spring and summer, there is now a new urgency to mitigate institutional racism that has not been sufficiently addressed.

The medical school created four dedicated advisory groups, made up of faculty, staff, students, and residents, focused on overturning racial inequities at Feinberg. This task force developed ten usable recommendations regarding matters such as: microaggressions and the use of race in lectures, clinical presentations, and laboratory algorithms; evaluation bias; community engagement; and faculty recruitment.

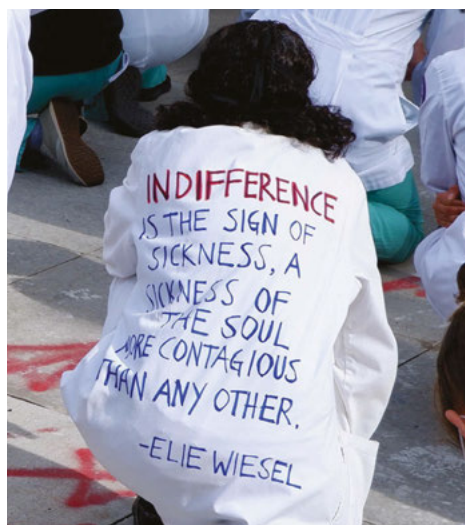
A comprehensive report and action plan was delivered to Feinberg faculty, and work on these initiatives has already begun (including implicit bias training for all faculty members). The report was issued by Eric G. Neilson, MD, vice president for Medical Affairs and Lewis Landsberg Dean; Marianne Green, MD, vice dean for Education, Rex Chisholm, PhD, vice dean for Scientific Affairs and Graduate Education, and Yancy.

Yancy also published an editorial in *JAMA* that encapsulates what is at stake for institutions like Feinberg, entitled “Academic Medicine and Black Lives Matter: Time for Deep Listening.” In the piece, he outlined fourth truths: that racism exists in academic medicine; that academic medical centers have a major influence on the practice of medicine; that while a range of strategies have been deployed to achieve racial equity in medicine, there is a lack of evidence about their impact; and that without black people in leadership positions, “the likelihood that budgets, policy, or mission will ever fully embrace racial equity becomes nil.”



*I wanted to be a part of this task force so that I could help shape the way that medical education is taught in the future.”*

**Maya Jackson-Gibson**, fourth-year medical student and member of the Task Force on Inclusion and Bias



He stressed in his piece, however, that the problems can be solved by addressing these truths. “All physicians, and particularly those in academic medicine, can and should address racial equality and engage with Black Lives Matter because atonement matters; culture matters; evidence matters; and leadership deeply matters. This is how the problem will be solved,” he wrote.

### **PROMOTING AN INCLUSIVE LEARNING ENVIRONMENT**

Student involvement is key to driving change. In 2019, the medical school launched a Task Force on Inclusion and Bias, chaired by Khalilah Gates, MD, '10 GME, assistant dean of Medical Education. The task force is made up

of 19 students and eight faculty and staff — all working toward the goal of creating an inclusive curriculum that mitigates bias and promotes health equity, as well as educating students in a safe and healthy learning environment.

Now, the task force is more important than ever.

Maya Jackson-Gibson, a fourth-year medical student, recently reflected on her time on the task force; why she is part of it, and how the group hopes to seize this opportunity to achieve racial justice today and in the future.

“Besides the lectures covered by health and society, I found that there was very little intersection between the science of medicine and how it has and continues to have negative impacts on marginalized communities,” she said. “I felt that we were not being taught the origins of medicine — the horror stories of maltreatment towards patients, the unethical behavior of medical researchers we praise, the longstanding systemic racism that is present in our field and that we continue to perpetuate mindlessly. I wanted to be a part of this task force so that I could contribute, in at least one way, to the effort to eradicate racism and bias in the Feinberg curriculum and help shape the way that medical education is taught in the future.”

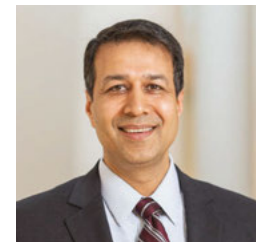
With commitment across the Northwestern community, open and supportive dialogues, and new leadership who bring new voices to the table (see page 4), Feinberg is working toward that future.



# New Center Tackles Primary Care for Older Adults

## NEW CHAIRS NAMED IN SURGERY AND PEDIATRICS

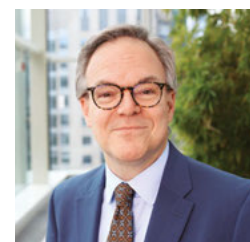
**Hasan B. Alam, MD**, the Norman W. Thompson Professor of Surgery and section head for general surgery at the University of Michigan Medical Center, has been named the Loyal and Edith Davis Professor and chair of the Department of Surgery.



A highly regarded trauma and general surgeon and physician-scientist, Alam has established integrative research and clinical programs at various institutions across the country, including Massachusetts General Hospital and the University of Michigan Medical Center, with a focus on developing more efficient and financially sustainable models of care-delivery.

"I am truly excited and honored to join Northwestern Medicine," Alam said. "Not only is it the dominant healthcare system in one of the largest and most iconic cities in the country, but also a national leader in academic medicine, education, and innovation. I am looking forward to being a part of this winning team."

**Matthew Davis, MD**, a pediatrician and internist with a focus on family health and community impact, has been named chair of the Department of Pediatrics. At the same time, Ann & Robert H. Lurie Children's Hospital of Chicago has



appointed Davis chair of the hospital's department of medicine, as well as president and chief research officer for Stanley Manne Children's Research Institute, and president of Pediatric Faculty Foundation, Inc.

"Matt is a dedicated advocate for the health of children and communities," said Eric G. Neilson, MD, vice president for Medical Affairs and Lewis Landsberg Dean.

**N**orthwestern investigators have been awarded a grant from the National Institute on Aging to establish a Claude D. Pepper Older American Independence Center (OAIC), joining a network of centers across the country that investigate ways to maintain or restore independence in older adults.

The center will be co-led by Michael Wolf, PhD, '02 MPH, '02 GME, the James R. Webster, Jr., Professor of Medicine and associate vice chair for Research in the Department of Medicine, and Jeffrey Linder, '97 MD, MPH, the Michael A. Gertz Professor of Medicine and chief of General Internal Medicine and Geriatrics in the Department of Medicine.

"The goal of our center is really to cultivate and bring together all of the expertise and aging research across Northwestern, in addition to partnering with various other academic institutions across the city and the state," said Wolf, who is also director of the Center for Applied Health Research on Aging (CAHRA), where the new center will be housed; both are part of the Institute for Public Health and Medicine (IPHAM). "We also have a mandate to support the training of the next generation of aging and geriatrics researchers."

"Research to improve primary care for older adults, particularly those with multiple chronic conditions, is a national priority,

and it is exciting that we now have a Pepper Center that will focus precisely on this important area," said Ronald Ackermann, MD, MPH, director of IPHAM, senior associate dean for Public Health, professor of Medicine in the divisions of General Internal Medicine and Geriatrics and Endocrinology, and a professor of Medical Social Sciences.

"There was definitely a need: Cook County has one of the largest populations of older Americans in the U.S., and in a city that's very racially and ethnically diverse, it's important for us to address health and healthcare disparities among older Americans," Wolf said.

Each OAIC has a unique focus, and the Northwestern OAIC will zero in on improving primary care for older adults with multiple medical conditions, whose doctor's visits often last just 15–20 minutes, according to Linder.

"American medicine is set up in time segments and widgets that don't always fit for older adults

who may move slower, take more time to discuss things, and who have more chronic conditions and are on more medicines," Linder said.



**Michael Wolf, PhD, '02 MPH, '02 GME**, the James R. Webster, Jr., Professor of Medicine and associate vice chair for Research in the Department of Medicine



**Jeffrey Linder, '97 MD, MPH**, the Michael A. Gertz Professor of Medicine and chief of General Internal Medicine and Geriatrics in the Department of Medicine



# FACULTY AWARDS & HONORS



Two Feinberg faculty members in the Department of Medical Education have been honored with 2020 awards from the Association of American Medical Colleges (AAMC):

• **Patricia Garcia, MD, MPH, '91 GME**, associate dean for curriculum and professor of Obstetrics and Gynecology in the Division of Maternal Fetal Medicine and of Medical Education, has been selected as the 2020 recipient of the AAMC Arnold P. Gold Foundation Humanism in Medicine Award. [1](#)

• **Marianne Green, MD**, was selected as one of four winners of the Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award.

Two Feinberg faculty members were named on the Illinois Science & Technology Coalition's third annual list of "Researchers to Know" at Illinois universities:

• **Sarki Abdulkadir, MD, PhD**, vice chair for Research in the Department of Urology, the John T. Grayhack, MD, Professor of Urological Research, and professor of Urology and Pathology, under the category "Preventing Disease"

• **Karla Satchell, PhD**, professor of Microbiology-Immunology, under the category "COVID-19 Response"

**Pedram Gerami, MD**, professor of Dermatology, Pathology, and Pediatrics, has been honored with the Humanitarian Award by the Melanoma Research Foundation. [2](#)

**William Grobman, MD, '00 GME, MBA**, vice chair for Clinical Operations in the Department of Obstetrics and Gynecology and the Arthur Hale Curtis, MD, Professor of Obstetrics and Gynecology, was elected to the National Academy of Medicine. [3](#)

**Dong-Hyun Kim, PhD**, associate professor of Radiology, received the 2020 Distinguished Investigator Award from the Academy for Radiology & Biomedical Imaging Research.

**Guillermo Oliver, PhD**, director of the Center for Vascular and Developmental Biology in the Feinberg Cardio-vascular and Renal Research Institute and professor of Medicine in the Division of Nephrology and Hypertension, was elected to the Latin America Academy of Sciences.

**Gabriel Rocklin, PhD**, associate professor of Pharmacology, received a National Institutes of Health (NIH) Director's New Innovator Award from the NIH Common Fund's High-Risk, High-Reward Research program.

**Sheetal Kircher, MD, '11 GME**, associate professor of Medicine in the Division of Hematology and

Oncology and medical director of the Cancer Survivorship Institute at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University, was named an Advocacy Champion by the Association for Clinical Oncology.

**Benjamin Singer, '07 MD, '10 GME**, assistant professor of Medicine in the Division of Pulmonary and Critical Care, and of Biochemistry and Molecular Genetics, was the recipient of the 2020 American Thoracic Society's Assembly on Respiratory Cell & Molecular Biology Carol B. Basbaum Award.

**Samuel Stupp, '77 PhD**, Board of Trustees Professor of Materials Science and Engineering, Chemistry, Medicine, and Biomedical Engineering, and director of the Simpson Querrey Institute, and **Mark Hersam, PhD**, professor of Medicine in the Division of Pulmonary and Critical Care, were

ranked among the world's most-cited researchers, according to the 2019 list released by the Web of Science Group within Clarivate Analytics. Their names were mistakenly omitted in the Spring/Summer print edition of this magazine. We apologize for our error.

[4, 5](#)

**D. James Surmeier, PhD**, chair and the Nathan Smith Davis Professor of Physiology, has received, for the second time, the National Institute of Neurological Disorders and Stroke's Javits Neuroscience Investigator Award. [6](#)

**Jane Winter, MD, '82 GME**, professor of Medicine in the Division of Hematology/Oncology, was named the recipient of this year's Paula H. Stern Award for Outstanding Women in Science and Medicine. [7](#)

The following faculty members were on *Crain's Chicago*

*Business's* list of 2020 Notable Health Care Heroes for their work during the height of COVID-19 (along with the teams on the 12th floor at Feinberg Pavilion and the COVID Care Unit at Shirley Ryan AbilityLab).

• **Melissa Simon, MD, '06 GME, MPH**, vice chair for research in the Department of Obstetrics and Gynecology and professor of Obstetrics and Gynecology and of Medical Social Sciences

• **Larry Kocielek, MD, '14 GME**, assistant professor of Pediatrics in the Division of Infectious Diseases

• **David Zich, MD**, health system clinician in the Department of Emergency Medicine

**Molly Beestrup, MLIS**, education and curriculum coordinator for the Galter Health Sciences Library and Learning Center, has been named Illinois Academic Librarian of the Year by the Illinois Library Association (ILA).



# RESEARCH BRIEFS

## DISEASE DISCOVERIES

### GENE THERAPY COULD TREAT ATRIAL FIBRILLATION



A gene-based therapy reduced atrial fibrillation in animal models of disease, according to a Northwestern Medicine study published in *Circulation*.

Treatments for atrial fibrillation (AFib), the most common heart rhythm disorder, are effective in only about half of patients, but this new therapy targets the mechanisms behind disease — a much more promising strategy, according to Rishi Arora, MD, professor of Medicine in the Division of Cardiology and senior author of the study.

The team developed a targeted genetic therapy: NOX2 shRNA. This therapy silences NOX2, a major regulator of oxidative stress. The investigators administered this therapy to one group of animal models, with another untreated group serving as a control.

Using rapid atrial pacing to induce AFib, the control group developed the condition after just three or four weeks. Meanwhile, the group treated with the therapy never experienced AFib. Further, the experimental group's refractory period — the amount of time between heartbeats — remained nearly constant, where the control group (like patients with AFib) experienced increasingly short refractory periods.

"This is something that has therapeutic value because if this gene was injected into human hearts, it could potentially reverse much of the electrical remodeling that is otherwise so hard to treat," Arora said. "This approach could potentially help people who currently cannot be helped by drugs or ablation."

This work was supported by National Institutes of Health (NIH) grants R01 HL093490 and R01 HL140061, the American Heart Association Strategically Focused Research Networks AF Center grant, and the NIH Center for Accelerated Innovations at Cleveland Clinic (NCI-CC).

## SCIENTIFIC ADVANCES

### New Genetic Regulators Could Improve Cancer Immunotherapy

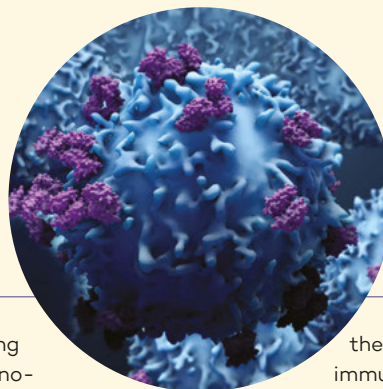


A genetic screen has revealed previously unknown regulators of Foxp3, a transcription factor that, when deactivated, may improve patient response to aggressive cancers, according to a Northwestern Medicine study published in *Nature*.

These newly-discovered regulators could act as "switches" to boost anti-tumor immunity, and this screening method could be used to discover other therapeutic targets for cancer and autoimmune diseases, according to Deyu Fang, PhD, the Hosmer Allen Johnson Professor of Pathology and senior author of the study.

"One regulator, Usp22, is a promising therapeutic agent against highly immunogenic cancers because its suppression not only induces tumor cell deaths, but boosts anti-tumor immunity by impairing Foxp3 regulatory T cell-mediated immune suppression functions in aggressive cancers," said Fang, who is also a member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University.

