

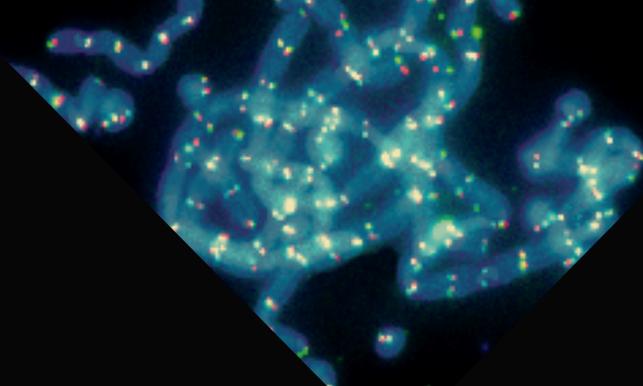
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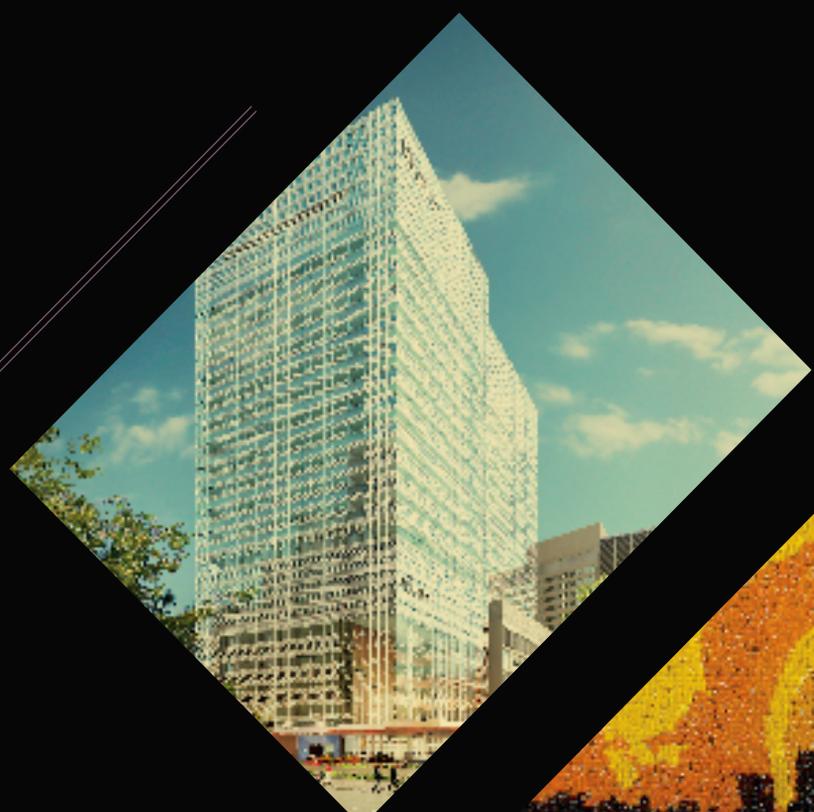
Beyond



We continue to push boundaries:
making what once was impossible,
possible, and expanding our expertise
to serve patients across our culturally
and socioeconomically diverse city.

