ON AUGUST 16, 2018, NYU SCHOOL OF MEDICINE MADE HISTORY . . .


WE ARE NOW THE FIRST TOP-RANKED MEDICAL SCHOOL
TO OFFER FULL-TUITION SCHOLARSHIPS TO
ALL OF OUR MEDICAL STUDENTS.

"WHAT IF . . ."

Letter from Robert I. Grossman, MD
Saul J. Farber Dean and CEO

WHAT IF ALL ASPIRING PHYSICIANS had the opportunity to pursue their dreams? At NYU School of Medicine, we're doing our part to turn that hypothetical into a reality, starting with a bold commitment to provide full-tuition scholarships to all of our medical students.

A population as diverse as ours is best served by doctors from all walks of life, and people should not have to discount medicine as a career because of the prospect of overwhelming debt. But according to the Association of American Medical Colleges, more than 48% of medical students come from the top income quintile, while less than 6% come from the bottom quintile. As medical education costs have risen, the idea that anyone from any background can pursue a career in medicine has started to slip away.

It's time to change that narrative. *Starting now.*

By becoming the first top-ranked medical school to offer full-tuition

scholarships to all of our medical students, we believe we have taken a necessary, rational step that we hope many other medical schools will soon choose to emulate. This achievement is just part of our ongoing drive for excellence and our commitment to progress, further demonstrated by our more than $382 million in federal funding, our rise to #3 in the nation on *U.S. News & World Report*'s 2019 ranking of the best graduate schools for research, our dramatic campus transformation, and our innovative use of technology and data at every stage of education—from admissions to residency.

We are privileged to collaborate with a visionary group of trustees, alumni, and other philanthropic partners in our efforts to help medical students achieve their potential. Their generosity has enabled our institution to support students so that they can enter their chosen field, to recruit the best doctors and scientists, and to build facilities that are second to none. We are deeply grateful for their support and for the opportunity to continue innovating in a noble profession where the work is both interesting and rewarding.

Sincerely,

ROBERT I. GROSSMAN, MD
SAUL J. FARBER DEAN AND CEO

"YOU DID NOT ARRIVE HERE AS A SOLO PILOT. GENEROSITY IS CORE TO A REWARDING LIFE."

ROBERT I. GROSSMAN, MD
SAUL J. FARBER DEAN AND CEO
WHITE COAT CEREMONY 2018

EDUCATION Tuition-Free

WHAT IF DOCTORS WERE LESS BURDENED BY STUDENT DEBT?

IN THE US, the financial barriers to becoming a doctor have never been higher. Last year, the average four-year cost of attendance was $213,338 for a public medical school, and $266,644 for a private medical school, according to the Association of American Medical Colleges (AAMC).

Of course, with rising costs comes rising student debt. The AAMC estimates that 75% of all doctors in this country graduated with debt in 2017. The median debt was $180,000 for graduates of public medical schools, and $202,000 for those of private institutions. Alarmingly, 21% of doctors graduated from private schools with more than $300,000 of educational debt. For NYU School of Medicine graduates, the average debt was $184,000.

Something had to change, and that change is starting at NYU School of Medicine with the introduction of full-tuition scholarships for all of our medical students.

NYU School of Medicine is the first top-ranked medical school in the nation to pursue this bold strategy. The 102 members of our incoming class were welcomed with the news at the White Coat Ceremony on August 16, 2018.

The ultimate success of this tuition-free initiative will be measured over time by the clinical and research achievements of future graduates, as well as the improvements in diversity of the physician ranks. But in the meantime, this is a step toward making medical school more affordable and accessible, thereby attracting a broader, more socioeconomically diverse pool of students who more closely reflect the nation's changing demographics and who can make better choices about their future careers.

We firmly believe that medical students unburdened by staggering debt are more empowered to pursue their field of choice and their passion to provide the highest-quality care to patients. "Many new doctors begin their careers with more debt than a typical mortgage," notes Rafael Rivera, MD, associate dean for admissions and financial aid. "Our goal is to recruit the very best medical students in the country, regardless of financial need. Awarding full-tuition scholarships to all of our MD students is a key element of that strategy."

"For me, the savings are astronomical since I was paying full tuition. The money that my parents had diligently saved for me will now be enough to cover my living expenses for four years."

Tunmise Fawole
First-year medical student

"The news was extremely overwhelming for all of us. My parents were at a loss for words. The scholarship will save me $220,000, which would have been covered almost entirely by loans. It makes me want to give back and do more to help people."

Emily Mills
First-year medical student

"We have only one wish: that you leave here with a great education and that you go out into a troubled and difficult world— but still the only world we have— and you do all you can to help someone live a healthier, better life."

Kenneth G. Langone
Chair, NYU Langone Health Board of Trustees

WHAT IF IT TOOK LESS TIME TO BECOME A DOCTOR?

"By closely monitoring the progress of all our students with data, we can really see the value of individual pathways through the medical school," says Steven B. Abramson, MD, senior vice president and vice dean for education, faculty, and academic affairs, and chair of the Department of Medicine.

WHEN NYU SCHOOL OF MEDICINE launched its Three-Year Accelerated MD Pathway program in 2013, allowing select students to skip the fourth year of medical training and save a year's worth of tuition and housing costs, some questioned whether graduates of the program would be as prepared for residency as traditional four-year students. Now, as the graduates of the third accelerated class enter the next phase of their training, a growing body of evidence is putting those doubts to rest.

Based on data from the graduating classes of 2017 and 2018, three-year students are performing as well as four-year students on medical knowledge exams and National Board of Medical Examiners shelf exams. They're also earning honors on clerkship grades and receiving membership to the Alpha Omega Alpha honor medical society as frequently as their four-year peers do. What's more, residency directors from 15 different specialties report no performance differences between three-year and four-year graduates during their first year of residency.

"Students in the Three-Year Accelerated MD Pathway program meet all of the same milestones and requirements as our four-year students," says Joan Cangiarella, MD, associate dean for education, faculty, and academic affairs. The difference, she notes, is that they're not doing residency interviews and away rotations during a fourth year. That's because they have identified their specialty at the outset of their medical education and are guaranteed a residency spot at NYU Langone Health, provided they maintain a strong academic performance and apply through the national residency matching process. As a result, three-year students report feeling more integrated with their department and less anxious about residency.

NYU School of Medicine is working closely with the Consortium of Accelerated Medical Pathway Programs, a group of 17 schools with accelerated MD programs, to collect and share data. Together, the consortium will study lessons learned and provide information to the medical community that is innovative, generalizable, and scalable to both three- and four-year programs.

$417K

The estimated amount each student saves by eliminating the fourth year of medical school when factoring in the cost of living.

EDUCATION Harnessing Big Data

WHAT IF WE COULD LINK CURRICULUM REFORMS TO PATIENT CARE?