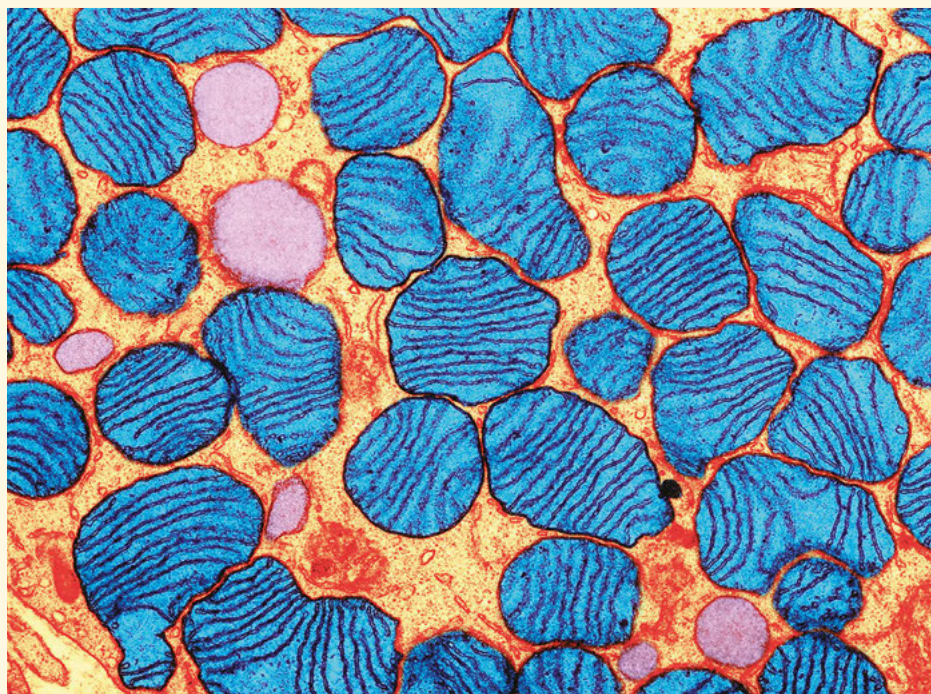
Aggressive cancers are less sensitive to standard treatments, such as chemotherapy or radiotherapy, and have a higher chance of recurrence, creating a need for more effective treatments. Immunotherapy, which enhances



the natural anti-tumor immune functions within each patient, has proved effective in some cancers, but aggressive cancers remain deadly, according to Elena Montauti, a fifth-year student in the Driskill Graduate Program in Life Sciences and co-lead author of the study.

"Although the immune system naturally has the ability to recognize and mount a defense against cancer cells, tumors can circumvent this immune attack through many mechanisms," Montauti said.

This study was supported by National Institutes of Health grants AI079056, AI108634, CA232347, and F31 CA220801-03.



## SCIENTIFIC ADVANCES

## Mitochondrial Metabolism Shows Promise as Target for Cancer Therapy



The growth of cancerous tumors requires the activation of a specific biochemical process within the mitochondria of tumor cells, according to findings published in *Nature*, showing potential as a new target for cancer therapy.

The cell's mitochondria is responsible for generating the chemical energy needed to power biochemical functions within the cell. Its inner membrane is embedded with a series of five enzyme complexes called the electron transport chain (ETC), which is responsible for generating energy production via adenosine triphosphate (ATP) to drive various processes and functions within the cell. Additionally, ETC function is responsible for providing metabolites linked to the tricarboxylic acid cycle (TCA) that provide the building blocks for cell proliferation.

The ETC is necessary for the growth of tumors, and previous studies have found that inhibiting the ETC is an ideal target for cancer therapy. However, the reason why a functional ETC is essential for tumor growth has remained unknown,

according to study senior author Navdeep Chandel, PhD, the David W. Cugell, MD, Professor of Medicine in the Division of Pulmonary and Critical Care, professor of Biochemistry and Molecular Genetics, and a member of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University.

By analyzing osteosarcoma tumor cells, lung adenocarcinoma cells and leukemia cells deficient in one complex known as mitochondrial complex III, the investigators discovered that cells lacking the complex were unable to grow tumors. This suggested that cellular metabolism linked to complex III function is essential to drive tumor growth.

Ultimately, complex III's ability to drive the TCA cycle but not ATP production was necessary for tumor growth, according to Chandel.

"In a normal cell, the mitochondria use oxygen to make ATP, but we show that's not the case in tumor cells. They're using that oxygen to drive the TCA cycle, which is linked to cell respiration, to generate metabolites for cancer growth," he said.

The study was supported by the National Institutes of Health (NIH) grant 5R35CA197532.

## DISEASE DISCOVERIES

## NEW THERAPY TARGETS BREAST CANCER IN BRAIN



A new combination therapy targeting breast cancer tumors in the brain dramatically decreased tumor size and increased survival in a study with mice, according to a study published in *Science Translational Medicine*. An estimated 75 percent of mice that had brain metastases from breast cancer were cured and cancer-free after the therapy.

"The new combination therapy we identified can cross the blood-brain barrier," said lead study author Maciej Lesniak, MD, chair of Neurological Surgery and professor of Neurosurgery. "The therapy also targets brain metastases and significantly improves survival."

The two drugs are vinorelbine, approved by the U.S. Food and Drug Administration (FDA) and available in clinics, and a bromodomain inhibitor, iBET-762, FDA-approved for clinical trials. The bromodomain inhibitor allowed the vinorelbine to permeate the blood-brain barrier and target breast cancer metastases.

"The findings of our work set the stage for a clinical trial, whereby patients with breast cancer brain metastases can be treated with the combination of these two drugs," Lesniak said. "This will offer patients with breast cancer brain metastases, who have been systematically excluded from clinical trials, the chance to benefit from a new therapeutic regimen that has been proven to be strongly effective in experimental settings."

**75%**  
OF MICE THAT HAD  
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FROM BREAST CANCER  
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THE THERAPY

The research was supported by grants R35CA197725, R01NS093903, P50CA221747, R01NS87990, R01NS106379 01A1, 1R01NS096376-01A1, 5R21CA220625, and R01NS102669 from the National Institutes of Health.



# MEDIA SPOTLIGHT



## Permanent Nerve Damage for Some COVID-19 Survivors

Placing a hospitalized COVID-19 patient in a face down position to ease breathing — or “proning” — can be a pandemic lifesaver. But a small new study warns that it may lead to permanent nerve damage.

Nerve compression injuries are typically uncommon with regular repositioning and careful padding. “So we were very surprised to find 12 out of 83 patients with nerve injuries,” said Colin Franz, MD, assistant professor of Physical Medicine and Rehabilitation and of Neurology.

The damage included loss of hand function, frozen shoulder, and foot dragging that may lead to a need for a brace, cane, or wheelchair. “Full recovery for nerve damage is estimated to occur in only about 10 percent of patients under the best of circumstances,” Franz explained, adding that the nerve damage might be the longest-lasting effect of COVID-19 for most of these patients.



## COVID-19’s Impact on the Heart: Two New Studies Suggest ‘The Plot Thickening’

With COVID-19, the focus has been primarily on fatality rates, but more attention needs to be paid to those who survive, yet don’t entirely recover.

Clyde Yancy, MD, chief of Cardiology in the Department of Medicine, and Gregg Fonarow of the University of California, Los Angeles, co-authored an editorial that accompanied two new studies in *JAMA Cardiology* about long-term implications of the virus on the heart.

“We see the plot thickening and we are inclined to raise a new and very evident concern that cardiomyopathy and heart failure related to COVID-19 may potentially evolve as the natural history of this infection becomes clearer,” Yancy and Fonarow wrote.

“We wish not to generate additional anxiety but rather to incite other investigators to carefully examine existing and prospectively collect new data in other populations to confirm or refute these findings,” they wrote.



THE WALL STREET JOURNAL. NBC NEWS

## A New Prescription: A Dose of Live Music for Hospital Patients

While at Northwestern Memorial Hospital for a week following a stroke, Nancy Storino, 72, listened to Clara Takarabe play songs on her viola over FaceTime as part of a Northwestern neurology study.

Analysis shows listening to music can reduce anxiousness and loneliness for patients. Music helps Parkinson’s sufferers

with steadiness and reduces agitation in dementia sufferers; pairing phrases with music can help stroke sufferers with speech.

The research was developed by Borna Bonakdarpour, MD, assistant professor of Neurology, who is also a classically educated pianist, and Takarabe, who has played with the Chicago Symphony Orchestra.

The New York Times The Washington Post WebMD

## Children May Carry Coronavirus at High Levels, Study Finds

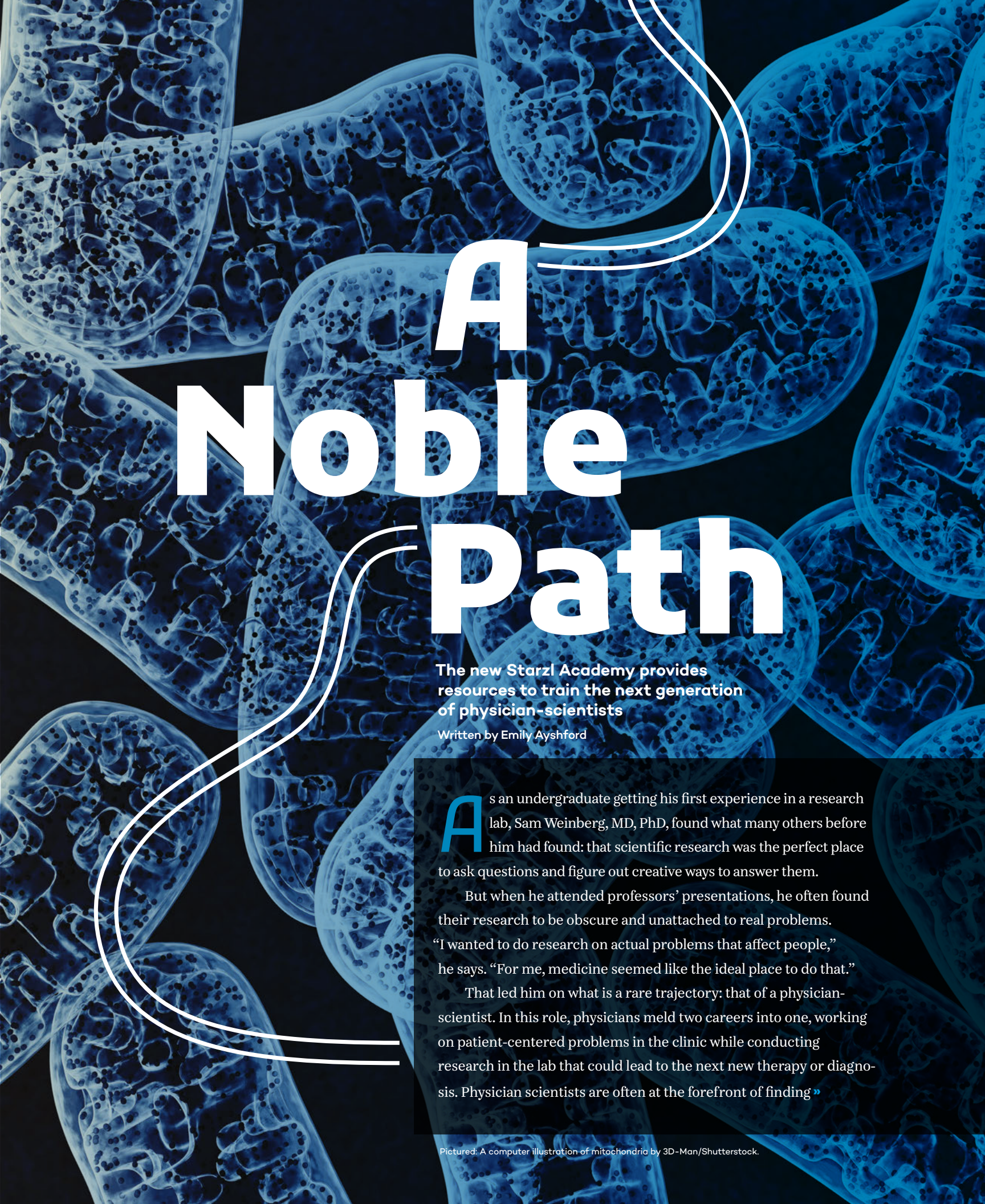
A study led by Taylor Heald-Sargent, MD, assistant professor of Pediatrics in the Division of Infectious Diseases, found that infected children have at least as much of the coronavirus in their noses and throats as infected adults — though this measurement does not necessarily prove children are passing the virus to others.

Caveats of the study include: It was small and did not specify participants’ race or sex, nor whether they had underlying

conditions; also, the tests looked for viral RNA, rather than the live virus itself. Still, the findings should influence the reopening schools, according to several experts.

“The school situation is so complicated — there are many nuances beyond just the scientific one,” said Heald-Sargent. “But one takeaway from this is that we can’t assume that just because kids aren’t getting sick, or very sick, that they don’t have the virus.”



The background of the entire page is a dense, blue-tinted illustration of numerous mitochondria. These organelles are depicted with intricate internal structures, including cristae and a network of membranes, rendered in a semi-transparent, glowing style. Overlaid on this background are several white, curved lines that sweep across the page, adding a sense of movement and design to the layout.

# A Noble Path

**The new Starzl Academy provides resources to train the next generation of physician-scientists**

Written by Emily Ayshford

**A**s an undergraduate getting his first experience in a research lab, Sam Weinberg, MD, PhD, found what many others before him had found: that scientific research was the perfect place to ask questions and figure out creative ways to answer them.

But when he attended professors' presentations, he often found their research to be obscure and unattached to real problems. "I wanted to do research on actual problems that affect people," he says. "For me, medicine seemed like the ideal place to do that."

That led him on what is a rare trajectory: that of a physician-scientist. In this role, physicians meld two careers into one, working on patient-centered problems in the clinic while conducting research in the lab that could lead to the next new therapy or diagnosis. Physician scientists are often at the forefront of finding »



solutions for patients' needs — many budding physician-scientists at Northwestern have already published studies in several high-impact journals — but they must also find the stamina to succeed in what are essentially two separate paths.

That's why the Feinberg School of Medicine recently created the Starzl Academy, an umbrella program for the school's many formal and informal Physician-Scientist Training Programs. The new academy provides tools and resources for budding physician-scientists, helping them secure mentorships, succeed in writing grants, and create a multi-level support network.

"It's increasingly challenging to blend these two careers together," says Elizabeth McNally, MD, PhD, the Elizabeth J. Ward Professor of Genetic Medicine, who directs the academy. "Physician-scientists make up a small percentage of the workforce, but they are essential for advancing human health. When you're forging this unique path, you really need the right resources to succeed."

### BECOMING OKAY WITH FAILURE

For Weinberg, that unique path led him to pathology. After completing his MD and PhD at Northwestern, he became a resident and research fellow, allowing him to conduct testing on patient samples while also exploring research questions in a laboratory setting. He studies how changes in a person's metabolic environment can affect their immune system. In

the lab, he has examined regulatory T cells, which suppress the immune system and which can cause autoimmunity if their numbers are too few. His work on suppressing the mitochondrial function in these cells garnered him a first-author publication in *Nature*.