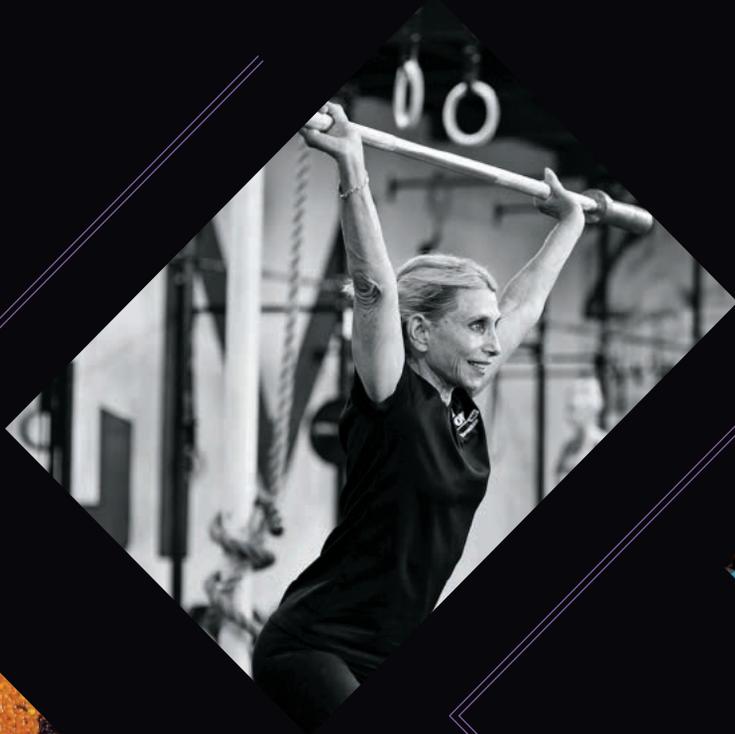
CONTENTS

- 3 Letter
- 4 Growth of Our Footprint
- 10 Research
- 16 Patient Care
- 22 Education
- 28 Campus Transformation
- 32 Appointments and Recruits
- 40 Philanthropy
- 42 Trustees
- 43 Leadership





**Every day we go above.
And beyond.**





From the Chair of the Board and the Dean & CEO



When lives are on the line, good is never good enough. To deliver the very best medical care, we must constantly set higher standards and strive to go above and beyond. There can be no shortcuts, no compromises, no excuses. At NYU Langone Medical Center, that drive is evident in the remarkable progress we've made in advancing our trifold mission to serve, teach, and discover. It's the reason that in 2016, for the first time, we placed among the top 10 hospitals nationwide in *U.S. News & World Report's* annual Best Hospitals rankings.

On the clinical front, our physicians continue to pioneer new techniques and therapies to alleviate the burden of illness. Last year, in a landmark procedure, a team from NYU Langone's Heart Valve Center implanted one of the first artificial mitral valves through a noninvasive procedure that barely breaks the skin (see page 18). Some of these patients go home the very next day, and without a single stitch.

Our research community is also thriving. NYU Langone's investigators are developing novel treatments to reverse multiple sclerosis, identifying mutations long before they seed cancer, and advancing techniques to grow human organs from scratch, among other bold efforts poised to transform medicine and save lives.

All of which drives exceptional growth: Last year, we registered nearly 6 million outpatient visits, added 300 physicians, and opened 40 new practices throughout the tri-state area. We forged a strategic partnership with Winthrop–University Hospital, a prominent medical center on Long Island, while transforming care at NYU Lutheran, an acute-care teaching hospital that joined NYU Langone last year and is now on its way to becoming the hospital of choice in Brooklyn.

On our main campus, the final steel beam was hoisted into place atop the Helen L. and Martin S. Kimmel Pavilion, a new inpatient facility adjoining our flagship Tisch Hospital. When it opens next year, the Kimmel Pavilion will be the first and only hospital in New York City to feature single-bed inpatient rooms.

As we look ahead—and above and beyond—to another year of outstanding achievements, we thank the members of the NYU Langone family, all of whom share a vision: to enrich the world with our work, inspire hope, and improve the lives of our patients and their families.



NYU School of Medicine ranked #11 in the nation for research, and #2 in New York, out of 140 medical schools nationwide on the *U.S. News & World Report's* 2017 "Best Graduate Schools."

ROBERT I. GROSSMAN
THE SAUL J. FARBER DEAN AND CEO

KENNETH G. LANGONE
CHAIR, BOARD OF TRUSTEES



NYU Langone ranked #10 in the nation on *U.S. News & World Report's* 2016–2017 "Best Hospitals" Honor Roll.



Expand

&

Embrace

GROWTH OF OUR FOOTPRINT

NYU Langone continues to expand, investing deeply in communities beyond our main campus. Our network of more than 140 ambulatory care sites—serving neighborhoods throughout the New York metropolitan area—drove nearly 6 million outpatient visits in 2016.

Extending our reach ensures we are able to provide the highest-quality care to patients where they live and work.