BEYOND THE CLASSROOM, medical schools have long sought ways to track the performance of their graduates in the real world. Now, with a $1 million grant from the American Medical Association, NYU School of Medicine is applying informatics to do just that.

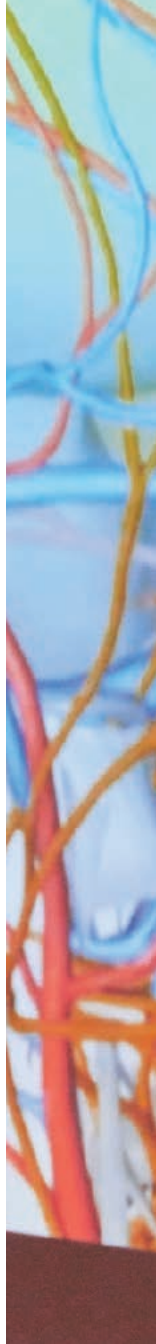
Marc M. Triola, MD, associate dean for educational informatics and the founding director of the School's Institute for Innovations in Medical Education, or IIME, recently identified the detailed practice data of some 8,500 graduates of NYU School of Medicine and about 12,000 graduates of NYU Langone's residency training programs. The data set—when merged and analyzed with other recently available patient health data sets from the Centers for Medicare and Medicaid Services and several states, including New York—could potentially shed light on any number of queries about how curriculum changes impact medical practice.

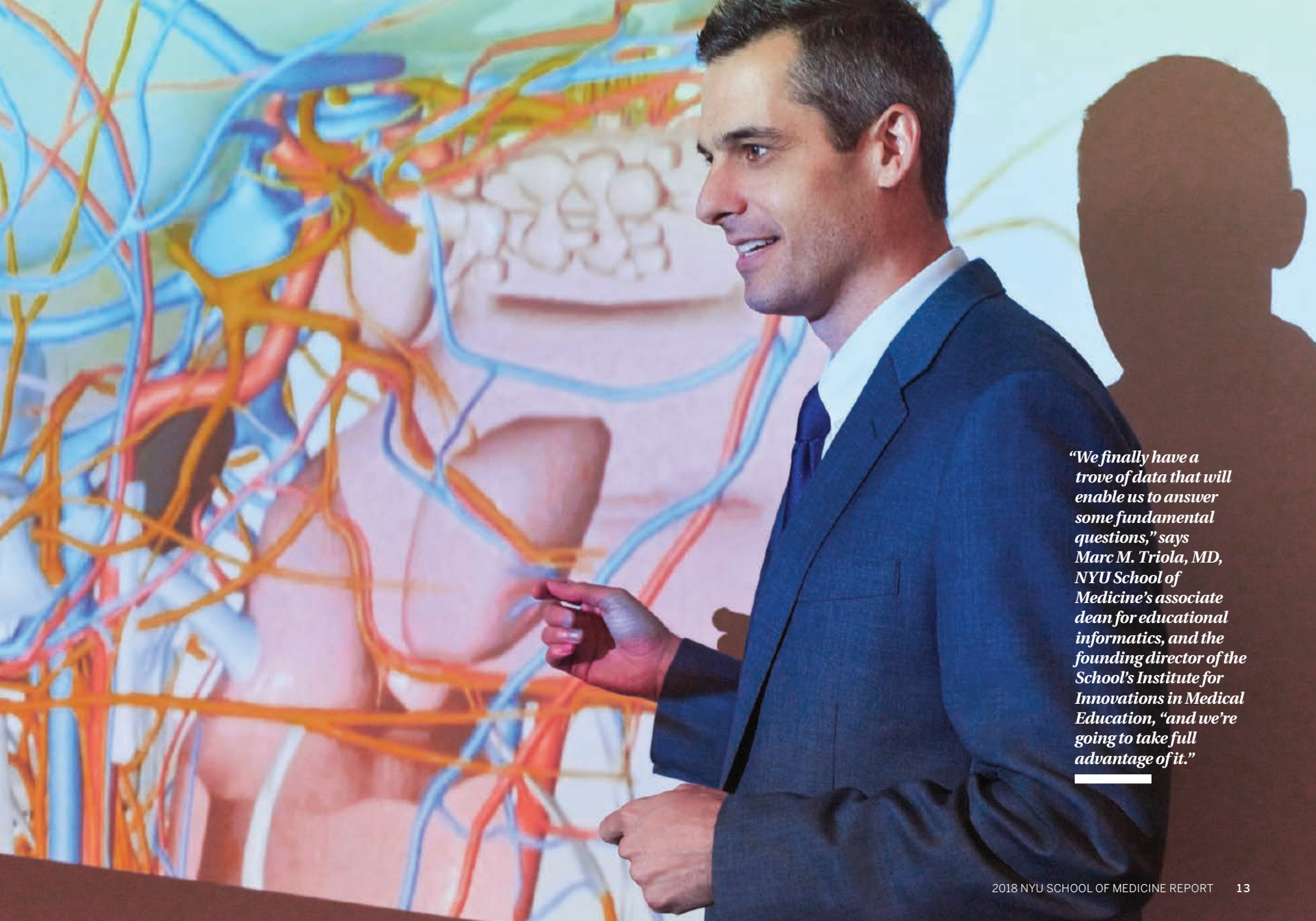
As an early proof of concept, the team recently published data showing how curriculum reforms at NYU School of Medicine influenced the prescribing behavior of its graduates.

Dr. Triola says his team also plans to look at whether recent curriculum changes that focus on improving how physicians work in teams can be tied to improvements in patient outcomes. If they can, this might point the way to additional changes in teaching teamwork.

Another important area of inquiry is the ongoing shift in surgery from inpatient to outpatient settings. "Our data could give real visibility to a possible need to move some residency training from the hospital to clinics and ambulatory facilities," Dr. Triola says.

Even small changes to education and training can end up making big differences in the healthcare system. "That's the whole point of medical education," Dr. Triola says. "But now we can achieve it with an evidence-based feedback loop."





"We finally have a trove of data that will enable us to answer some fundamental questions," says Marc M. Triola, MD, NYU School of Medicine's associate dean for educational informatics, and the founding director of the School's Institute for Innovations in Medical Education, "and we're going to take full advantage of it."

EDUCATION Rethinking Residency

WHAT IF YOUNG DOCTORS WERE BETTER PREPARED TO PRACTICE MODERN MEDICINE?

AS HEALTHCARE COSTS continue to skyrocket, patients and providers are demanding greater transparency and accountability in medicine—from quality of care and safety measures to how physicians are trained. In 2014, a report from the National Academy of Medicine (formerly known as the Institute of Medicine) called for nationwide reform in graduate medical education, citing a lack of preparedness among residents, inadequate integration of technology in training programs, and poor alignment with mandated national quality and safety goals.