"We ultimately want to tease out the pathways and regulation of immune cells to help fight autoimmunity or get the immune system to attack tumors," he says.

That kind of success is what sets apart physician-scientist trainees at Northwestern, says Peng Ji, MD, PhD, associate professor of Pathology. "Sam is an outstanding physician scientist trainee with a bright future," Ji says. "He will be a role model for our future trainees."

But that doesn't mean Weinberg's research path has always been smooth. "It's difficult, frustrating, and time-consuming," he says. "When you finish medical school and get into the lab, you're at the bottom of the totem pole, and it seems like nothing is working. You have to learn to be okay with failure, with the hope that one day you'll affect people's lives."

### A PERFECT MARRIAGE OF CARE AND RESEARCH

Aspiring physician-scientists have to be constantly curious and innovative about problems in the clinic. For Luisa Morales-Nebreda, MD, that means working to understand the different ways that acute lung injury can present itself — and be treated. She started working on the problem in her native Venezuela, trying to understand how scorpion venom induces lung injury.

As a physician-scientist trainee, she is now studying the mechanisms behind influenza, pulmonary fibrosis, and, more recently, COVID-19.

"We want to understand how people can recover from lung injuries," she says. "If we can understand the cellular or molecular mechanisms that underpin what's happening in the lungs, we can hopefully understand how to enhance recovery." Her research involves systematically taking fluid samples from ICU patients and analyzing their content, and has led to journal publications in the *Journal of Experimental Medicine*, *Journal of Clinical Investigation*, and *Cell Metabolism*.

Being a physician-scientist is the "perfect marriage between delivering care to patients and working to ask the questions on how care can be improved," she says. "For many diseases, like pulmonary fibrosis, we don't have much to provide to patients. That's very frustrating. If we can find new methods or therapeutics that could help patients — that's a very valuable goal for me."

Morales-Nebreda credits her success in part to several mentors, including Benjamin Singer, MD, assistant professor of Medicine and Biochemistry and Genetics. "Having a mentor is the most important part of success as a physician-scientist,"



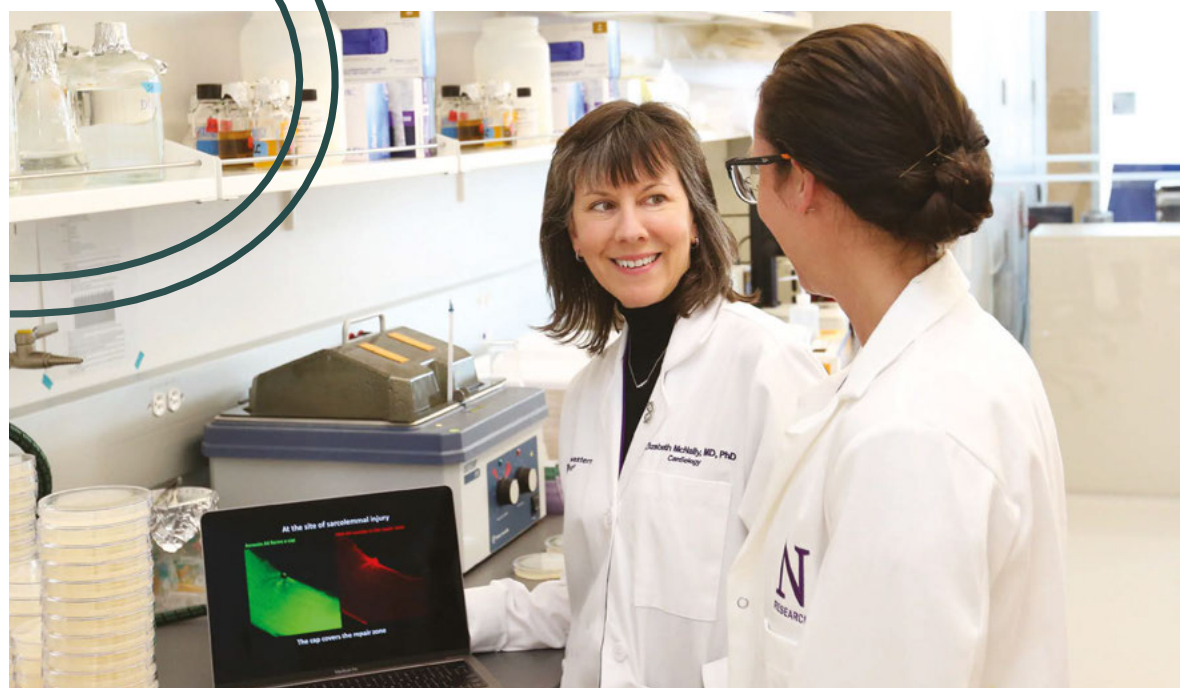
## Thomas Starzl: The Father of Transplantation

The Starzl Academy is named for Thomas Earl Starzl, MD, PhD (1926–2017), an eminent transplant surgeon, mentor, and immunologist. Starzl attended Northwestern University, earning his master's degree in anatomy in 1950 and both a PhD in neurophysiology and an MD with distinction in 1952. He served on the medical school's faculty from 1958 to 1961.

Photo courtesy of Archives & Special Collections, University of Pittsburgh Library System

**“When you’re forging this unique path, you really need the right resources to succeed.”**

**Elizabeth McNally, MD, PhD**  
the Elizabeth J. Ward professor  
of Genetic Medicine and  
director of the Starzl Academy



she says. “They are essential to giving you guidance and keeping you on track.”

“It has been a great pleasure to mentor Luisa,” Singer says. “She is an all-star trainee, excelling in each domain of our tripartite mission of clinically-relevant discovery, exceptional patient care, and education of the next generation.”

#### FROM BEDSIDE TO BENCH, AND BACK AGAIN

For Elnur Babayev, MD, having mentors who are both physicians and scientists has been critical to asking key research questions, like how aging affects reproduction. As a clinical fellow in reproductive endocrinology and infertility, Babayev has studied what happens to ovaries and the cumulus cells around eggs as women age. His work has garnered him publications in journals like *Aging Cell and Fertility* and *Sterility*.

Now, he is working to understand the quality of eggs in adolescent patients who preserve their eggs before undergoing chemotherapy or gender transitioning hormonal treatments, which can affect fertility. “We want to know — are these eggs of the same quality as adult eggs?” he says. “There is not a lot of research in this area. I’m fascinated by how aging affects reproduction, and projects like this are an opportunity for me to be involved in clinical care and treat infertility patients while also thinking about big problems in the field. It’s a bed-to-bench loop to try and see what problems we can solve.”

That’s the kind of approach that makes physician-scientists so successful, says Eve Feinberg, MD, associate professor of Obstetrics and Gynecology. “Elnur is one of the brightest minds

I have encountered,” she says. “He is inquisitive and will not stop researching until he is able to find answers.”

#### MAKING A DIFFERENCE IN PATIENTS’ LIVES

Encouraging bright minds like this is the goal of the Starzl Academy, says McNally. As a physician-scientist herself who studies the genetics of cardiovascular and neuromuscular disorders, she gets “pulled in a lot of different directions.”

“Sometimes you can feel like you’re on your own,” she says. “We want to help physician-scientists understand grant opportunities and understand all the resources available to help them.”

Even if it sometimes feels like double the work, a career as a physician-scientist can also be doubly rewarding: McNally is now seeing the field embrace genetic therapies that can provide treatment to previously untreatable diseases. “That’s taking your training and making a difference in lives,” she says. 🌟

## Trainees Making Their Mark



**Sam Weinberg, MD, PhD**, is studying how changes in a person’s metabolic environment can affect their immune system.



**Luisa Morales-Nebreda, MD**, is studying the mechanisms behind influenza, pulmonary fibrosis, and COVID-19.



**Elnur Babayev, MD**, is studying how aging affects reproduction.



# INHERITING INJUSTICE FOR HEALTH EQUITY

Northwestern investigators uncover health disparities while advocating for health equity

Written by  
Emily Ayshford,  
Will Doss,  
Hilary Hurd Anyaso,  
Marla Paul, and  
Melissa Rohman

While the medical field has made major strides in the prevention and treatment of disease in recent decades, far too many people have been left behind. Black adults, for example, are 20 percent more likely to die from heart disease than non-Hispanic whites, while Hispanic adults are 50 percent more likely to die from diabetes than white adults. LGBTQ populations also face disparities, with greater risks for heart disease and mental health conditions.

This year, COVID-19 has put an additional spotlight on disparate health outcomes: Black and Hispanic COVID-19 adult patients face nearly five times the rate of hospitalization as white people, and both Black and Hispanic children with COVID-19 have much higher hospitalization rates than white children.

Scientists and physicians across Feinberg are working to not only identify disparities in health outcomes among different racial, ethnic, geographic, and socioeconomic groups — they are also working to change the many systems that allow these disparities to exist and grow.

Some of this work happens in Northwestern's Institute for Public Health and Medicine (including in its Center for Health Equity Transformation, Center for Epidemiology and Population Health, and Center for Community Health, which has an equal presence in the Northwestern University Clinical and Translational Sciences Institute), while other research stems from cross-departmental collaborations.

"What's really notable about Northwestern is that disparity research is not restricted to a single department or institution here," says Mercedes Carnethon, PhD, vice chair

of Preventive Medicine and chief of Epidemiology in the Department of Preventive Medicine. "You can find people in every department at Feinberg, in every discipline — from basic scientists to population scientists — who are focused on addressing disparities and developing strategies, using different methods."

"I think it's a growing area of research at Northwestern," adds Kiarri Kershaw, PhD, MPH, assistant professor of Preventive Medicine in the Division of Epidemiology. "We're getting a critical mass of disparities investigators with expertise in many different areas, and that's exciting."

## Finding patterns among disparities

Before disparities can be addressed, they must be specifically defined. Many Feinberg investigators are studying patterns of disease among populations — often finding results that reveal previously unknown patterns or upend racial stereotypes.

In 2018, Carnethon published a study in *JAMA* that revealed Black and white people have the same risk of developing diabetes when taking into account biological risk factors, such as obesity. The study obliterated the idea that there is an unexplained or genetic reason why Black adults have twice the rate of diabetes, as compared to white adults.

"It may seem like the answer is simple — don't gain weight — but the solution is actually really complicated, because of different accesses to resources and preventive care," Carnethon says. "We hope our research is informative to people who can really take it to the next level and think creatively about a comprehensive and complex set of strategies to reduce this disparity."

**Mercedes Carnethon, PhD**  
vice chair of Preventive  
Medicine and chief  
of Epidemiology in  
the Department of  
Preventive Medicine



**“What’s really notable about Northwestern is that disparity research is not restricted to a single department or institution here.”**

Carnethon also published a paper that year that found that, across the board, Black people have poorer overall cardiovascular health than non-Hispanic whites. Other Feinberg investigators have found similar results. This year, Sadiya Khan, '09 MD, '14 MS, '10, '12 GME, assistant professor of Preventive Medicine in the Division of Epidemiology and of Medicine in the Division of Cardiology, found that deaths due to heart failure and hypertensive heart disease are increasing in the United States, especially among Black women and men. In a study published in *The British Medical Journal*, Khan looked at mortality data from 1999 to 2018 across a spectrum of heart disease types, looking at differences between sex and racial groups across age groups and geography. She found that deaths from heart disease in 2018 equaled 3.8 million potential years of life lost. Not only that, the loss was 30 percent and 60 percent greater for Black men and women compared with white men and women, respectively.

“We have to recognize and address that the root causes of these disparities arise from differences in social determinants of health, such as socioeconomic status and access to care, and structural and systemic racism in our country,” Khan says.

Such disparities don't just affect cardiovascular health. In a study published in *JAMA Neurology*, Norrina Allen, PhD, '11 GME, director of IPHAM's Center for Epidemiology and Population Health and associate professor of Preventive Medicine in the Division of Epidemiology, found that higher cumulative blood pressure among Black patients is a major contributor to their higher risk of dementia.

Using five large population cohorts totaling nearly 20,000 individuals, Allen and her collaborators analyzed the interaction between cumulative blood pressure and changes in cognitive function. They found that high blood pressure over time was associated with significantly faster cognitive decline.

“We have known for decades that African Americans experience an excess burden of hypertension and hypertensive-related outcomes,” Allen says. “This study expands our understanding of the impact of these blood pressure disparities to demonstrate they are additionally responsible for racial disparities in cognitive decline with age. Prevention of hypertension, particularly focusing on Black communities, is

critical to addressing racial disparities in a broad range of health outcomes.”

**Sadiya Khan, '09 MD, '14 MS, '10, '12 GME**  
assistant professor of  
Preventive Medicine  
in the Division of  
Epidemiology and of  
Medicine in the Division  
of Cardiology



### Understanding the effect of social environments

Health disparities often stem from social environments — something that Kershaw realized when she initially tried to understand differences in air pollution exposure or supermarket access by race. “The common themes were these underlying structural factors,” she says, such as racial and ethnic segregation. Kershaw has focused her career on understanding how these factors affect health disparities in areas like cardiovascular and mental health.

In a study published in *JAMA Neurology*, she found that Black people who experience racial segregation in their neighborhood during young adulthood are more likely to have poor cognitive performance, even as early as midlife. »

**Kiarri Kershaw, PhD, MPH**  
assistant professor of  
Preventive Medicine  
in the Division of  
Epidemiology







**The need for systemic change has especially come to light in 2020. COVID-19 has illuminated vast differences in health outcomes, and civil unrest and the Black Lives Matter movement have put an additional spotlight on structural racial inequities.**

practices,” she says. “It starts with the leadership, the highest levels of leaders in all aspects of an institution. There are many people already working in healthcare delivery institutions and at academic health centers that have the talent and ability to be appointed to high-level leadership positions and who are Black, Indigenous, or people of color, but aren’t given a chance for a variety of reasons, including long-standing systemic racism.”

The need for systemic change has especially come to light in 2020. COVID-19 has illuminated vast differences in health outcomes, and civil unrest and the Black Lives Matter movement have put an additional spotlight on structural racial inequities.

She also found that systolic blood pressure readings of Black people dropped between one to five points, over 25 years, when they moved to less-segregated areas. That research was published in *JAMA Internal Medicine*.

Even income can have an adverse effect on health, she found. In a study published in *Circulation*, she showed that long-term income volatility increased the risk for both cardiovascular events and overall mortality.

Now, she is beginning a study that uses ECG monitors to measure how stressed participants are, and how they respond to stressful situations in real time. She and her collaborators will also use GPS to track participants’ locations, and will ask them questions about diet and exercise, to get a better sense of how geography and environment might affect stress levels.

### **Striving for systemic change**

Identifying health and healthcare

disparities is a major first step, but investigators are also working to close gaps — something that requires major systemic change.

In a recent discussion paper published by the National Academy of Medicine, Melissa Simon, MD, MPH, GME ’06, the George H. Gardner, MD, Professor of Clinical Gynecology, and founding director of the Center for Health Equity Transformation, argued that one way to achieve health equity is through a “patient and family engaged care” culture.