NYU Lutheran: Building a Better Bridge to Brooklyn

NYU Langone Medical Center has long enjoyed close ties to Brooklyn. Residents of New York City's most populous borough have accounted for some 25% of the Medical Center's inpatients and about 20% of its ambulatory care visits. Last year, nearly half the babies born at Tisch Hospital went home to Brooklyn.

On January 1, 2016, that bond became even stronger, as NYU Langone and the newest member of its family, NYU Lutheran Medical Center, an acute-care teaching hospital in southwest Brooklyn, transitioned from an affiliation to a full merger.

Initially, the union brought some 5,000 clinicians and staff on board, and last year, NYU Lutheran added

85 physicians and surgeons to its hospital and more than 200 to its network of faculty group practices. "By extending our expertise to Brooklyn," explains Andrew W. Brotman, MD, senior vice president and vice dean for clinical affairs and strategy, "we can now bring the high quality and safety standards of NYU Langone to patients closer to where they live and work."

In June, Bret Rudy, MD—previously NYU Lutheran's chief medical officer—was appointed its executive hospital director and senior vice president. Assuming Dr. Rudy's prior role is another longtime NYU Langone faculty member, Joseph Weisstuch, MD, who had served as assistant chief medical

officer. With its new leadership, staff, programs, and technology—and further expansion on the horizon—NYU Lutheran offers a greater breadth and depth of clinical services than ever before.



NYU LUTHERAN
BY THE NUMBERS 2016

3,850

BIRTHS

26,671

PATIENT ADMISSIONS

663,011

OUTPATIENT
VISITS*

75,190

EMERGENCY
ROOM VISITS

2,383

TRAUMA CASES

842

STROKE CASES

*Includes Family Health Centers

In its first year as part of the NYU Langone Health System, NYU Lutheran marked a number of major milestones:

- NYU Lutheran received its largest-ever gift—\$7 million from an anonymous donor that will be used, in large part, to bolster NYU Lutheran’s neurocritical care program and build its first dedicated neurointensive care unit.
- With the August launch of Epic, a state-of-the-art electronic health record platform, 22 locations at NYU Lutheran became fully integrated—with each other and with NYU Langone. The largest clinical “go-live” event in NYU Langone’s history involved the training of nearly 3,500 staff at NYU Lutheran and the on-boarding of more than 1.7 million patients.
- The Emergency Department, which is the point of entry to NYU Lutheran for many of the 75,000 patients who visit annually, underwent numerous changes, including new leadership and staff, a new team approach to enhance the efficiency of patient care, plans for a new observation unit that affords comprehensive care without admission, and a new pediatric emergency unit.
- NYU Lutheran launched a full-service hospitalist program last year. Staffed by 21 dedicated internists, the program provides comprehensive, coordinated, around-the-clock care for inpatients, whether they have their own primary care physician or not.
- As part of its master plan to modernize, relocate, and expand NYU Lutheran’s ambulatory services throughout Brooklyn, NYU Langone acquired two new buildings in Sunset Park, one of which will be converted into a new satellite of the Laura and Isaac Perlmutter Cancer Center.
- In February, NYU Lutheran launched a robotic-surgery program focused on minimally invasive urological and gynecological surgeries, with plans to expand to colorectal, general, and bariatric surgical procedures.
- NYU Lutheran began or completed more than a dozen capital improvement projects in 2016, including a new medical-surgery suite, a new radiology reading room, a refurbished postanesthesia care unit, a renovated cardiac catheterization lab, and a new hybrid operating room designed for nonsurgical procedures to treat certain heart, brain, and vascular conditions.