To address these challenges, NYU School of Medicine has launched G21—Graduate Education for the 21st Century. This interdepartmental plan builds on the success and momentum of the School's revamped undergraduate curriculum, introduced in 2014 as the Curriculum for the 21st Century, or C21. Our primary goals are to enhance training in ambulatory settings and across continuity of care, better integrate technology into training programs, and more closely align training with mandated national and institutional quality and safety goals.

G21 is no small effort. We are implementing the plan among some 1,500 trainees across more than 150 programs in 22 clinical departments. As part of a leading integrated academic medical center, NYU School of Medicine is uniquely positioned to link educational and clinical

H. Leon Pachter, MD, the George David Stewart Professor of Surgery and Chair of the Department of Surgery, and chief surgical resident Megan Jenkins, MD, prep for surgery at Tisch Hospital.

missions, as well as educational and clinical data. Taking full advantage of the institution's best-in-class technology, all residents work with iPads that include a custom iOS mobile app; access to Epic, the institution's electronic medical record system; and evaluations of house staff and students. They are also encouraged to take new electives in telehealth and telemedicine, two of the fastest-growing fields in medicine.

Among the top priorities of G21 is educating more residents in value-based management (VBM), a healthcare delivery model designed to maintain high-quality care without raising costs. In a new VBM-based elective course, residents work in teams to solve problems they have encountered on the wards. Then, in a competitive setting modeled after the hit reality-TV show *Shark Tank*, they pitch their solutions to a panel of clinical leaders, who choose the best ones to implement throughout the medical center.

"Residents provide frontline care to many of our patients," notes Steven B. Abramson, MD, senior vice president and vice dean for education, faculty, and academic affairs, and chair of the Department of Medicine. "This new training helps our next generation of physicians promote the highest standards of quality and safety while becoming quality leaders themselves."

WHAT IF WE COULD FUTURE-PROOF OUR CAMPUS?

KIMMEL PAVILION: BY THE NUMBERS

374
single-patient rooms

11
inpatient floors

30
operating rooms and image-guided labs plus 4 small procedure rooms

830K
square feet

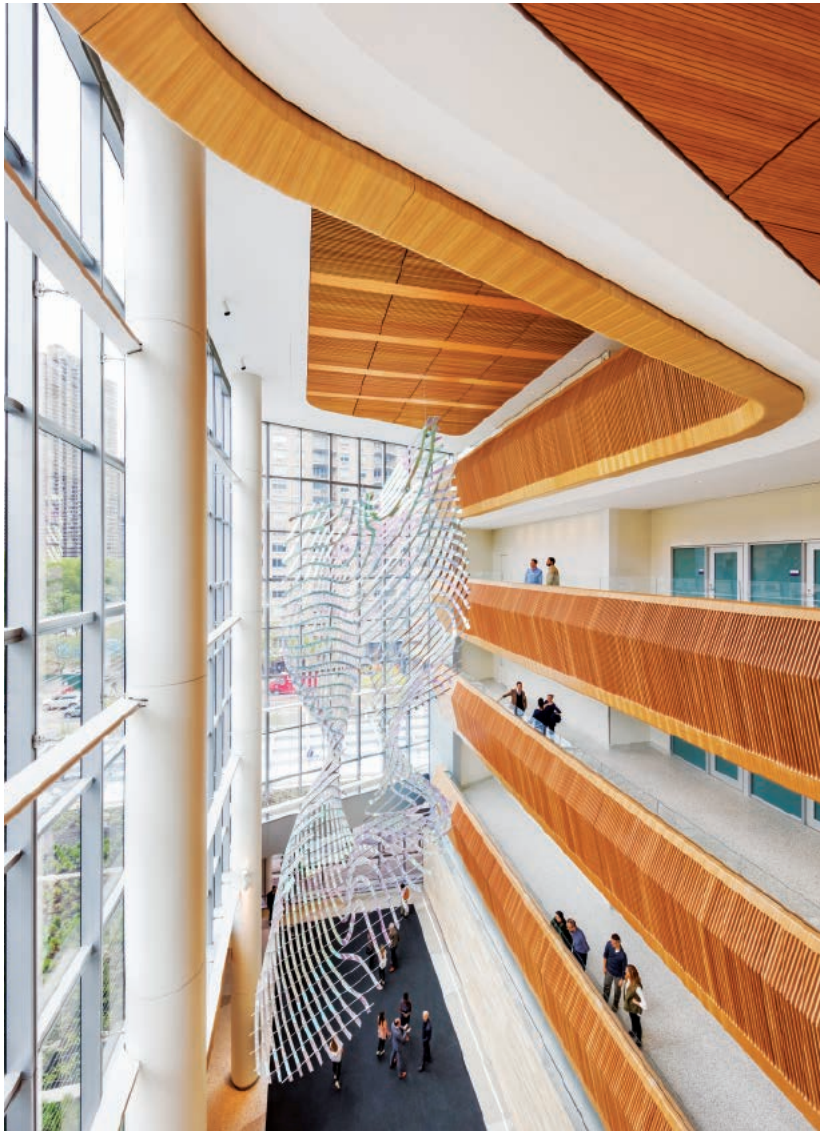
NYU School of Medicine was founded in 1841 by six preeminent physician-scientists who aspired to broaden the reach of innovative medical education and extend its benefits to the underserved. That dedication to progressive education and compassionate care has continued to this day, reflected in a vibrant training environment renowned for its diversity, leading faculty, and state-of-the-art facilities.

BUILDING ON THAT LEGACY quite literally, this year NYU Langone Health caps a sweeping, decade-long campus revitalization project that will define the institution for years to come. In June, the doors opened at the Helen L. and Martin S. Kimmel Pavilion, one of the most technologically advanced and seamlessly integrated inpatient facilities in the US, and the first in New York City to offer all-private rooms. It's connected to NYU Langone's flagship Tisch Hospital, and houses Hassenfeld Children's Hospital–34th Street, the city's first new children's hospital in nearly 15 years.

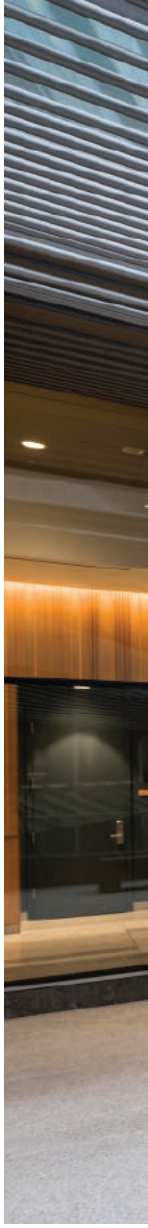
At the south end of campus is the new 16-story Science Building, a state-of-the-art biomedical research facility that can accommodate up to 800 researchers, graduate students, and postdoctoral fellows, and also serves as home of the Neuroscience Institute.