That means providing care that genuinely centers around patients and their families of all communities, which would require “a transformational culture shift in the way institutions are structured at every level, from the way they deliver patient care, to their teaching, scholarship, policies, and

# Social Inequities in COVID-19

In June, a multidisciplinary team of Northwestern investigators received a \$200,000 grant from the National Science Foundation to create a web-based, no-contact research platform to investigate the origins of social inequities in COVID-19 across neighborhoods in Chicago.

The team, which includes experts from the University's Institute for Sexual and Gender Minority Health and Wellbeing (ISGMH), has recruited participants from different areas of Chicago to use a finger stick dried blood spot (DBS) sample kit that will allow investigators to analyze the sample for IgG antibodies against the receptor binding domain of SARS-CoV-2, the virus that causes COVID-19.

Participants, who use the kit at home and mail it in, also take a survey. Antibody test results will be combined with survey responses and neighborhood-based administrative data to investigate the individual-, household- and community-level predictors of exposure.

"The goals of this project are inherently about understanding the causes and solutions to the dramatic race and place inequities in COVID-19 across the city of Chicago and in other communities around the county," says Brian Mustanski, director of ISGMH and professor of Medical Social Sciences and of Psychiatry and Behavioral Sciences.

To create the system, the team adapted technology used to study at-home HIV and sexually transmitted infection testing for young gay and bisexual men. The team also helped craft research questions that focus on understanding and addressing the racial and geographic disparities in COVID-19 across Chicago and the United States.

"In addition to our team's focus on sexual and gender minority communities, ISGMH investigators draw from an intersectionality perspective and have achieved excellent recruitment of racial and ethnic minority participants in our research. We are leveraging that experience to support enrollment into the current COVID-19 study," Mustanski says.

In addition to Mustanski, the team is made up of Thomas McDade, PhD, the Carlos Montezuma Professor of Medical Social Sciences and of Anthropology at the Weinberg College of Arts and Sciences; Elizabeth McNally, MD, PhD, the Elizabeth J. Ward Professor of Genetic Medicine and director of the Center for Genetic Medicine; Alexis Demonbreun, PhD, assistant professor of Pharmacology; Richard D'Aquila, MD, director of the Northwestern University Clinical and Translational Sciences (NUCATS) Institute and the Howard Taylor Ricketts, MD, Professor of Medicine in the Division of Infectious Diseases and associate vice president of research; and Nanette Benbow, MA, research assistant professor of Psychiatry and Behavioral Sciences.

**"In addition to our team's focus on sexual and gender minority communities, ISGMH investigators draw from an intersectionality perspective and have achieved excellent recruitment of racial and ethnic minority participants in our research."**

**Brian Mustanski**  
director of ISGMH and professor of Medical Social Sciences and of Psychiatry and Behavioral Sciences



**Melissa Simon, MD, MPH, GME '06**  
the George H. Gardner, MD, Professor of Clinical Gynecology, and founding director of the Center for Health Equity Transformation



**Norrina Allen, PhD, '11 GME**  
director of the Center for Epidemiology and Population Health and associate professor of Preventive Medicine in the Division of Epidemiology



"It highlights the importance of addressing structural determinants of health," Kershaw says. "We have done a better job of characterizing the problem, but we're still far away from a solution. These issues show the need to really focus and tackle root causes."

Considering where disparities originate is needed if Northwestern wants to be a leader in both making changes to the healthcare system and in effecting change within communities more broadly, Allen says. In the Center for Epidemiology and Population Health, she and others are working to understand how some populations of infants and children begin to accumulate risk factors for cardiovascular disease, like obesity. "We want to know how we can intervene early to help mitigate these risk factors from the start," she says. "We're really focused on creating a healthy life for all." 🌟



# The Socrates Project



***When a specific diagnosis is elusive and pathology does not fit cleanly into the purview of a specialist, there is no oracle to seek. Enter Northwestern Medicine's Socrates Project.***

**IN** 2015, Benjamin Singer, '07 MD, '10 GME, joined Feinberg as an assistant professor of Medicine in the Division of Pulmonary and Critical Care and of Biochemistry and Molecular Genetics. That same year, under the direction of Douglas Vaughan, MD, chair and the Irving S. Cutter Professor of Medicine, Singer also established the Socrates Project, a first of its kind physician-to-physician consultation service that helps Northwestern Medicine referring physicians diagnose diseases that are challenging to identify.

Using Socratic principles, particularly iterative hypothesis testing, the aim of the project is to improve patient care by providing diagnostic possibilities and recommendations to referring physicians with the overarching goal of reducing or managing diagnostic uncertainty.

"We work at one of the top medical centers on the planet with some of the smartest specialists and subspecialists that you can find, but that doesn't always mean that patients come away with a confirmed diagnosis," Singer says. "There are still patients who have unexplained signs and symptoms, so the idea was that we could help fill that unmet need."

The service team is led by Singer and is composed of Feinberg's chief medical residents. Residents spend one extra year after their residency volunteering on the team to focus on education and administration, with one of the residents assuming primary responsibility for each new consultation request the service receives. Due to COVID-19, the team has been conducting all service operations virtually.

## **PROBING DIAGNOSTIC UNKNOWNNS**

"The Socrates project has challenged me to think critically and entertain diagnoses that I once would not have. Most importantly, it's humbled me as a physician, exposed the complexity of the human body, and pushed me to sometimes be okay with diagnostic unknowns," says Sneha Thatipelli, MD, '20 GME, chief

medical resident in the Department of Internal Medicine, who is on the Socrates team.

The team receives about two consultation requests per week, usually submitted by Northwestern Medicine general internists, but also from specialists of all disciplines. According to Singer, roughly 80 percent of the referrals are for current inpatients at Northwestern Memorial Hospital, and there is no additional charge to patients when physicians use the consultation service.

After obtaining the patient's case history from the referring physician, a resident conducts thorough reviews of medical literature and electronic health records. The resident will also reach out to experts either at Feinberg or across the country to devise diagnostic possibilities and testing recommendations. In the inpatient setting, the resident performs a new patient history and physical via telemedicine to construct a detailed list of the patient's health problems.

Singer then reviews and refines the list and diagnostic possibilities with the resident, which are then shared with a larger review team consisting of volunteer general internists, specialists, and the rest of the Socrates team. Finally, the service team will document the patient's health problems, diagnostic possibilities, and recommendations in the patient's medical record and discuss the case with the referring physician and their team.



"The Socrates Project has challenged me to think critically and entertain diagnoses that I once would not have."

Sneha Thatipelli, MD

"It's a reminder of the importance of having physicians step back and look at the complexities of a patient presentation across subspecialties in their entirety."

Arushi Singh, MD

From left: Jennifer Jo, MD; Benjamin Singer, MD; Graham Peigh, MD; and Arushi Singh, MD, discuss a case.

The turnaround time for this process is one week, according to Singer, but can be done faster for more urgent cases.

"In almost all cases, the referring physicians have done an incredible job with the workup and we either validate what they've done or recommend other things that might be helpful in this patient's case," Singer says.

#### NO LONE HEALERS

Overall, the service limits its clinical recommendation to diagnosis and avoids commenting on management decisions outside of the use of therapies as diagnostic tests. Oftentimes, however, the team is unable to come up with a concrete diagnosis. This, according to Singer, is because the diagnosis may be identifiable, just not by the Socrates Projects physicians involved in the case or the physicians they consulted (it simply isn't plausible to ask every physician across the globe to exhaust the possibility of a knowledge deficit, he explains). The other reasons why a concrete diagnosis isn't possible, he says, are: The diagnosis is a described condition without any available tests, or the diagnosis has not yet been described by medical science — for example, seeing a case of COVID-19 at the end of 2019.

Arushi Singh, MD, '20 GME, chief medical resident in the Department of Internal Medicine

and a member of the Socrates team, has been working to understand a particularly challenging patient case over the past few weeks, involving various subspecialty physicians across centers of care around the country.

"This case has required multiple weeks of investigation, and we have yet to arrive at a final diagnosis. The process has been trying, but I have derived patience and support from my colleagues and Dr. Singer. It is a work in progress, and I am hopeful that more information will come to light through the test of time," says Singh.

For Singh, the Socrates Project has reoriented her perspective on patient care and has provided her with the opportunity to gain new skills she hopes to apply throughout her medical journey.

"It's a reminder of the importance of having physicians step back and look at the complexities of a patient presentation across subspecialties in their entirety. In addition, it has pushed me to develop and organize my diagnostic reasoning skills in collaboration with trusted friends and mentors," says Singh.

Continued review and cataloging of other similar patient cases and data for educational purposes is paramount. The service has an

established follow-up system for cases, which involves team members reviewing patient charts and reporting them during the team's weekly meetings, as well as making regular phone calls to patients and providers for cases that haven't been followed up on for a while due to missed appointments and documentation or unreturned phone calls from providers.

"We never just throw up our hands and say we have no idea," says Singer. "We'll always have an idea, we'll always have a list, but whether we can prove it definitively or not is a different question."

As for the future of the Socrates Project, Singer says he hopes to expand the team and continue to see the program emphasize how medicine is truly a "team sport."

"The idea of the lone healer going out there and helping a patient — that's not how we should practice best as physicians," he says. "We should talk to each other, and that's why it's great when physicians reach out to us so we can have those conversations and try to ultimately get an idea out there that will help the patient." 🌟




**“Dr. Jordan  
listened to me  
and treated me  
like a human  
being and not  
like some sort  
of disease you  
could catch.”**

Jake Dicus







Northwestern Medicine's  
new Gender Pathways Program  
provides comprehensive  
transgender care

# Becoming Jake

WRITTEN BY CHERYL SOOHOO  
PHOTOGRAPHY BY LAURA BROWN

Jake Dicus, photographed in front of a mural near Lake Michigan. He travels for three hours from his southern Illinois home to receive treatment at Northwestern Memorial Hospital.

**J**ake Dicus has been living publicly in his affirmed gender since 2010, but the path to living fully as his true self is ongoing.

After starting hormone therapy in 2014 and having a chest reconstruction surgery in 2016, the freelance photographer spent years seeking gender-affirming surgery, taking him from his southern Illinois home to the nearby states of Missouri and Kansas with disheartening results.

"The doctors I saw not only didn't want to treat me, but they also didn't want to hear my story," recalls Dicus, 37. "All they wanted to do was get me out the door as quickly as possible."

Undeterred, Dicus and his wife, Jennifer, who have five kids between them, continued looking for a caring, compassionate surgeon. Dicus credits Jennifer for helping him move forward, despite the obstacles he has endured. "We had only been dating a year when I came out, but I could not stand hiding who I was anymore," he says. "She is my rock and keeps me going. Without her, I would have given up."

In 2018, a Google search led them to Northwestern Medicine's Sumanas Wanant Jordan, MD, PhD, '17 GME, assistant professor of Surgery in the Division of Plastic Surgery.

"We fell in love with her as soon as we talked to her," says Dicus. "She listened to me and treated me like a human being and not like some sort of disease you could catch." »



**“We strive for a whole-person approach. Sure, patients can come in for one procedure and be done,**

**but achieving the best health outcomes relies on lifelong supportive and thoughtful care.”**

**Sumanas Wanant Jordan,  
MD, PhD, '17 GME**

### INCREASING ACCESS TO CARE

A plastic surgeon specializing in gender-affirming surgery and transgender care, Jordan helped establish Northwestern Medicine's new Gender Pathways Program. Launched in January, the clinical program offers integrated multidisciplinary health services tailored to the needs of transgender and gender non-binary individuals. While sponsored by Northwestern Medicine's Plastic and Reconstructive Surgery Division,



Above: Jordan, left, explains how skin, nerves, and blood vessels from Dicus's forearm will be used for his surgery.

the program takes a holistic approach that goes beyond providing femininizing and masculinizing surgeries to include primary and transition medical care, such as hormone replacement therapy (HRT) and laser hair removal.

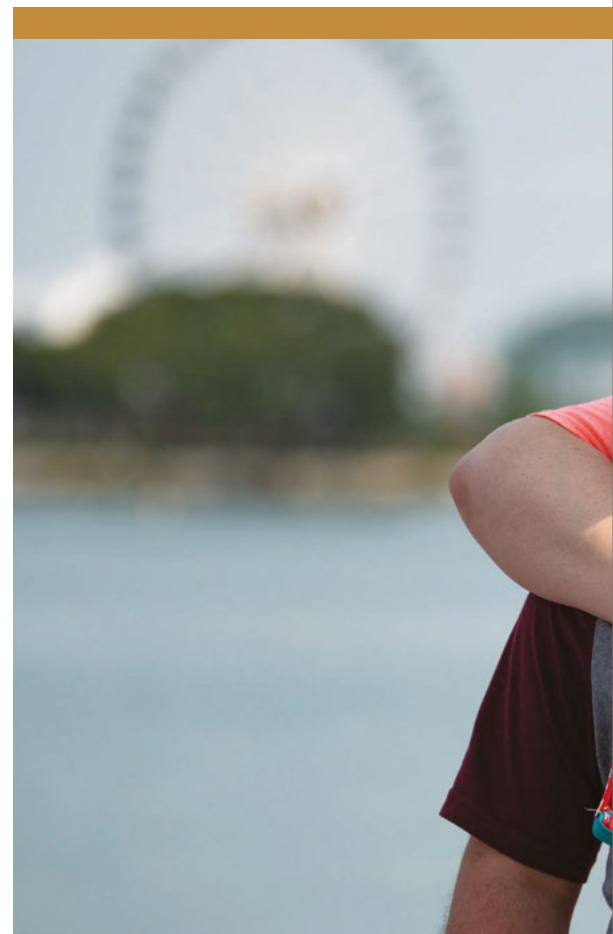
Based at Northwestern Memorial Hospital, the program features a collaborative team of physicians in a wide range of specialties, including obstetrics and gynecology, urology, reproductive endocrinology and infertility, internal medicine, social work, and family medicine. Together, they work with patients to address the medical, emotional, social, and legal aspects of transition.

Transgender individuals face many barriers to accessing affordable high-quality medical services, from routine health and wellness visits to transition specific care. In a 2015 U.S. transgender survey conducted by the National Center for Transgender Equality, 33 percent of respondents reported negative experiences with healthcare providers due to their gender identity. The study, the largest of its kind, also revealed that 23 percent of survey participants don't see a doctor for fear of being mistreated.

“In the middle of a major heart attack, often transgender patients would rather go to a community health center than a tertiary medical center because they didn't want to deal with discrimination. That's not right,” says Jordan. “We want Northwestern Medicine to be welcoming for everyone, no matter their gender identity.”

### OPTIMIZING LIFELONG OUTCOMES

The functional and aesthetic goals of gender-affirming surgery require the expertise of a multispecialty surgical team. Plastic surgeons, urologists, and/or obstetrics and gynecologists often scrub in together. Angela Chaudhari, MD, associate professor of Obstetrics and Gynecology; Diana Bowen, MD, assistant professor of Urology, and Jordan are all part of Dicus's surgical team. He had a hysterectomy in June and, in November, will have his phalloplasty.