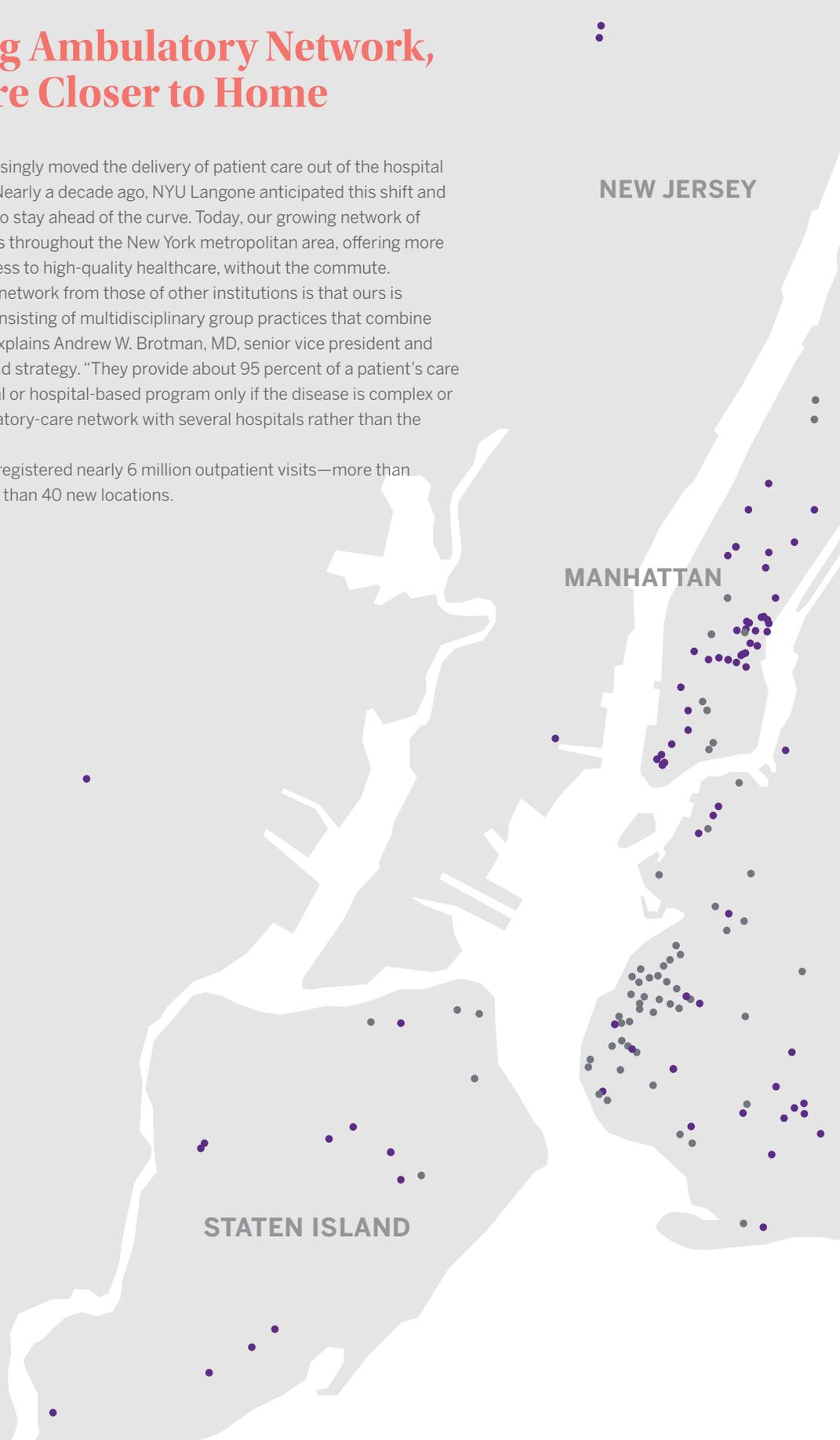
Our Growing Ambulatory Network, Offering Care Closer to Home