With the new space, NYU School of Medicine now has 220 laboratories conducting groundbreaking research on neuroscience, genetics, computational medicine, and other fields that are transforming medicine. The School's growing commitment to biomedical science is reflected in its #3 ranking in research by *U.S. News & World Report*.

Clockwise from near right: The lobby, a patient room, and the exterior of the Helen L. and Martin S. Kimmel Pavilion.




NYU Langone Health



"The integrative approach to the planning and design of all of our new facilities is reshaping how we manage patient-centered care from the bench to the bedside, driving greater connectivity, collaboration, productivity, and training opportunities across our campus and beyond."

Vicki Match Suna, AIA, senior vice president and vice dean for real estate development and facilities

Interior and exterior of the new Science Building.

RESEARCH Translational Medicine

WHAT IF MORE PATIENTS HAD ACCESS TO LEADING CLINICAL TRIALS?

Clinical trials serve as a vital bridge between the lab and clinic. At NYU School of Medicine, clinician-scientists are leading major investigations to advance the treatment of heart disease, improve palliative care in emergency medicine, and measure the impact of environmental pollutants on child development, among other initiatives.

CARDIOVASCULAR MEDICINE

One of the largest clinical trials in cardiology, the ISCHEMIA trial, short for International Study of Comparative Health Effectiveness with Medical and Invasive Approaches, aims to resolve a longstanding debate over whether there is a benefit to invasive interventions when added to optimal medical therapy for patients with stable coronary heart disease. Under the leadership of study chair and principal investigator Judith S. Hochman, MD, the Harold Snyder Family Professor of Cardiology at NYU Langone Health, the ISCHEMIA trial has randomly assigned more than 5,000 patients with abnormal stress tests to one of two treatment strategies: one group receives medical therapy plus either a stent or bypass surgery, and the other group receives only medical therapy. "The results will provide much-needed information to guide practice and improve the quality of care for the millions of patients affected by stable ischemic heart disease," notes Dr. Hochman. The trial, now under way at more than 300 medical centers worldwide, is supported by an $85 million grant from the National Institutes of Health (NIH).

A parallel study, called the ISCHEMIA-Chronic Kidney Disease trial, aims to address this same question in patients who also have advanced chronic kidney disease. Such patients are 5 to 10 times more likely to die from cardiovascular disease than renal failure, yet 80% of coronary artery


86.7 kV
FL
239.7 mA
10.0 p/s
A
Coro
FL Card
>1.0
Gy
Lens Temp
OVERRIDE
77
78

disease trials exclude patients with chronic kidney disease. "Given the aging population and the dramatic increase in obesity and diabetes—all risk factors for kidney disease—the question of how to best manage patients with both kidney disease and ischemia is exceedingly important," says principal investigator Sripal Bangalore, MD, professor of medicine, Leon H. Charney Division of Cardiology at NYU Langone Health. Supported by a $10 million grant from the NIH, the trial involves 300 medical centers worldwide.

While heart disease is the leading cause of death in both men and women in the US, women are more likely than men to die after a heart attack. One reason is that it's more common for women to have atypical symptoms, such as nausea and fatigue, which may more readily be misattributed to other, more benign health problems. Supported by a four-year, $4 million grant from the American Heart Association, cardiologists at NYU Langone Health are investigating why women suffer from heart attacks, what makes them different in women, and the best techniques for diagnosis and treatment. The research is part of NYU Langone's Sarah Ross Soter Center for Women's Cardiovascular Research, one of five research sites in the American Heart Association's Go Red For Women Research Network. "Heart disease is still the number one cause of death among women in the US, and many questions remain about the causes of heart attack in women and how to treat them," says the center's leader, Harmony Reynolds, MD, associate professor of medicine, Leon H. Charney Division of Cardiology at NYU Langone.

PALLIATIVE CARE

With an estimated 75% of Americans 65 or older visiting an emergency department (ED) during the last six months of life, palliative care is playing an increasingly important role in emergency medicine. Studies point to numerous benefits for initiating palliative care in the ED, including better control of symptoms, improved outcomes, shorter hospital stays, less need for intensive care, and overall cost savings. But little is understood about which models work best in EDs.

To close the knowledge gap, Corita Grudzen, MD, a nationally recognized expert on palliative care in the ED, is leading two of the largest national studies in the fields of palliative care and emergency medicine. "The ED is an opportune place for establishing a comprehensive, long-term care plan with older patients and their families," explains Dr. Grudzen, vice chair for research in NYU Langone Health's Ronald O. Perelman Department of Emergency Medicine.

The first study, funded by $12 million from the Patient-Centered Outcomes Research Institute, investigates how palliative care can be delivered most efficiently and how it can best satisfy the goals of patients and their families. The study involves researchers from nine diverse EDs nationwide, who will be recruiting more than 1,300 volunteers, along with some of their personal caregivers, and gathering data over the next five years. The second study, supported by a $7.6 million grant from the NIH and under way at 35 EDs nationwide, is evaluating the best methods for training and educating emergency-medicine providers in basic palliative care skills to improve overall quality of care.

PEDIATRICS

How does the environment impact child growth and development? That's the central question behind the Children's Health and Environment Study, part of a $40 million, five-year grant from NIH awarded to pediatrician-epidemiologist Leonardo Trasande, MD. The trial, which has so far enrolled more than 1,800 pregnant women and 1,000 infants in New York City, will examine the influence of several environmental factors on mothers during pregnancy, around birth, and during childhood. "We hope to understand how the environment where you live, work, and play may affect children's health from early life, even before birth, onward," says Dr. Trasande, director of the Division of Environmental Pediatrics, and associate professor of pediatrics, environmental medicine, and population health.

WHAT IF MORE POSTDOC FELLOWS ASPIRED TO CAREERS BEYOND THE BENCH?

WITH MORE THAN 60,000 POSTDOCS in the US and fewer than 3,000 available faculty positions, finding a career is a pressing concern for many PhD holders. The reality is that only one in six PhDs will go on to earn a tenure-track position in academia. But based on recent surveys, employment-related anxiety is declining among the 400 postdocs at NYU School of Medicine.

That may be because five years ago, thanks to a grant from the National Institutes of Health, NYU Langone Health launched the Scientific Training Enhancement Program (STEP) to bolster career-training opportunities for both postdocs and graduate students.

"We partnered with professionals in nonacademic fields to come up with an evidence-based curriculum that better prepares people for a variety of careers," says Keith J. Micoli, PhD, assistant dean for postdoctoral affairs at NYU Langone.

Today, the postdoctoral program at NYU School of Medicine is a robust national leader, offering more than 25 professional development electives, including an eight-week career-planning course called Hope Is Not a Plan, which was the first of its kind in the country.

In a new course offered through the NYU Technology Ventures and Partnerships group, called Venture Creation in the Biomedical Industry, teams work together to develop a viable commercial pathway for a research-derived technology. Veteran science writers also teach courses on medical writing, and policy experts teach a course on how science policy works.