Fellowship-trained in reconstructive microsurgery, Jordan possesses the skills essential to performing feminizing and masculinizing top surgeries as well as bottom surgeries, such as vaginoplasty and phalloplasty (her partner Marco Ellis, MD, assistant professor of Surgery, performs all of the facial procedures).

“For many reconstructive surgeries, you need to know how to move tissue from one part of the body to another,” she explains. In Dicus's case, Jordan will move skin, nerves, and blood vessels from his forearm to use for his phalloplasty.

Because transforming male and female genitalia is not only technically but also perioperatively demanding, the Gender Pathways Program is essential for optimizing outcomes.

“We strive for a whole-person approach,” says Jordan. “Sure, patients can come in for one procedure and be done, but achieving the best health outcomes relies on lifelong supportive and thoughtful care.”

Myriad considerations go into play well before the surgery itself. After an individual has come to the decision that gender-affirming surgery is right for their transition

Dicus attributes his ability to keep moving forward despite great difficulty to his wife, Jennifer.



identities of patients. Already, the health system's electronic medical records system allows for the chosen or preferred name of patients to be indicated on their charts. And biological sex designations or gender markers such as female and male have been removed from patients' hospital wristbands.

In addition to clinical services, the Gender Pathways Program offers advocacy, education, and research to better serve and advance the care of transgender and gender-fluid individuals. Jordan, for example, is currently conducting a study on whether chest masculinization surgery (a mastectomy with the goal of achieving the appearance of a male chest) improves mental health and quality of life for young transgender men and non-binary individuals. Other research focuses on the overall benefit of coordinated multidisciplinary care in improving the quality of care for this often-marginalized patient population.

journey, their first interaction at Northwestern Medicine is with program coordinator Jazz McGinnis, LCSW, who assists with health insurance, provides information about the

"You can't have a complicated surgery and be sleeping on a train afterwards," explains McGinnis.

**"I help ensure that we are supporting our patients in their journey to affirm their gender by setting them up for success in positive post-operative results."**

**Jazz McGinnis, LCSW**

surgery, and helps patients acquire necessary documentation (including securing letters of surgical readiness from mental health professionals, which McGinnis can also write).

McGinnis, who identifies as a trans masculine person, also assesses a number of key factors, from how the Gender Pathways team can best help people reach their individual transition goals to how prepared they are to undergo major surgery.

"I help ensure that we are supporting our patients in their journey to affirm their gender by setting them up for success in positive post-operative results. This can include going beyond a person's gender identity to consider the whole person by looking at other socioeconomic factors like housing, food security, and safety at home."

#### **A WELCOMING ENVIRONMENT**

Creating a safe, non-judgmental space for transgender patients is a core component of the Gender Pathways Program. That mission builds on Northwestern Medicine's ongoing efforts as an institution to respect the gender



Above: McGinnis, Jordan, and Dicus discuss his care in the patient room.

"It became evident very quickly that launching this program would fill a void in our community," says Jordan. "Northwestern has tremendous expertise and all these amazing people who want to ensure that transgender patients have access to high level compassionate care. We work hard to help patients overcome obstacles to achieve their transition goals, whatever they might be." 🌟





# BASIC SCIENCE BELIEVER

Richard D'Aquila, MD, brings decades of translational science experience to bear as the new director of NUCATS

Written by Ed Finkel · Photography by Eileen Molony

# “OUR NUCATS TEAM IS WORKING HARD TO IMPROVE EQUITY OF HEALTH AND CARE.”

**T**his past summer, as Richard D'Aquila, MD, was assuming his new role of director of the Northwestern University Clinical and Translational Sciences (NUCATS) Institute, scientists across Northwestern and around the world were in the midst of responding to the COVID-19 pandemic. A professor of Medicine in the Division of Infectious Diseases, D'Aquila is no stranger to a pandemic — albeit a different one. He has spent the past 35 years contributing to the advances in medicines for HIV infection and their personalization, which have led to AIDS becoming much less common.

While gratified by the advances in treatments that improve longevity for patients with HIV, when taken for the rest of their lives, D'Aquila says that a cure would greatly improve patients' quality of life and their lifespan. “People who have HIV that is well treated with these medicines still have so much overactive immunity and systemic inflammation that they get conditions associated with aging — including heart disease, strokes, kidney disease, liver disease, and mild cognitive decline — at least 10 or 15 years earlier,” he says.

He also cites another obstacle to ending that other, still-problematic pandemic: “Disparities in both prevention and care for HIV persist and help the virus spread,” he says.

In his new position, D'Aquila is uniquely qualified to both continue his prolific HIV/AIDS research and, at the same time, shepherd NUCATS during this crucial moment in scientific discovery.

“It's interesting to take on this new position at this point in time, given the social and medical challenges facing us today. Our NUCATS team is working hard to do more to improve equity of health and healthcare, as well as accelerating new advances in prevention, diagnosis, and treatment of diseases — including COVID-19,” says D'Aquila, who is also associate vice president of research, senior associate dean for Clinical and Translational Research, and the Howard Taylor Ricketts, MD, Professor.

## An early interest in HIV/AIDS

After earning an MD from Albert Einstein College, D'Aquila began to focus on HIV/AIDS research during his internal medicine residency at University of Pennsylvania. In 1982, for a one-month research elective, he and his mentor were among the first to study the then-newly identified disease, before its viral cause was discovered. After starting research on another virus during a fellowship that followed at Yale University School of Medicine, D'Aquila pivoted to working on the virus causing AIDS immediately after it was identified. His work moved to Massachusetts General Hospital, where he focused on developing treatments and diagnostics to guide their use in the laboratory and in clinical trials. He began leading interdisciplinary scientific teams, and this work took full flight once he became the Addison B. Scoville, Jr., Professor of Medicine at Vanderbilt University, as well as chief of infectious diseases and director of the Vanderbilt AIDS Center.

D'Aquila pursued the research track because as a clinician in the mid-to-late 1980s, he was treating so many dying patients. By the early 1990s, HIV was the number one cause of death among Americans ages 25 to 44. Promising early single-drug treatments such as AZT became less effective as the virus mutated. Research was where he felt he could make the most difference.

“What led to real advances was basic science and understanding the structures of viral proteins in order to design and perfect new drugs,” says D'Aquila.

D'Aquila contributed to laboratory research on combining anti-HIV medicines and then led multi-center clinical trials of new combinations, including some of the first medicines specifically designed through basic science to inhibit HIV proteins. He also focused on developing assays to identify HIV resistance to specific anti-HIV medicines and led a nationwide collaborative group designing and running clinical trials to prove their usefulness.

By the 2010s, viral resistance became less common, with improved antiretroviral therapy (ART) allowing people with AIDS to lead fuller lives. This led D'Aquila and others to shift their focus to figuring out how to achieve a sustained remission, even after stopping antivirals — in other words, how the body could fight off the disease on its own. »



“ART does not cure HIV,” says D’Aquila. “If it’s stopped at any time, the HIV infection rebounds within three weeks from a small number of cells where it persists in the body during treatment.” Additionally, notes D’Aquila, “Medicines are expensive, there are side effects, and you have to take them every day for the rest of your life.”

### Bringing more HIV/AIDS research muscle to Feinberg

The HIV/AIDS research enterprise at Feinberg is substantial, and in 2015, D’Aquila was instrumental in helping it grow with the founding of the Third Coast Center for AIDS Research (CFAR), a partnership between Northwestern University and other Chicago-based universities, health departments, clinics, and community organizations that have helped sustain that research growth and strengthened collaborations.

Today, a significant research focus in the D’Aquila lab is on discovering how a future medicine might boost defensive immune system proteins called APOBEC3s (or A3s for short) to achieve sustained remission after ART stops or, even more optimistically, a cure. He and his colleagues discovered that more ample stores of cellular A3 appear to be a part of what very rarely enables HIV-infected individuals to control the virus naturally — without antiviral drugs. Published in *PLOS ONE*, this finding has important implications.

A second, complementary strain of D’Aquila’s research, published in *PLOS Pathogens*, *AIDS*, and *Cell Reports*, has been examining the T-cells that the HIV virus infects and sometimes replicates itself from, trying to figure out why the virus is only able to replicate from activated, and not resting, T-cells. This could help develop inhibitors that would block HIV replication, increasing cells’ resistance to the incoming virus and perhaps also decreasing the reactivation of persisting and latent viruses, D’Aquila explains.

“Putting those things together might get us to a place where we can stop

antiretroviral medicines for months or even years, and maybe longer,” he says. “But even stopping them temporarily would be a huge advance and give us clues for research on how to prolong such success.”

### Leading on multiple fronts

In the three years before his new appointment, D’Aquila assumed a broader leadership profile at Feinberg as associate director of NUCATS and director of its Center for Clinical Research (CCR).

“I’m most proud of CCR’s collaborations with Northwestern Medicine on the Clinical Research Unit, and with many investigative teams around multicenter studies and resources of the National Center for Advancing Translational Sciences (NCATS) Trial Investigation Network,” he says. “We’ve been leading a lot of cutting-edge discoveries and moving new medicine into clinical practice. There’s a lot that we still need to learn, though, about how to implement our successful new therapeutic and preventative advances, so they reach all the people who need them.”

As D’Aquila transitioned into his new role at NUCATS, the institute also played a key role in Feinberg’s mobilization surrounding COVID-19. Since the pandemic began, NUCATS has awarded investigators pilot grants, many of which have seeded new NIH grant applications and collaborations. NUCATS CCR also helped on a task force created by Eric G. Neilson MD, vice president for Medical Affairs and the Lewis Landsberg Dean, which is aimed at prioritizing and coordinating COVID-19 research efforts by answering researchers’ questions about the feasibility of their ideas and helping to identify potential collaborators. D’Aquila is also part of the team of Northwestern investigators conducting the Screening for Coronavirus Antibodies across Neighborhoods (SCAN) study to better understand how individuals, households, and Chicago neighborhoods have been exposed to COVID-19, including

“WE DO A LOT TO ENGAGE COMMUNITY ORGANIZATIONS IN OUR RESEARCH, BRING THEM IN AS STAKEHOLDERS, AND LISTEN TO WHAT THEY SAY IN TERMS OF HOW WE’RE DOING RESEARCH, AND WHAT RESEARCH IS OF VALUE TO THE COMMUNITY.”

Richard D’Aquila, MD



examining the virus’s disproportionate impact on Black and Latinx communities.

“Racial justice, racial inequity, structural racism — all of those topics are front and center for NUCATS,” D’Aquila says. “We do a lot to engage community organizations in our research, bring them in as stakeholders, and listen to what they say in terms of how we’re doing research, and what research is of value to the community. We need to do even more.”

Outside of work, D’Aquila takes great pride in the educational progress of his daughter, a second-year student at Virginia Tech Carilion School of Medicine. While he’s mostly staying at home and working these days, once a vaccine for COVID-19 is found, he looks forward to returning to other passions. “I want to get back to our fabulous restaurant, theater, and music scene in Chicago,” he says. “I love going to jazz and blues venues. Someday soon, we will do that again.” 🌟



# The Power of Empathy

*A letter from Rishi Reddy, '00 MD (HPME)*

**H**ello, Feinberg alumni! Eight months into this global pandemic, I'm sure that many of us continue to monitor our regional and hospital COVID-19 rates, just as most of us likely wear PPE every day and continue to be anxious about our own exposure and risk of illness. The past few months have been incredibly challenging, from the relentlessness of the virus to police brutality and civil protests.

It feels as if our society is divided in what we believe and how to move forward. I see this in my work daily, from my patients, to my colleagues, and even my neighbors, friends, and family. My biggest concern with the rhetoric has been the lack of empathy shown to others. People are suffering in many forms right now. Some acutely due to COVID-19, but others due to long-standing biases, economic distress, and other stressors in all levels of society. We all know people who are suffering. We must engage them, listen to them, and try to help them.

The last few years have been personally enlightening to me, as I have learned to interact with my patients, my students, and my colleagues with more empathy, and to appreciate their point of view.

I have learned that some of my patients have missed appointments, not due to indifference to their health, but rather to the inability to schedule a ride because they live

two hours away. I have learned that many of my students are facing challenging personal situations, helping to care for others, or dealing with their own health issues, which can impact their ability to study. I have learned that many

*I hope that we all can take a step back occasionally to think about what both our patients and our colleagues are enduring, and how we might be able to make more efforts to help each other.*

of my colleagues have family members with immune-compromised health conditions, opting to live in hotels for weeks and sometimes months during the early phases of the first COVID-19 surge.

More than ever, I appreciate my emergency medicine and intensivist colleagues who have risked and continue to risk their lives every day, with no clear end in sight.

I hope that you all continue to stay safe, and if you are on the frontlines of COVID-19

care, you have my enduring gratitude and respect. I hope that we all can take a step back occasionally to think about what both our patients and our colleagues are enduring, and how we might be able to make more efforts to help each other. I am also proud to know that Feinberg and Northwestern, too, are making efforts to increase diversity and empathy in our schools and in our communities.

I wish I could end this note, as I have in years past, by encouraging you to mark your calendars for our upcoming Alumni Weekend. Alas, as you may have already heard, the 2021 Alumni Weekend will be formally cancelled due to COVID-19, with the goal of hosting classes from 2020, 2021, and 2022 in the spring of 2022. But until then, there are still plenty of ways for us to stay in touch with one another and continue to connect with current Feinberg students (for ideas, go to [feinberg.northwestern.edu/alumni](https://feinberg.northwestern.edu/alumni)).

Thank you for staying engaged and GO CATS!

## Stay in Touch!

For ideas on how to stay in touch and connect with current Feinberg students, go to [feinberg.northwestern.edu/alumni](https://feinberg.northwestern.edu/alumni)



# Health is More Than Healthcare

**The average American spends just 60 minutes a year receiving healthcare, says John Lumpkin, '73 BMS, '74 MD — not enough time to tackle the harmful effects of health inequities or resolve the chronic diseases that too often result from them.**

“Health is more than healthcare,” said Lumpkin, the recipient of the 2020 Feinberg Distinguished Medical Alumnus Award. “Health happens where people live, where they work, where they recreate, where their life is spent — in their communities. We can work with those communities to help them be places that encourage health as opposed to put up barriers to health.”

In his dual roles as president of the Blue Cross and Blue Shield (BCBS) of North Carolina Foundation and vice president, Drivers of Health for Blue Cross and Blue Shield of North Carolina, Lumpkin is working on innovative programs to help overcome inequities that can lead to poor health. For example, the health insurance company works with food banks and a nonprofit called Benefits Data Trust to help members who are food insecure sign up for the Supplemental Nutrition Assistance Program (SNAP). They are also piloting a program with Reinvestment Partners in Durham and Food Lion, a large grocery chain, called SuperSNAP that will provide member SNAP recipients with an additional \$40 a month to purchase fresh produce.

“Our vision is to help make North Carolina one of the healthiest states in the nation in a generation,” says Lumpkin.

## A BIGGER IMPACT

A tragedy — the murder of family friend and civil rights activist Fred Hampton in 1969 by police as he slept — set Lumpkin on his path to becoming a physician. At the time, he was a freshman studying biophysics at the Massachusetts Institute of Technology, but the loss of Hampton made him want to have a bigger impact. He transferred into Northwestern's six-year Honors Program in Medical Education (HPME) in 1970.

His advisor Jeremiah Stamler, MD, professor emeritus of Preventive Medicine in the Division of Epidemiology, who was very interested in social and preventive medicine, helped Lumpkin tailor his education to pursue a career in the nascent specialty of emergency medicine. Lumpkin was the first African American and one of the first 200 residents to train in emergency medicine. During his tenure on the board of directors of the College of Emergency Physicians, he helped conceptualize the current model for emergency residency. Working in an emergency department inspired him to earn a master's in public health at the University of Illinois.

**Lumpkin was the first African American and one of the first 200 residents to train in emergency medicine.**

“If you work in the emergency department, you see how the healthcare system fails because when it fails, by and large, people end up in the emergency department,” he says.

In 1990, Lumpkin was appointed the first African American director of the Illinois Department of Public Health. During his tenure, he served under three governors and helped boost the department's preparedness for emergencies and disasters in the wake of September 11, 2001. In the months that followed, the department ran thousands of tests on samples suspected of being anthrax. Lumpkin says he was proud of the legacy of preparedness he left behind and the fact that he helped open the door for others. In fact, every director since his tenure has been a person of color, including the

current director Ngozi Ezike, MD, who is leading Illinois's response to the pandemic.

“I've been fortunate enough to have been a trailblazer,” says Lumpkin. “I like to think that I did a good enough job as director that they saw [having a person of color in the lead] as being something important.”

## HEALTH EQUITY FOCUS

After leaving the Illinois Department of Public Health, Lumpkin joined the Robert Wood Johnson Foundation as senior vice president, Programs. While there, he led a nationwide campaign to reduce childhood obesity.



The opportunity to leverage both the tools of a large not-for-profit insurer serving 3.8 million North Carolinians and a philanthropy drew him back to state-level work. Now, he's using those tools, including BCBS of North Carolina's massive data set and value-based payment systems, to help tackle the historical and structural factors that contribute to health inequity in North Carolina.

"In a number of communities across North Carolina, there are structural barriers that are a result of historical disinvestment that has occurred as a result of structural racism that we have within our society and within the state of North Carolina," he says.

That work has become even more critical as the pandemic exacerbates existing disparities.

"The fact is that this epidemic has disproportionately affected African Americans and Hispanics, especially in the state of North Carolina," he says. "Our programs have been modified to address that."

The foundation has long emphasized quality early-childhood education, which is crucial for life-long health and opportunity.

But, in the wake of the pandemic, it has shifted its focus to the brewing childcare crisis in the state, where an estimated half of childcare centers are in danger of closing down as a result of a months-long shutdown, Lumpkin explains.

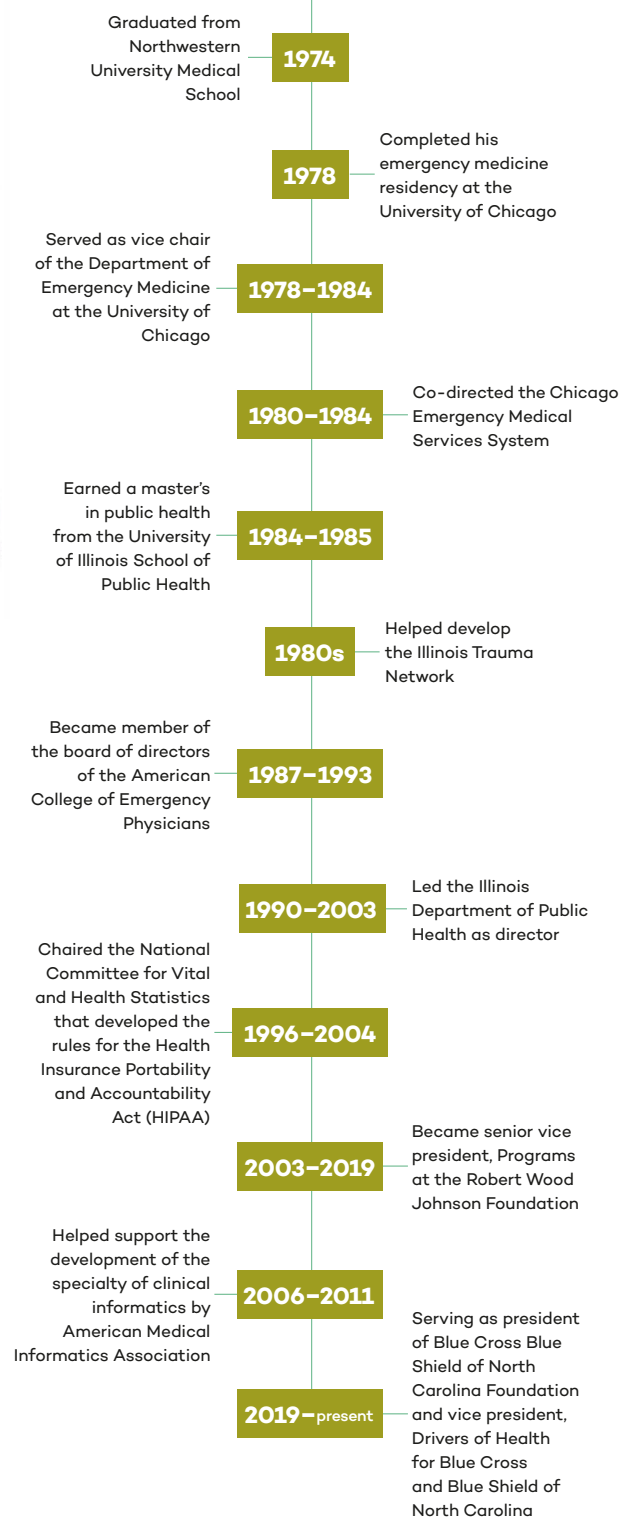
To help these small, often women-run, businesses reopen, the foundation is partnering with nonprofit organizations that can provide financial guidance.

"It's that kind of technical assistance that doesn't normally exist that could be the difference between opening and shutting down forever," he says.

Lumpkin credits Northwestern for allowing him to customize his education and giving him the foundation necessary to become a leader at the state and national level.

"It's the excellence in clinical grounding, which, to this day, I appreciate, because I understand how medicine works," he says. "I understand how the healthcare system works."

### Career Highlights





# PROGRESS NOTES

*We'd love to hear from you!  
Please share your recent  
news, accomplishments, and  
important milestones with us.*



Send your updates and  
high-resolution photos to

[medcommunications@northwestern.edu](mailto:medcommunications@northwestern.edu).

We will publish them in an upcoming  
issue of the magazine.



Bryan Murtaugh, MD, '12 GME, and Chuck Peterson, '98 MD, are photographed together at the NBA Bubble. Murtaugh is the team physician for the Washington Wizards and Peterson for the Phoenix Suns.

## 1940s

**Thomas J. Mudge, '45 MD**, a veteran, turned 100 years old over Memorial Day weekend and was honored by his hometown of Marquette, Michigan, for a lifetime of service. 📷 1

## 1960s

**Jeffrey M. Ignatoff, '67 MD, '75 GME**, of Savannah, Georgia, continues in his post-retirement

"second career" as associate professor of Medical Education at Mercer University School of Medicine in Savannah. In addition to his involvement in pre-clinical education, he was recently appointed vice chair of the combined departments of Pathology and Clinical Science Education, with responsibilities in curriculum management and faculty development. Prior to relocating to Georgia, he was head of the Division of Urology at Northwestern Healthcare in Evanston, and is emeritus associate professor of Urology at Feinberg School of Medicine. Ignatoff and his wife Kathy have thoroughly enjoyed their years in Savannah, as well as traveling and keeping up with their three children and six grandchildren. 📷 2

## 1970s

**Allen R. Nissenson, '71 MD, '76 GME**, was appointed to the board of directors of Angion Biomedica Corporation. Nissenson is a member of the board of directors of Rockwell Medical, Inc. and an emeritus professor of Medicine at the David Geffen School of Medicine at UCLA, where he previously served as director of the Dialysis Program and associate dean. He is emeritus chief medical officer of DaVita Kidney Care, a former president of the Renal Physicians Association, and current member of the Government Affairs Committee. Nissenson previously served as president of the Southern California End-Stage Renal Disease Network, as well as chair of the Medical Review Board. 📷 3

**Michael T. Lotze, '75 MD**, was appointed chief cellular therapy officer at Nurix Therapeutics, Inc. Lotze previously served as the chief scientific officer of Iovance Biotherapeutics and vice president of research at GlaxoSmithKline.

## Oustanding Service to NU

In September, the Northwestern Alumni Association recognized several alumni and clubs for outstanding contributions to the university. Among them was Feinberg alumna **Bonnie Typlin, '70, '74 MD**.

Typlin has volunteered for the Northwestern Alumni Association for more than 45 years. A longtime member of the Feinberg School of Medicine's Medical Alumni Board, she served as board president from 2007 to 2009. Typlin is also a founding member of the Council of One Hundred and a member of the NU Club of Tucson. Typlin was a pediatrician in Chicago for more than two decades before moving to Arizona, where she served as chief medical officer for a children's rehabilitative outpatient facility and joined a pediatrics practice. After graduating from Northwestern with a BA in biology and an MD from the Feinberg School of Medicine, she completed her residency in pediatrics and an ambulatory fellowship at Ohio State University.



He also served as professor of surgery, immunology and bioengineering, vice chair of research within the Department of Surgery, and director for Damage Associated Molecular Pattern Molecule Laboratories at the University of Pittsburgh Medical Center Hillman Cancer Center. Lotze also is associate editor of the *Journal of Immunotherapy*. 📷 4

## 1980s

**David Aizuss, '80 MD**, an ophthalmologist in Los Angeles, California, was elected to the American Medical Association's (AMA) Board of Trustees. Aizuss is a longtime leader in organized medicine; he is the immediate past president of the California Medical Association and a current member of the AMA Council on Legislation. During his time as a Northwestern medical student, he served as a leader in the Illinois State Medical Society's Medical Student Section and on the AMA-Medical Students Section Governing Council. He also served on the AMA-Resident and Fellow Section Governing Council for three years. 📷 5

**Boris D. Lushniak, '83 MD**, professor and dean in the School of Public Health at the University of Maryland, published an editorial on August 20 in the *Chicago Tribune* entitled "The Big Ten Made the Right Decision to Cancel Fall Sports."

**Mark J. Sontag, '83 MD**, gave a Grand Rounds lecture for Google's medical staff in Mountainview, California, in July titled, "Acute vs. Chronic Pain: The Mind Body Continuum." Sontag specializes in sports medicine and chronic pain management, having founded two private practices in the San Francisco Bay area:

**"I WISH YOU ALL THE VERY BEST AS YOU MOVE FORWARD WITH WHATEVER CHALLENGES LIFE AND MEDICINE BRING. RETIREMENT IS A GOOD THING!"**

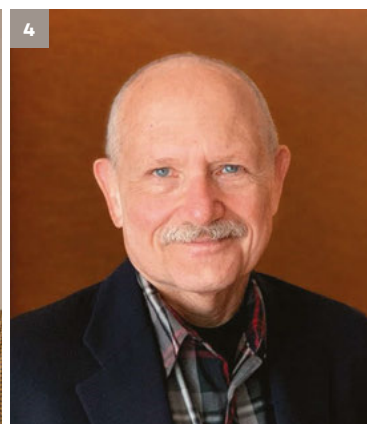
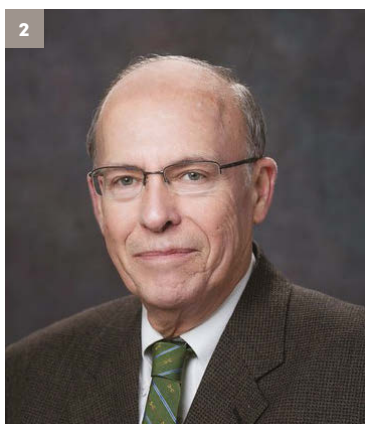
**KATHERINE V. NICHOLS, '85 MD**

ReMeDy Medical Group and SPARC Medical Group.

**Katherine V. Nichols, '85 MD**, recently retired and shared this update:

"I have retired as of the end of 2019 (remember, I am 6 to 10 years older than most of you). Turns out it was just in time, meaning that I am watching COVID-19 unfold from the sidelines while keeping you all in my thoughts and prayers.

After graduating with this wonderful class, I moved on to a pediatrics residency at Yale New Haven Hospital, followed by a fellowship in neonatal-perinatal medicine at Yale. From 1991–1996, I paid back my Air Force scholarship, working as a neonatologist at the Naval Medical Center in Portsmouth, Virginia. While there, I was also on the clinical faculty at Eastern Virginia Medical School and Uniformed Services University of the Health Sciences. Upon leaving the military, I chose to stay in Virginia, my home state, and have been in the big town/small city of Lynchburg since. By 2006, the challenges of working 36-hour days in the intensive care nursery as a single, widowed parent became too much, so with my kids moving into middle school and high school, I decided to make the







transition to general pediatrics, which allowed for a more flexible schedule. I retired from an eight-person pediatrics practice.

My kids are now adults. Ben is an audio engineer in Los Angeles. Jeff is completing a PhD in biomedical engineering at Virginia Tech. No grandkids, one grand-dog.

Other than some volunteer work and as much socially distanced hiking as my dog and I can get in, my retirement has been spent in COVID-19 lockdown. Not what I expected, but then, 2020 has not been what any of us expected.

The four years we spent together at NUMS (as it was known) were excellent, leading to a fulfilling career and life. I wish you all the very best as you move forward with whatever challenges life and medicine bring. Retirement is a good thing!" 📸 6

**William Yates, '85 MD**, was recently featured in the *Chicago Tribune* for his family business's efforts to help keep workers and patrons safe during the COVID-19 pandemic. Yates Enterprises distributes products to help people fight the pandemic, including an innovative walkthrough body temperature-taking device,

**WILLIAM YATES, '85 MD'S FAMILY BUSINESS, YATES ENTERPRISES, DISTRIBUTES PRODUCTS TO HELP PEOPLE FIGHT THE PANDEMIC, INCLUDING AN INNOVATIVE WALKTHROUGH BODY TEMPERATURE-TAKING DEVICE, FACE MASKS, AND MORE.**

face masks, and more. Yates is a graduate of the Honors Program in Medical Education and practiced as a trauma surgeon after graduating from Feinberg. 📸 7

**Carla Hightower, '87 MD, '91 GME, '02 MBA**, was featured on *Northwestern Intersections*, a podcast by the Northwestern Alumni Association. In the episode, "Eating Well in the Pandemic," Hightower "explores the connection between nutrition and many chronic health conditions that exacerbate the effects of COVID-19. As a physician, a certified integrative health coach and corporate wellness consultant, Carla shares some ideas on how to make lasting changes to our eating habits so our bodies can operate and feel their best."