Outside of the classroom, we host a biennial two-day symposium for graduate students and postdoc fellows called What Can You Be with a PhD? Last year's event drew more than 1,200 researchers to see more than 100 speakers describe different career paths. Speakers described their jobs, recounted their career trajectories, and answered audience questions. "The things that we're doing make us a unique program," Dr. Micoli says, "and help us attract motivated young scientists. We want all our postdocs to figure out what they most love about science, and then be able to use that passion in their career."

WHAT IF A BROADER RANGE OF STUDENTS WERE INSPIRED TO PURSUE BIOMEDICAL RESEARCH?

THE NATION'S HEALTHCARE needs are evolving along with its shifting demographics and will require research and researchers to reflect those changes and focus new attention on growing problems and disparities. Sackler Institute of Graduate Biomedical Sciences at NYU School of Medicine has long strived to meet this demand through a host of innovative programs and strategies to connect with underrepresented minority communities throughout the country. A shining example is its Summer Undergraduate Research Program, or SURP, launched in 1990 to help train and mentor aspiring biomedical scientists from a wide range of cultural and academic backgrounds. This well-established program, among the most competitive of its kind, enrolls 30 aspiring scientists—selected from a pool of more than 1,500 undergraduate applicants—to spend nine weeks over the summer conducting research at NYU Langone with leading biomedical scientists. At the end of the summer, the students present their work to other researchers at NYU Langone, and at a national symposium hosted by the Leadership Alliance, a consortium of 30 institutions, including colleges, universities, and private industry, that offers research and networking experiences to students from underrepresented minority groups.

For many students, the immersive experience is transformational. "I didn't know there were possibilities in the biomedical field other than getting an MD," says Alberta Negri, an undergraduate student from the University of Cincinnati, who worked with Maria R. Khan, MPH, PhD, associate professor of population health, to investigate the mediators between incarceration and the prevalence of HIV. "The SURP summer program opened my eyes to the possibility of pursuing an MD/PhD or MD/MPH degree."

"NYU School of Medicine has worked hard over the years to build a national reputation for inclusiveness and diversity," says Naoko Tanese, PhD, director of NYU School of Medicine's Sackler Institute of Graduate Biomedical Sciences, professor of microbiology, and associate dean for biomedical sciences.

95%

Percentage of NYU Langone's Summer Undergraduate Research Program participants who go on to pursue a PhD, MD/PhD, or MD degree.

34%

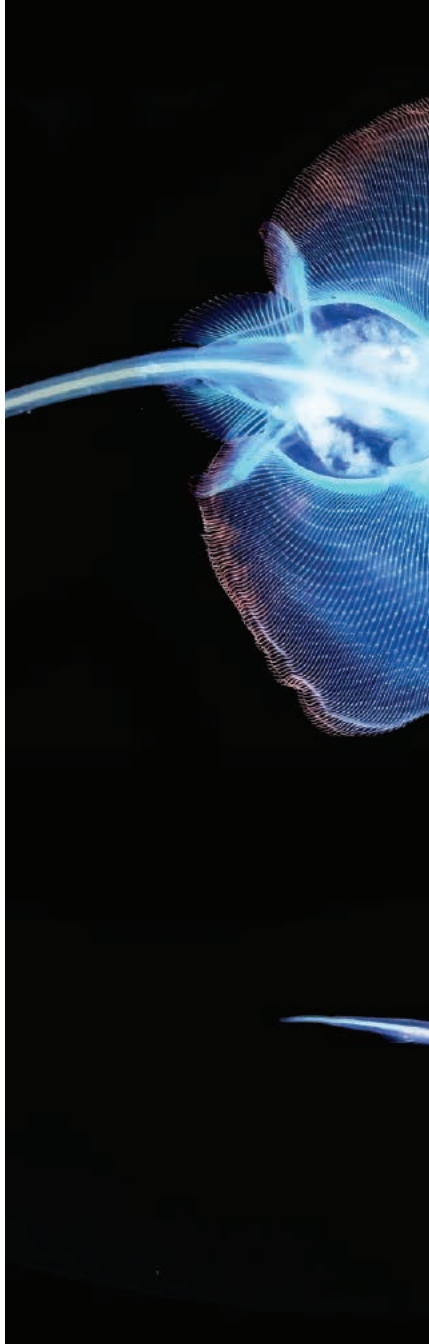
Percentage of US students entering the Sackler PhD program in 2017 who are members of underrepresented minority groups.

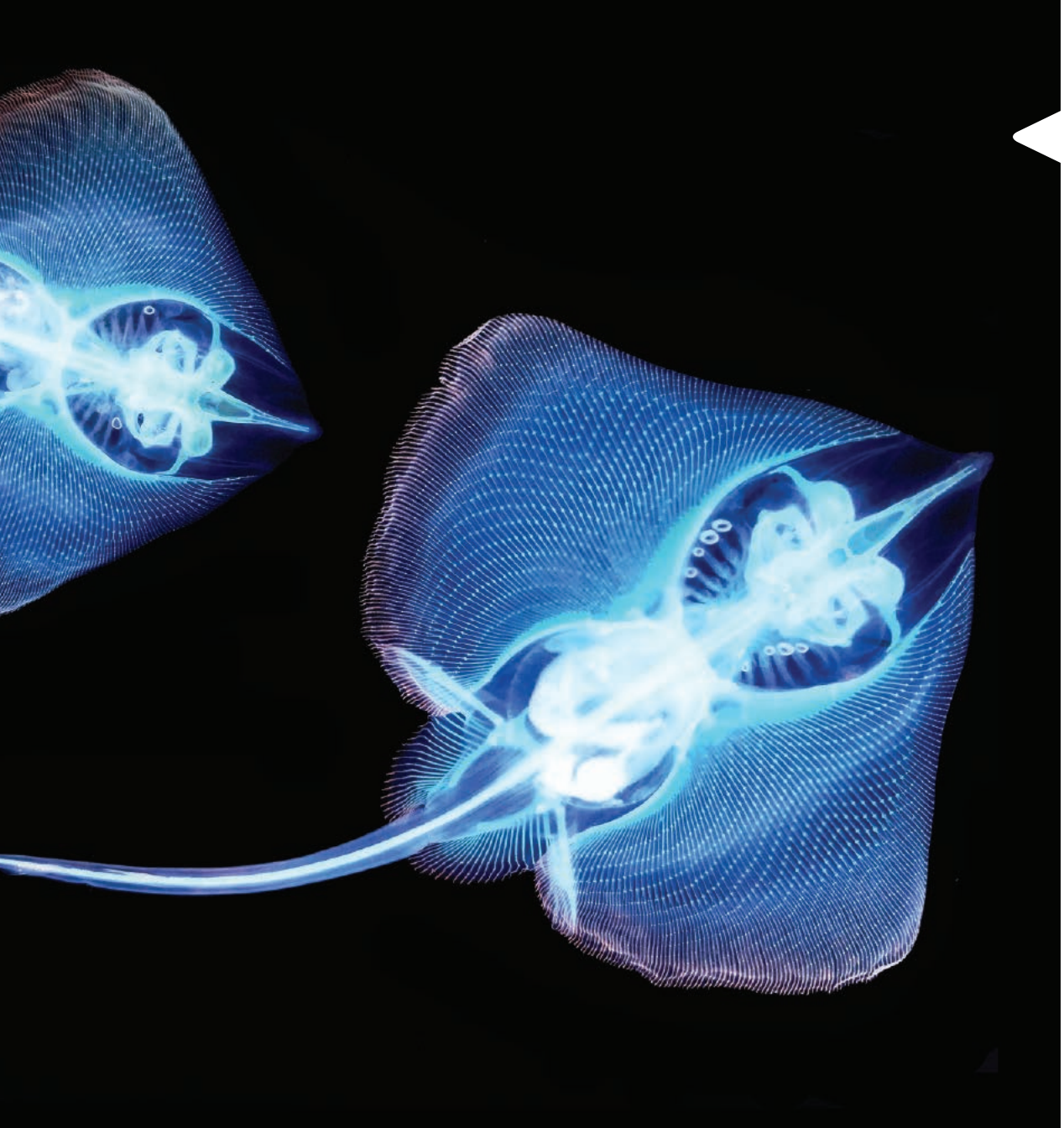
WHAT IF WE VALUED CURIOSITY AS IF LIVES DEPENDED ON IT?

Pinpointing the basis of maternal instincts. Imaging the moving parts of a hand. Revealing the secrets of a walking fish. Our emphasis on recruiting top investigators, building state-of-the-art lab space, and embracing creative thought has dramatically expanded and energized the research conducted at NYU School of Medicine. Our remarkable growth and push for excellence are reflected in our #3 spot on *U.S. News & World Report*'s 2019 ranking of the best graduate schools for research. These highlights reflect just a few of the ways in which our dedication to research is making headlines, and major headway toward a growing number of biomedical advances.

"We're a community united around our enthusiasm for asking questions and seeking answers. Curiosity is the foundation of science."

Dafna Bar-Sagi, PhD, Senior Vice President and Vice Dean for Science, Chief Scientific Officer



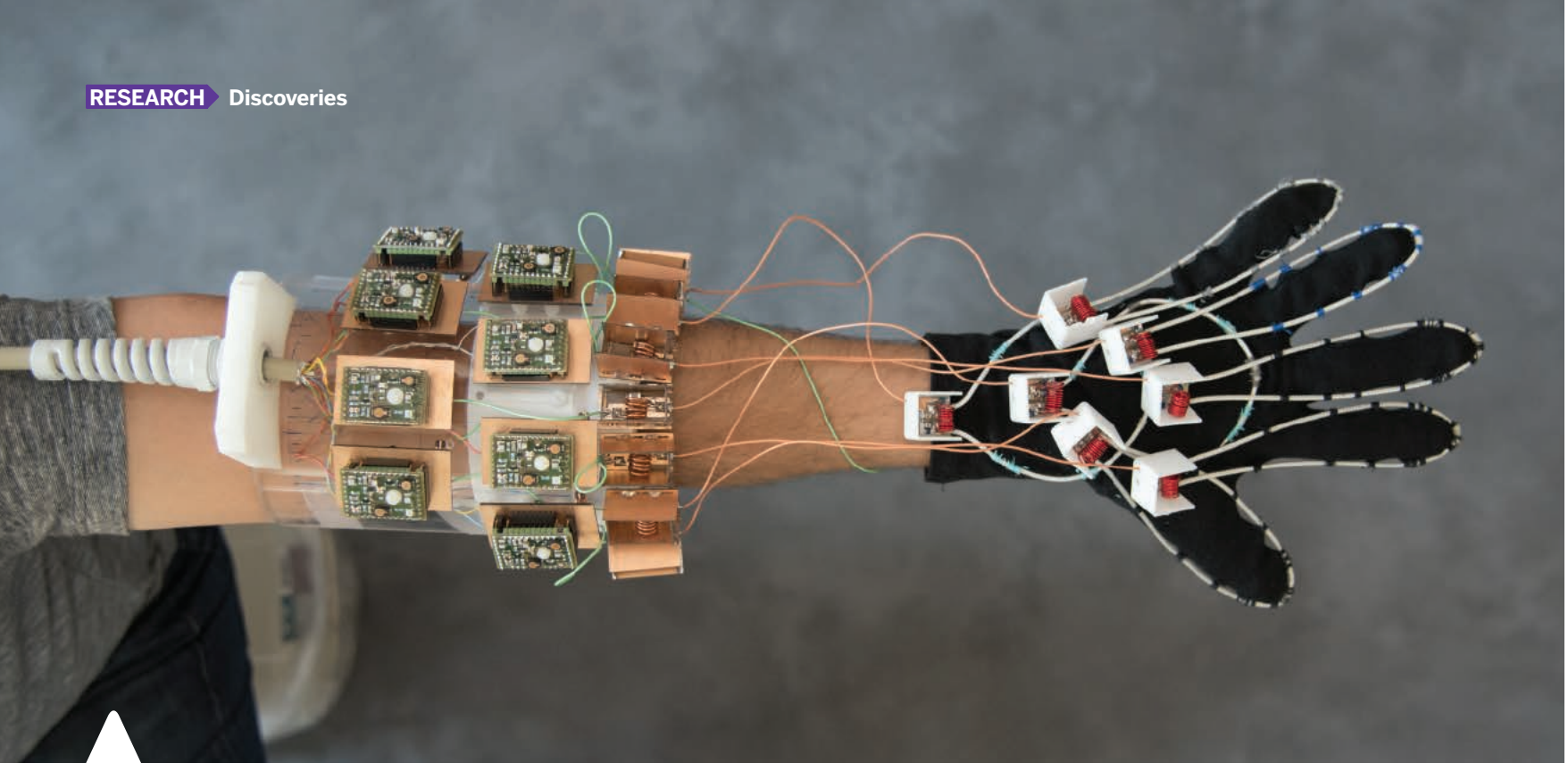


MOLECULAR CIRCUITS FOR WALKING FOUND IN ANCIENT FISH

More than 400 million years ago, long before our ancestors wiggled onto dry land, a primitive fish evolved the nerve circuitry needed to walk on two fins—and two feet. The surprising discovery, reported by NYU School of Medicine researchers in the journal *Cell*, provides new insights into the basic molecular machinery and physiological requirements for standing and walking.