**Bruce K. Patterson, '89 MD, '94 GME**, founder and chief executive officer of IncellDx, recently announced the patent filing with the USPTO, Pre-EUA, and FDA for the CCL5/RANTES Utility as a diagnostic, prognostic, and therapeutic biomarker in COVID-19. 📸 8

## 1990s

**Vijay Shah, '91 MD**, was recently appointed as the Carol M. Gatton Chairman of Medicine and Distinguished Investigator at Mayo Clinic in Rochester, Minnesota.

**Raymond Sanchez, '94 MD**, is chief medical officer of Cerevel Therapeutics Holdings, Inc., which announced that they have entered into a business combination agreement, which will allow them to further advance their clinical programs and support their research and development of neuroscience drugs. Sanchez is currently the executive co-chair of the International Society for CNS Drug Development and a trustee and member of the board of directors of the Connecticut Mental Health Center Foundation and Yale School of Medicine, as well as several other not-for-profit organizations.

**Samantha Meltzer-Brody, '96 MD**, is the recipient of the 2020 Oliver Max Gardner Award. The award recognizes faculty at the University of North Carolina at Chapel Hill who have "made the greatest contribution to the welfare of the human race" and is the highest honor that the system confers on faculty. Meltzer-Brody is the Assad Meymandi Distinguished Professor and chair of the Department of Psychiatry. She also is director of the UNC Center for Women's Mood Disorders. 📸 9



## Earn CME credit by listening to the Breakthroughs podcast!

*Breakthroughs* is a Feinberg-produced podcast where we interview the physicians and scientists behind the latest high-impact medical discoveries at Northwestern. Available on Apple Podcasts or wherever you listen to podcasts. You can also visit [feinberg.northwestern.edu](http://feinberg.northwestern.edu) and search "Breakthrough podcast" to listen and claim your Continuing Medical Education credit.

## ALUMNI IN THE NEWS

## Speaking Out on Behalf of Black Women

After Michelle Obama acknowledged on her podcast that she felt a low-grade depression due to the state of today's world, **Aderonke Bamgbose Pederson, '15 MD, '19 GME**, instructor of Psychiatry and Behavioral Sciences at Feinberg, **Brandi Jackson, '15 MD**, a psychiatrist at Rush University Medical Center, and **Crystal Clark, MD, MSc**, associate professor of Psychiatry and Behavioral Sciences and Obstetrics and Gynecology at Feinberg, joined with their colleagues to co-write an open letter in support of the former first lady.

The letter, signed by 200 of their peers, came to the attention of *Chicago Tribune* columnist Heidi Stevens, who interviewed the physicians and printed their letter. Below is an excerpt from that letter:

*"Dear Mrs. Obama,*

*As Black female psychiatrists in the United States, we thank you for your openness in reflecting on your mental health in these times. We stand in solidarity with the vulnerability you expressed, which we know many other Black women experience.*

*We share with you the burden of current events, including the disproportionate number of deaths of Black people from COVID-19 and the killings of Black people at the hands of police — especially Black women like Breonna Taylor.*

*As Black psychiatrists, we represent less than 5% of the members of our profession in the United States. Particularly as Black women, who are so often unseen and unheard, we uniquely recognize and bear the toll that current events have on our communities. Thus, both professionally and personally, we affirm your statement that it is essential that all people — including Black women — have the freedom to express their feelings without fear of stigma."*



Aderonke Bamgbose Pederson,  
'15 MD, '19 GME



Brandi Jackson,  
'15 MD



Crystal Clark,  
MD, MSc

## 2000s

**Lawrence Adam Zeidman, '04 MD, '08 GME**, recently published a book, *Brain Science Under the Swastika: Ethical Violations, Resistance, and Victimization of Neuroscientists in Nazi Europe*, drawing from neuroscience history and ethics. Zeidman currently serves as an associate professor of Neurology and a physician at Loyola University's Maywood campus. He lives in Chicago with his wife, an attorney, and two children.

**Sadiya Khan, '09 MD, '10, '12 GME, '14 MS, '16 GME**, is the senior author of a study published in *The British Medical Journal*, which found that deaths caused by heart failure and hypertensive heart disease are on the rise in the U.S., especially among Black women and men, despite medical and surgical advances in heart disease management. The study is the first of its kind to comprehensively characterize mortality over nearly 20 years across a spectrum of heart disease types, examining the differences between sex and racial groups among various age groups and geography. Read more on page 16.

## 2000s

**Brian J. Miller, '11 MD, MBA, MPH**, joined Johns Hopkins University School of Medicine as an assistant professor of Medicine. Miller will practice hospital medicine at the Johns Hopkins Hospital and continue his work in health policy. He was appointed as a member of the Centers for Medicare and Medicaid Services Medicare Evidence Development and Coverage Advisory Committee. [📖 10](#)

**Javier Guevara, Jr., '12 MD**, Medical Alumni Association Board member, was recently awarded the Degree of Fellow for the American Academy of Family Physicians for his contributions to the specialty and the academy. [📖 11](#)

## 2020s

**Patricia "Oby" Ekwueme, '20 MD, '20 MPH**, is the recipient of the 2020 Daniel Hale Williams



## In Memoriam

*Northwestern Medicine expresses its condolences to the families and friends of the following alumni (listed in order of their graduation year) and faculty who have passed away. All dates are in 2020.*

### ALUMNI

**Margaret "Mickey" Gerber '39, '44 MD**

Wilmette, Illinois  
SEPTEMBER 23

**Charles M. Sayre, '46 DDS**

River Forest, Illinois  
AUGUST 4

**William G. Thomas, '50 MD**

Northport, Michigan  
MAY 27

**Hugh H. Ryan, '52 DDS**

Downers Grove, Illinois  
JULY 25

**Sadao Itano, '52 DDS**

Altadena, California  
JULY 31

**William W. Johnson, '53 MD**

Medford, Oregon  
JUNE 4

**Billy G. Cremeen, '54 DDS**

Maumelle, AR  
JUNE 28

**William R. Barnhart, '54 DDS**

San Francisco, California  
MAY 27

**J. Richard Crout, '55 MD**

Rockville, Maryland  
JULY 9

**Leo K. Durham, '55 DDS**

Bozeman, Montana  
AUGUST 4



**Charles Roberts Snorf, MD**

JUNE 30, 1930 -  
JULY 30, 2020

Charles Snorf, '58 MD, '63 GME, passed away peacefully in Carmel, California, a month after celebrating his 90th birthday. "Charlie" as he was known to friends and family, was born in Chicago, Illinois, and raised in Wilmette, Illinois. He finished New Trier High School and went East to Deerfield Academy, then Yale University, graduating

in 1953. He spent the following summer traveling through Europe and then enrolled in medical school (following in his father's footsteps) at Feinberg, where he also completed his orthopaedic surgery residency. He then had a 33-year career as an orthopaedic surgeon in private practice and at the Community Hospital of the Monterey Peninsula. "Going to Northwestern for medical school and residency was the most important and defining part of my development as a physician," Dr. Snorf said at the investiture ceremony of Michael Terry, MD, whom Snorf and his wife, Leslie, endowed with the Dr. Charles and Leslie Snorf Professorship in Orthopaedic Surgery in 2016. Generous benefactors of Feinberg, the Snorfs also established the Charles and Leslie Snorf Research and Education Fund and the Snorf Medical Student Scholarship Fund, which has supported more than a dozen medical students since its inception in 1997. Dr. Snorf is survived by his loving family: wife Leslie; daughters Susan, Cynthia, and Carolyn; and stepsons Kevin and David Hicks, along with 13 grandchildren, beloved nieces and nephews spread across the United States, and his first wife Roberta B. Elliott. "Charlie lived his active and adventure-filled life as a loyal, ethical, and honest man, and friend to all," his family shared.

**Emile T. Fisher, DDS, '56 MS**

Atlanta, Georgia  
JUNE 22

**Isabelle M. Bohman, '56 CERT**

Lacey, Washington  
AUGUST 2

**G. Leonard "Len" Apfelbach, '57 MD, '52 GME**

Fish Creek, Wisconsin  
JUNE 25

**Ronald D. Smith, '57 MD, '62, '64 GME**

Salisbury, North Carolina  
JUNE 2

**Edward S. Friedrichs, '58 MD**

Brown Deer, Wisconsin  
MAY 29



**Marvin E. Cooper, MD**

NOVEMBER 19, 1921 -  
SEPTEMBER 16, 2020

Marvin E. Cooper, MD, aged 98, passed away in Chicago, Illinois. Dr. Cooper lived his entire life in Chicago with the exception of his college years in downstate Illinois and a brief stint in the army during the Korean War. After medical school at the University of Illinois, he joined a pediatric practice

in West Rogers Park and continued actively practicing until he was 90, caring for multiple generations of families. A clinical instructor of Pediatrics in the Division of Community-Based Primary Care, he taught first- and second-year medical students at Feinberg for 56 years. Later, his son Adam endowed the Marvin E. Cooper, MD, Clinical Colloquium in the Lurie Pediatric Residency Program in honor of his father's many years of practice in the community. "The students loved him and he loved seeing the energy and passion they had for their new careers," his family shared. They also shared a letter from pediatric chief resident Dan Balcarcel, MD, who is planning the 2020-2021 colloquium, and wrote, on behalf of the residency program, of Dr. Cooper's "kind and gentle nature as well as his unmatched experience and expertise in general pediatric medicine." Dr. Cooper is survived by his wife, Marcia, his children: Sara, Michael, Joel, Karen, and Adam; 12 grandchildren: Jill, Marc, Matthew, Charlie, William, Abby, Lauren, Benjamin, Leann, Emma, Chloe, Jade; and 15 great grandchildren: Margo, Elyse, Penny, Jack, Mimi, Simon, Albert, Ethan, Gavin, Savannah, Joey, Amelia, Sadie, Mae, and Avery.

**Frederick G. Wenzel, III, '59 MD**

Clyde, North Carolina  
JULY 28

**Glenn C. Faith, '59 MD**

Rochester, Minnesota  
JULY 15

**Richard J. Lewis, '60 MD**

Ventura, California  
JUNE 23

**Robert L. Parker, '61 MD**

Kennett Square, Pennsylvania  
JUNE 13

**Paul F. Brenner, '62 MD**

Los Angeles, California  
JULY 30

**Charles W. Troup, '63 MD**

Green Bay, Wisconsin  
MARCH 5

**Donald J. O'Brien, '63 MD**

Eugene, Oregon  
AUGUST 8

**David H. Munger, '63 MD**

Tubac, Arizona  
JUNE 24

**Duncan K. McDonald, '65 MD**

Holladay, Utah  
JULY 21

**Don Brancato, '67 MD**

Florissant, Missouri  
JUNE 11

**Nathan D. Mouldrem, '69 MD**

Eau Claire, Wisconsin  
JULY 30

**Theodore “Ted” C. Potter, '75 DDS**  
Marshfield, Wisconsin  
JULY 28

**Mark H. Deierhoi, '76 MD, '81 GME**  
Mountain Brook, Alabama  
JUNE 4

**Norman A. Smith, Jr., DDS, '83 MS**  
Kansas City, Missouri  
JUNE 1

**Steven B. Inbody, '83 MD**  
Houston, Texas  
JUNE 29

**Lauren Elise Hoffman, '16 MPO**  
Illinois  
JUNE 18

## FACULTY

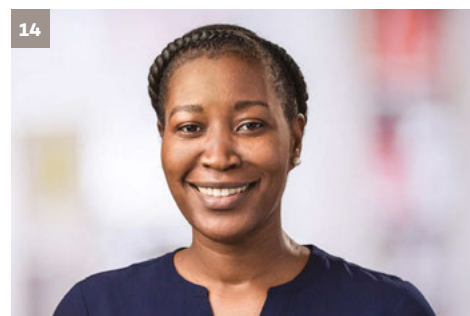
**David M. Berkson, '53 MD**  
*former clinical professor of Preventive Medicine*  
Chicago, Illinois  
JUNE 25

**Michael Heuer, '56 DDS**  
*former dean of Northwestern University Dental School*  
Naperville, Illinois  
JUNE 4

**James C. Houk, PhD**  
*former chair of Physiology*  
Evanston, Illinois  
JUNE 11

**Thomas K. Poulakidas, DDS, '79 MS**  
*associate professor emeritus of Otolaryngology in the Division of Dental Surgery*  
Illinois  
MAY 29

Diversity and Inclusion Student Award. Each year, this award is bestowed upon one student who epitomizes the vision that leaders at Feinberg embrace about how diversity and inclusion should manifest in its culture. 📸 12



## RACHEL ISSAKA, MD, '13, '14 GME, RECENTLY PUBLISHED A FEATURED ARTICLE ON RACISM AND MEDICINE IN THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

## GME

**Jeffrey Sherman, MD, '84, '85 GME**, Medical Alumni Association Board member, was recently recognized in *Pharma Voice* as one of the “Pharma Voice 100 Inspirational Leaders ... having an extraordinary and positive impact on their colleagues, companies, and

the life-sciences ecosystem.” Sherman, chief medical officer and executive vice president for Horizon Therapeutics, was described in the publication as a “champion for rare diseases ... raising the bar by developing and embracing best practices for patient and professional engagement.” 📸 13

**Cheryl Walker-McGill, MD, '89 GME, MBA**, assumed the position of chair of the Federation of State Medical Boards (FSMB) Board of Directors for a one-year term. Walker-McGill has been an FSMB board member since 2016. She served on the North Carolina Medical Board for six years, chairing many committees during her tenure and serving as president of the Board from 2015–2016. She is a board-certified allergist, immunologist, and internist and serves as medical director at Carolina Complete Health in Charlotte, North Carolina.

**Melissa Simon, MD, '06 GME**, was the first author of a discussion paper published by the National Academy of Medicine, which asserts that health and healthcare disparities are ever-present, despite efforts to address health equity. The paper describes health equity as imperative in a “patient and family engaged care culture,” and that healthcare organizations, institutions, and providers must take a health-equity-centered, population health approach. Read more on page 16.

**Rachel Issaka, MD, '13, '14 GME**, recently published a featured article on racism and medicine in the *Journal of the American Medical Association (JAMA)*. Issaka is a gastroenterologist and assistant professor at the Fred Hutchinson Cancer Research Center and the University of Washington. 📸 14





# Alumni Giving Supports First White Coats for New MD Students

In years past, first-year medical students at Northwestern donned their white coats for the first time surrounded by classmates, professors, and family during the Founders' Day ceremony. This year, circumstances prevented the traditional celebration, but alumni made sure that our newest students were warmly welcomed to the medical community. Here, students share their gratitude to just a few of the many generous alumni — Frederick Dean, '66 MD, Michael Krew, '82 MD, Mark Kogan, '80 MD, David Bartsch, '69 MD, Theodore Greenlee, Jr., '59 MD, and Robert Lohr, '76 MD — who gave them the gift of their first white coat.