A modern descendant of the fish, called a little skate, still walks on its two pelvic fins along the seafloor. "Given that skates use many of the same nerve circuits that we do to walk, the fish provide a simple model to study how the circuits that enable walking are assembled," says senior author Jeremy Dasen, PhD, associate professor of neuroscience and physiology. Study authors included David Schoppik, PhD, assistant professor of otolaryngology–head and neck surgery and of neuroscience and physiology.

Understanding the skate's nerve circuits may give researchers better insights into how they become dysfunctional in spinal cord injuries and degenerative diseases. "Until we understand how spine-limb nerve connections are wired, we can't expect to reverse spinal cord damage," Dr. Dasen says.



MRI GLOVE OFFERS REAL-TIME VIEWS OF HAND MOVEMENTS

Starting with a simple $5 cloth glove, researchers at NYU School of Medicine have assembled a flexible magnetic resonance imaging (MRI) detector that provides an unprecedented view of how the bones, tendons, and ligaments of the hand move together. The MRI glove, described in a cover story of the journal *Nature Biomedical Engineering*, has produced remarkably clear images and videos of hands pretending to play a piano and making the "thumbs up" and "rock on" gestures, among other movements.

"Some people experience hand and wrist discomfort only when doing very specific actions," says senior author Martijn Cloos, PhD, assistant professor of radiology. "This allows us to see what is happening when patients perform those motions." For instance, doctors could use the more precise view of movements in real time to help diagnose repetitive-stress injuries like carpal tunnel syndrome and trigger finger.

"For any applications that involve moving structures that we want to track closely, this is very exciting," adds study coauthor Daniel Sodickson, MD, PhD, professor of radiology and of neuroscience and physiology, and director of the Bernard and Irene Schwartz Center for Biomedical Imaging.

MATERNAL INSTINCT TO GATHER YOUNG TRACED TO SPECIFIC BRAIN REGION

A mother's instinct to retrieve her young and direct them to safety is governed by a key group of cells in the brain's hypothalamus, according to a new study in mice by NYU School of Medicine investigators.

The researchers studied the brain activity of dozens of female mice as they interacted with pups, and found that specific cells in the medial preoptic area of the hypothalamus were most active when the mothers found and returned pups to the nest. When the researchers artificially activated these brain cells, the mother mice immediately picked up their pups. Virgin mice did the same even though the pups weren't theirs, suggesting that the powerful instinct is hardwired in the brain.

"Our work shows precisely how a maternal instinct is generated in the mammalian brain," says senior author Dayu Lin, PhD, associate professor of neuroscience and physiology, and of psychiatry, and a member of NYU Langone Health's Neuroscience Institute. The results, published in the journal *Neuron*, may help explain maternal behavior in humans, too, and offer insights into how to help mothers struggling to nurse or bond with their infants.

CANCER

Theodore Nicolaides, MD, a nationally renowned pediatric oncologist, was appointed director of pediatric neuro-oncology at Perlmutter Cancer Center and Hassenfeld Children's Hospital. Previously, he was director of the Brain Tumor Research Center Preclinical Core at the University of California, San Francisco.

Paul E. Oberstein, MD, a nationally renowned cancer clinician and researcher, was appointed director of gastrointestinal medical oncology and assistant director of the Pancreatic Cancer Center at Perlmutter Cancer Center. Previously, he was a member of the Herbert Irving Comprehensive Cancer Center at Columbia University and an attending physician at New York–Presbyterian/ Columbia University Medical Center.

Elizabeth Raetz, MD, a nationally renowned pediatric oncologist, was appointed director of the Division of Pediatric Hematology/Oncology at Perlmutter Cancer Center and medical director of the Stephen D. Hassenfeld Children's Center for Cancer and Blood Disorders. Previously, she was director of the leukemia program at the University of Utah and Primary Children's Hospital.

Raoul Tibes, MD, PhD, a nationally renowned physician-scientist and cancer researcher, was appointed director of the Clinical Leukemia Program at Perlmutter Cancer Center. Previously, he served as director of the Acute and Chronic Leukemia Program and as consultant at Mayo Clinic and Mayo Clinic Cancer Center in Scottsdale and Phoenix, Arizona.

CARDIOTHORACIC SURGERY

Zachary Kon, MD, a cardiothoracic surgeon and nationally renowned expert in lung transplantation, was appointed the inaugural surgical director of the Lung Transplant Program. Previously, he was director of heart and lung transplantation at the University of Maryland Medical Center.

Nader Moazami, MD, a cardiothoracic surgeon and internationally renowned expert on heart transplantation, was appointed the inaugural surgical director of the Heart Transplantation and Mechanical Circulatory Support Program. Previously, he served as director of the cardiac transplantation and ventricular assist device therapy program at the Cleveland Clinic.

ENDOCRINOLOGY, DIABETES, AND METABOLISM

Lauren Golden, MD, an endocrinologist, was appointed the inaugural director of the Center for Diabetes and Metabolic Health. Previously, she was a clinician and researcher at the Naomi Berrie Diabetes Center at New York–Presbyterian Hospital.

GASTROENTEROLOGY AND HEPATOLOGY

Adam J. Goodman, MD, a gastroenterologist, has been appointed section chief of gastroenterology and director of quality for the Department of Medicine at NYU Langone Hospital–Brooklyn. Previously, he was chief of gastrointestinal services at Kings County Hospital Center and chief of endoscopy at Bellevue Hospital Center.

GENETICS AND GENOMICS

Aravinda Chakravarti, PhD, a nationally renowned geneticist, was appointed the inaugural director of the Center for Human Genetics and Genomics. Previously, he was director of the McKusick-Nathans Institute of Genetic Medicine and director of the Center for Complex Disease Genomics at Johns Hopkins University.

INTERVENTIONAL CARDIOLOGY

Craig A.Thompson, MD, an internationally renowned interventional cardiologist, was appointed director of interventional cardiology and cardiac catheterization laboratories. Previously, he served as senior vice president and global chief medical officer of interventional cardiology and structural heart at Boston Scientific.

Atul Sharma, MD, an interventional cardiologist, was appointed director of interventional cardiology at NYU Langone Hospital–Brooklyn. Previously, he was chief of the Division of Cardiology at New York Downtown Hospital and site director of the Division of Cardiology at New York–Presbyterian Lower Manhattan Hospital.

New People

MEDICAL LIBRARY

Jeffrey D. Williams, MLIS, was named chair of the Medical Library and director of the Health Sciences Library. Previously, he served as deputy director of the NYU Health Sciences Library.

NEUROLOGY

Steven J. Frucht, MD, an expert on Parkinson's disease and movement disorders, has been appointed director of the Division of Parkinson's and Movement Disorders. Previously, he was director of the Movement Disorders Division at Mount Sinai Health System.