Dear Dr. Dean,

From the bottom of my heart, thank you so much for your immense generosity with this gift of my first white coat. I'm deeply humbled to be entering the medical profession, especially in a time like this, and I certainly felt both the weight of that responsibility and the depth of that honor as I wore my coat for the first time.

Yours,  
Rohan Chalasani



Dear Dr. Kogan,

As the first in my family to go to college and medical school, your generous gift provides me comfort and reminds me that even though medical school is tough, we are surrounded by faculty and alumni such as yourself who see our potential and will support us to ensure that we succeed. For me, the white coat is a reflection of the many people, mentors, friends, and loved ones that have been a part of my journey. Most importantly, it represents another step towards taking care of people and positively impacting their health and lives for the better.

All the best,  
Devyn Coskey



Dear Dr. Krew,

Being a physician is a dream that I've had ever since I was a little girl, and I feel so blessed to finally be here. What makes this moment extra special is your support of my journey, and my induction into a cycle of support and giving back. To me, this white coat represents a platform of hope, healing, and change. I hope to pass along the same generosity you have shown me, and one day make another first-year student feel as excited and supported as you have done for me.

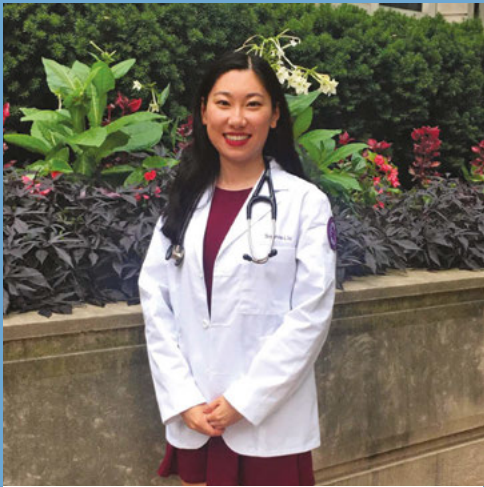
With so much appreciation,  
Jehannaz Dastoor

Dear Dr. Greenlee,

I want to express my sincere gratitude for your white coat donation. The coat is a large symbol of service, selflessness, and a commitment to ensuring the health of others. I know I have a long way still to go in achieving my goals, but I hope to carry on the legacy of those who came before me and inspire a better future in those who come after me.

Best wishes,  
Michael Chidueme





Dear Dr. Bartsch,

Although we were not able to have a formal white coat ceremony this year, your gift made me feel more connected to and strengthened by the Northwestern community. I greatly appreciate your support, and I hope to pay your kindness forward in the future!

Sincerely,  
Sophia Liu



Dear Dr. Lohr,

I am grateful and humbled to attend such a remarkable institution and follow in the footsteps of physicians like yourself. This coat represents the first step in realizing a dream I've had since I first stepped into an OR, and I am grateful that it came from a member of the Feinberg family.

All my best,  
Ian Erkkila

# Join the Nathan Smith Davis Society

Feinberg’s Nathan Smith Davis Society honors alumni, faculty, friends, and staff members for their generous contributions to the medical school. Membership is based on annual,\* cumulative, and planned gifts to support Feinberg’s research and education missions, as well as volunteer service to the medical school.

<b>BENEFACTOR SOCIETY</b>	\$1 million or more in cumulative lifetime giving								
<b>LIFETIME GIVING SOCIETY</b>	\$35,000–\$999,999 in cumulative lifetime giving								
<b>NORTHWESTERN UNIVERSITY LEADERSHIP CIRCLE</b>	\$1,000 or more in total annual giving								
<b>YOUNG ALUMNI SOCIETY</b> (New Levels!)	Feinberg MD, PT, and PA alumni who graduated in the last nine years and have made gifts at the following levels: <table><tr><th>Year of Graduation</th><th>Annual Gift Total</th></tr><tr><td>Classes of 2020 and 2021 + current students</td><td>Any amount</td></tr><tr><td>Classes of 2017, 2018, and 2019</td><td>\$50</td></tr><tr><td>Classes of 2012, 2013, 2014, 2015, and 2016</td><td>\$250</td></tr></table>	Year of Graduation	Annual Gift Total	Classes of 2020 and 2021 + current students	Any amount	Classes of 2017, 2018, and 2019	\$50	Classes of 2012, 2013, 2014, 2015, and 2016	\$250
Year of Graduation	Annual Gift Total								
Classes of 2020 and 2021 + current students	Any amount								
Classes of 2017, 2018, and 2019	\$50								
Classes of 2012, 2013, 2014, 2015, and 2016	\$250								
<b>HENRY &amp; EMMA ROGERS SOCIETY</b>	Donors who have notified Northwestern and documented an estate or deferred gift commitment to benefit the medical school								
<b>SERVICE SOCIETY</b>	Alumni, faculty, and friends who are actively engaged in select volunteer activities benefiting the medical school								

\*Within fiscal year extending from September 1 through August 31



# NOTES FROM A FIRST-YEAR RESIDENT

"Hi, I'm Roshni. I'll be the doctor taking care of you tonight."

It's amazing the difference a single word makes.

It was June 2019 — the start of my Internal Medicine residency at UCLA. For my first two weeks, I served as the overnight physician in the medical intensive care unit (ICU), caring for our

hospital's sickest patients. Within days of introducing myself as a doctor, I began to understand how people react to this title: Patients

and family members stop what they are doing, stand to greet me, or pull out their notebooks; more experienced colleagues await my decisions.

But in those moments, I still felt like "Roshni," not "doctor."

In just one week, I had many firsts. My first prescription: 20 mEq of potassium repletion. My first page: "Call the neurologist back for recommendations about seizure medications." My first time ordering a blood transfusion, evaluating possible stroke, placing a feeding tube and confirming its placement on x-ray. There were also the things I had learned at Feinberg: Convincing a patient to take life-saving medications, chest compressions during a cardiac arrest code, and advocating for a cancer patient to receive pain medications because my first duty is to do no harm.

On my second night in the ICU, I was paged to complete a death exam. Earlier in the night, I had seen the patient's family members trickle in. They'd hung streamers from the door and put candles into a chocolate grocery store cake. Gospel notes had rasped out of an iPhone speaker into the hallway.

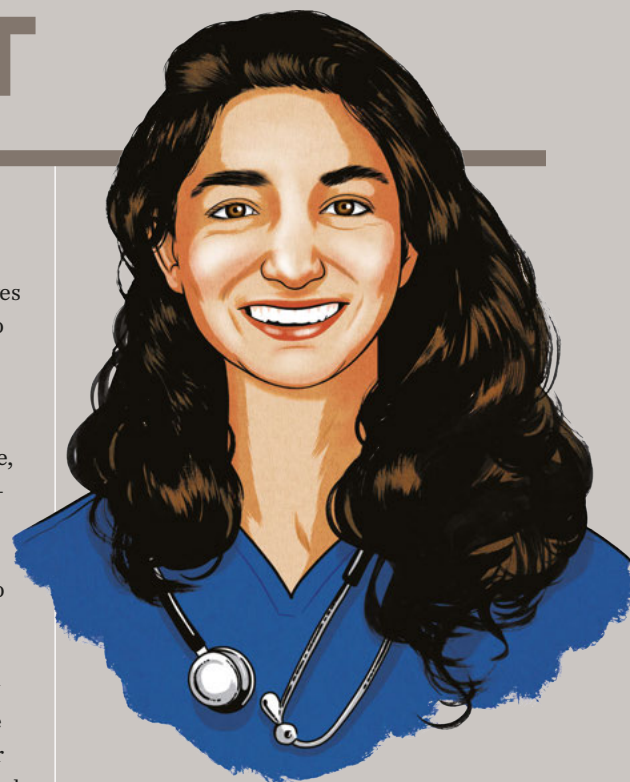
When I entered the room this time, the tone had changed. Fifteen previously hopeful

faces greeted me with stricken expressions. I stepped through the crowd toward the patient, who was lying peacefully with his eyes closed. With one finger, I lifted each eyelid to examine his pupils, immediately surprised at how doughy his skin had become within just a few minutes of dying. I moved quickly through an exam I'd done many times before, but was jarred when I listened to his heart — this was the first time I listened to a chest without hearing a heartbeat. I finished with a short, subtle pinch of the first fingernail, to confirm his pain reflex was no longer intact.

"Time of death: 2:47 a.m.," I announced in a somber voice. All at once, his previously motionless family erupted in agony. His wife launched herself into my arms; his daughter burst into tears; other family members wailed around us. Although they had probably known the reality for the entire five minutes it took me to reach the room, they had waited for my words to confirm it was true. Immediately, I felt the absurdity of one human confirming that another human has passed.

I knew my graduation from Feinberg would come with a title, a wealth of knowledge, and enormous responsibility, but I hadn't anticipated this deference and esteem that I didn't yet feel I had earned for myself. In fact, it was easier for me to hold my patient's family members as if grieving with a friend than it was to accept the authority with which they regarded my statement. Though I'd heard many physicians announce those words in the past, this time, they were mine. And the respect and gravity with which they ought to be said had to be mine as well.

Fast forward eight months into my residency, and I have come to perform this exam with some frequency. Those moments

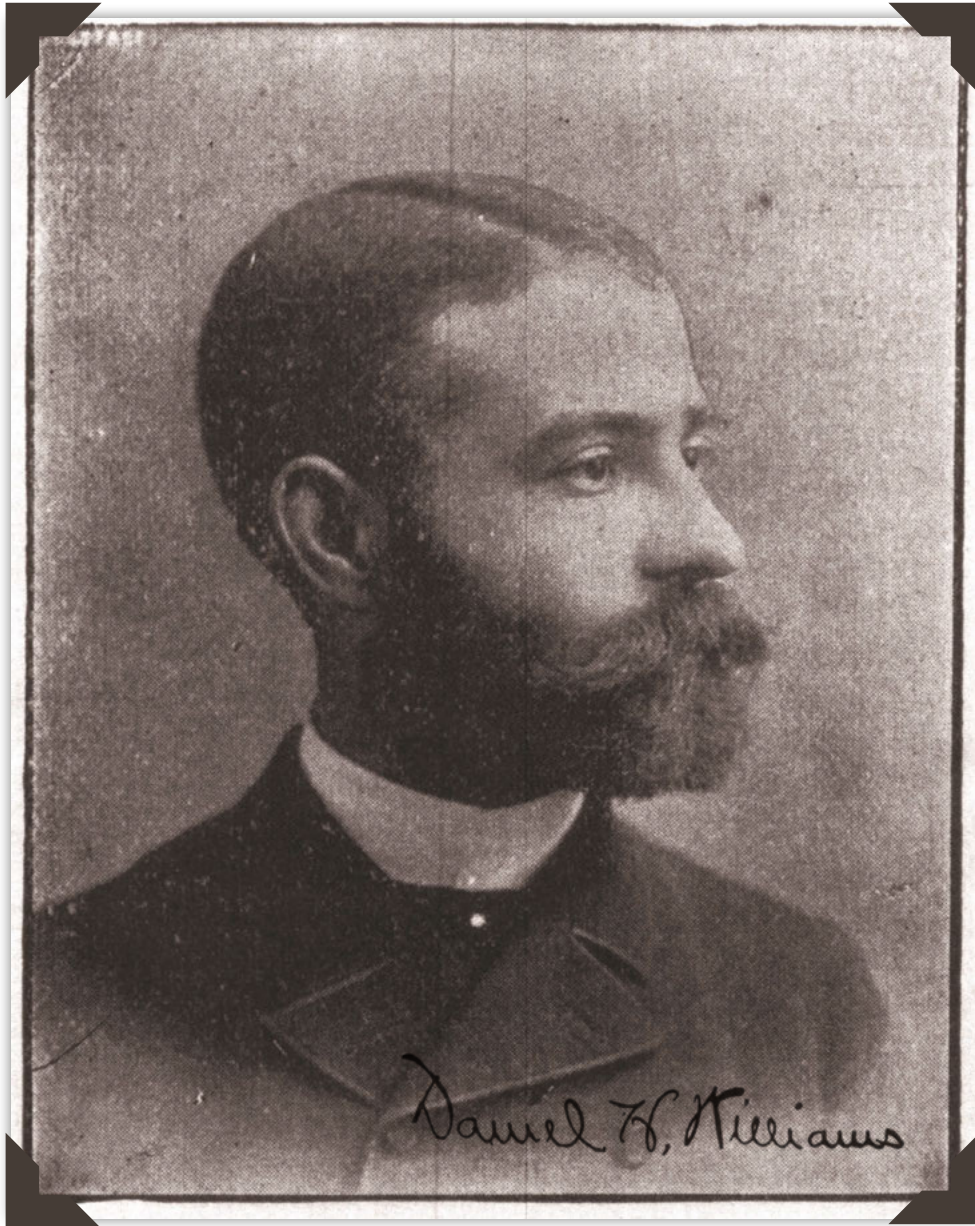


and many others that required me to be my patient's expert, confidant, or decision-maker have made the absurdity of making life and death choices for another person less palpable to me. But in those first few nights in the ICU, when I felt more like a visitor than a physician, I learned an important lesson: MD or not, this work is personal.

When I make clinical decisions, it's my physician self, the one who bears a title, who signs all the prescriptions. But it's the rest of me who receives a joy-filled hug from a patient or musters the courage to click "Discontinue" on electronic orders for life-saving medications when my patient's family declines resuscitation. I have grown into my role as a doctor as the months have flown by, but I can't let myself forget the discomfort I felt in those early days — when I related to patients as a fellow human before I remembered myself as the physician.

Perhaps mastering — and balancing — both feelings is the true challenge of being a doctor.

**I learned an important lesson: MD or not, this work is personal.**



Left: Williams, 1894. Below: Provident Hospital in Chicago, the first black-owned and -operated interracial hospital and nurse training school, which Williams founded in 1891.



care. Two years later, when a young Black man checked into the hospital with knife wounds to his chest, Williams performed the second repair of a laceration to the pericardium in medical history.

Williams was the first Black fellow of the American College of Surgeons and the principal founder of the National Medical Association. In 1894, he was appointed surgeon-in-chief at Freedman's Hospital, Washington, D.C., by President Grover Cleveland.

To honor this impressive legacy while addressing the pressing need to recruit Black males into the medical profession, in 2018, Feinberg created the Daniel Hale Williams Society. The Society's Board Members are prominent campus leaders who proactively identify promising students at the undergraduate level, provide career mentorship and guidance, and encourage applications to Feinberg. Another of Feinberg's tributes to this great leader is the Daniel Hale Williams Diversity and Inclusion Award, bestowed upon one student each year who epitomizes how diversity and inclusion should manifest in the Feinberg culture.

## 1890s

### A Hero in Medicine

#### IMMENSE CONTRIBUTIONS TO THE MEDICAL FIELD

**D**aniel Hale Williams, MD, Feinberg's first African-American graduate and faculty member, was the kind of physician who inspires the best in people, both in the medical field and beyond.

He founded Provident Hospital in Chicago, the first Black-owned and -operated interracial hospital and nurse training school in the country in 1891, at a time when the Black population in Chicago had few options for medical



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