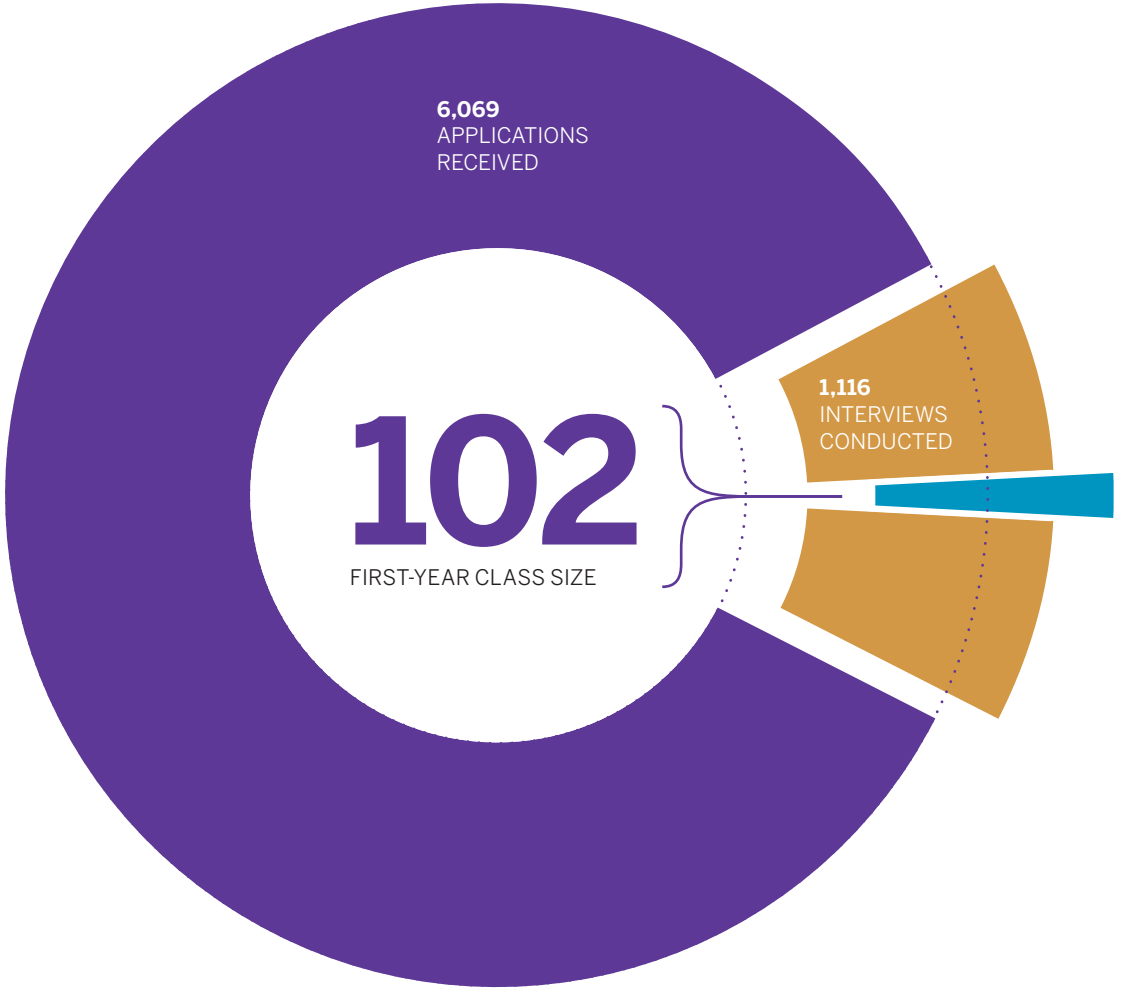
Andrew S. Feigin, MD, an expert on Parkinson's disease and movement disorders, has been appointed coexecutive director of the Marlene and Paolo Fresco Institute for Parkinson's and Movement Disorders. Previously, he was director of the Experimental Therapeutics Division at Northwell Health.

PULMONARY, CRITICAL CARE, AND SLEEP MEDICINE

Luis F. Angel, MD, a pulmonologist and nationally renowned expert in lung transplantation, was appointed inaugural medical director of the Lung Transplant Program. Previously, he was director of interventional pulmonology and medical director of the lung transplant program at the University Transplant Center of San Antonio.

REHABILITATION MEDICINE

Jonas M. Sokolof, DO, was appointed the inaugural director of the Division of Oncological Rehabilitation at Rusk Rehabilitation. Previously, he was an attending physician at Memorial Sloan Kettering Cancer Center.



ENTERING CLASS OF 2018

3.93
MEDIAN GPA
(range 3.45 – 4.00)

522
MEDIAN MCAT
(99th percentile)
(range 503 – 528)

3.63
MEDIAN MMI
(on 5-point scale)

57%
FEMALE

15%
UNDERREPRESENTED
IN MEDICINE

Facts & Figures

GRADUATE MEDICAL EDUCATION

1,329
RESIDENTS AND FELLOWS

RESEARCHERS

498
RESEARCH FACULTY

22
NEW RESEARCH-FOCUSED FACULTY

430
POSTDOCTORAL FELLOWS

262
PHD CANDIDATES

NYU TECHNOLOGY VENTURES AND PARTNERSHIPS*

#1
IN LICENSE INCOME AMONG US UNIVERSITIES OVER THE PAST 10 YEARS

69
STARTUPS FORMED

779
PATENTS ISSUED

24
BIOMEDICAL PRODUCTS BROUGHT TO MARKET

186
LICENSES SIGNED IN THE PAST FIVE YEARS

**These numbers are cumulative and represent NYU School of Medicine.*

RECOGNITION

#3

In the Nation, *U.S. News & World Report* Best Medical Schools for Research

FACULTY HONORS

5
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** As of September 1, 2018*

THE STORY OF NYU SCHOOL OF MEDICINE'S historic full-tuition scholarship program is the story of the collective power of philanthropy. We could not have made this promise to our students without the generosity of each individual who contributed to scholarships over the years.

When our Board Chair Ken Langone announced the decision to offer full-tuition scholarships to all of our medical students last August at the White Coat Ceremony, his words electrified the room. It was a life-changing moment, and you could see it on the faces of the first-year medical students, their loved ones, and everyone else in attendance.

To the remarkable alumni, leaders, and friends who supported this effort: You made this happen. You're not only making an immeasurable and invaluable difference in the lives of our medical students, but you are also precipitating a sea change in medical education. We are so grateful. And while we are fortunate to be the first top-ranked medical school to offer full-tuition scholarships to all of our medical students, it is our sincere hope that we will not be the last.

At NYU School of Medicine, we set our sights high. Only through ongoing support can we build our endowment and become fully sustainable for generations to come.

With a community of this caliber, there is no doubt we will get there.

OUR TUITION-FREE INITIATIVE grew from a groundswell of support, including the extraordinary generosity of the following trustees and leaders.

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