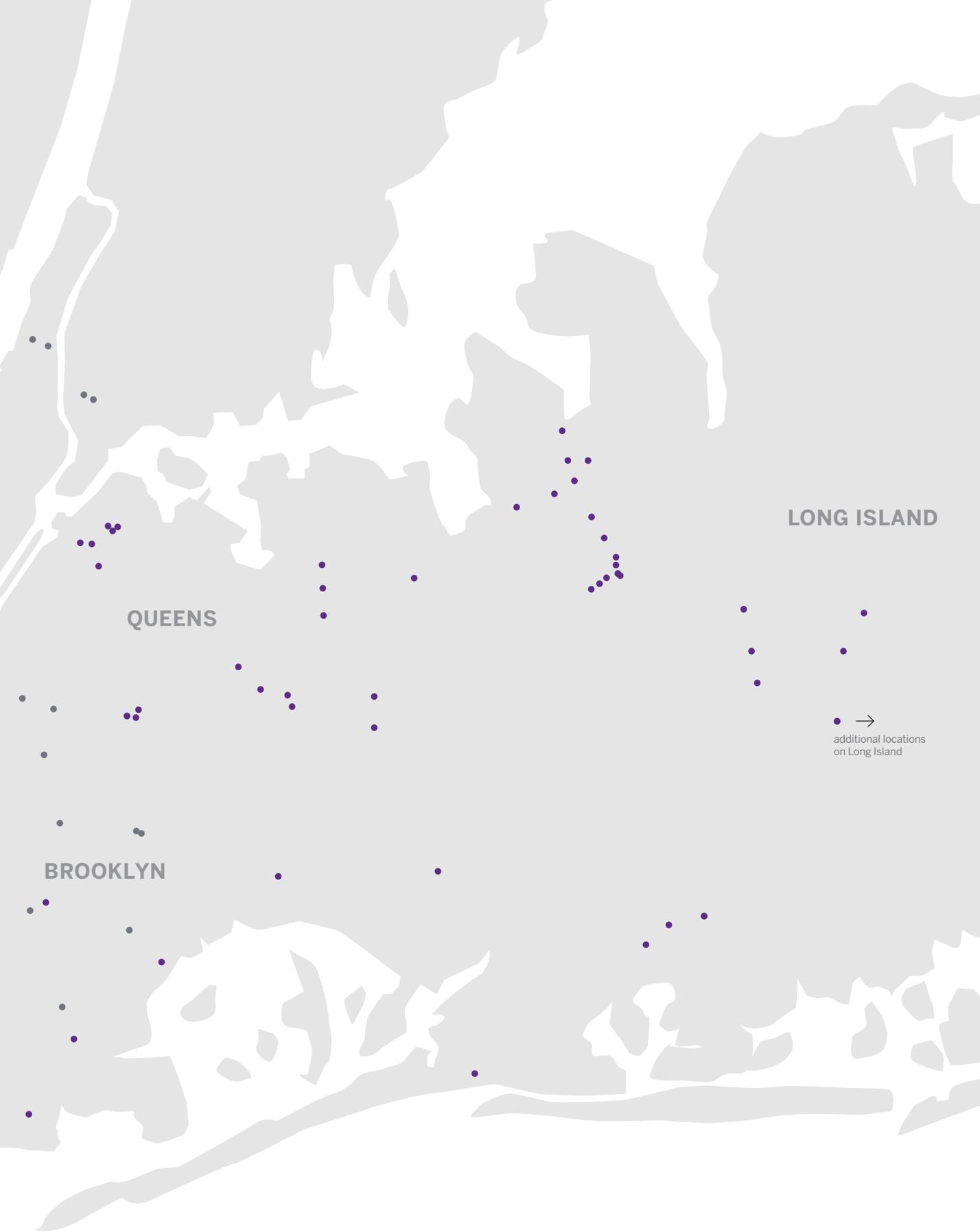
Medical advances have increasingly moved the delivery of patient care out of the hospital and into outpatient settings. Nearly a decade ago, NYU Langone anticipated this shift and adopted a bold new strategy to stay ahead of the curve. Today, our growing network of ambulatory-care sites extends throughout the New York metropolitan area, offering more patients than ever before access to high-quality healthcare, without the commute.

“What distinguishes our network from those of other institutions is that ours is primarily physician-driven, consisting of multidisciplinary group practices that combine primary and specialty care,” explains Andrew W. Brotman, MD, senior vice president and vice dean for clinical affairs and strategy. “They provide about 95 percent of a patient’s care and refer patients to a hospital or hospital-based program only if the disease is complex or acute. We are really an ambulatory-care network with several hospitals rather than the other way around.”

Last year, NYU Langone registered nearly 6 million outpatient visits—more than ever before—and added more than 40 new locations.

- NYU Langone Locations
- NYU Lutheran Locations





QUEENS

BROOKLYN

LONG ISLAND

→
additional locations
on Long Island



Discover

|
&
|

Transform

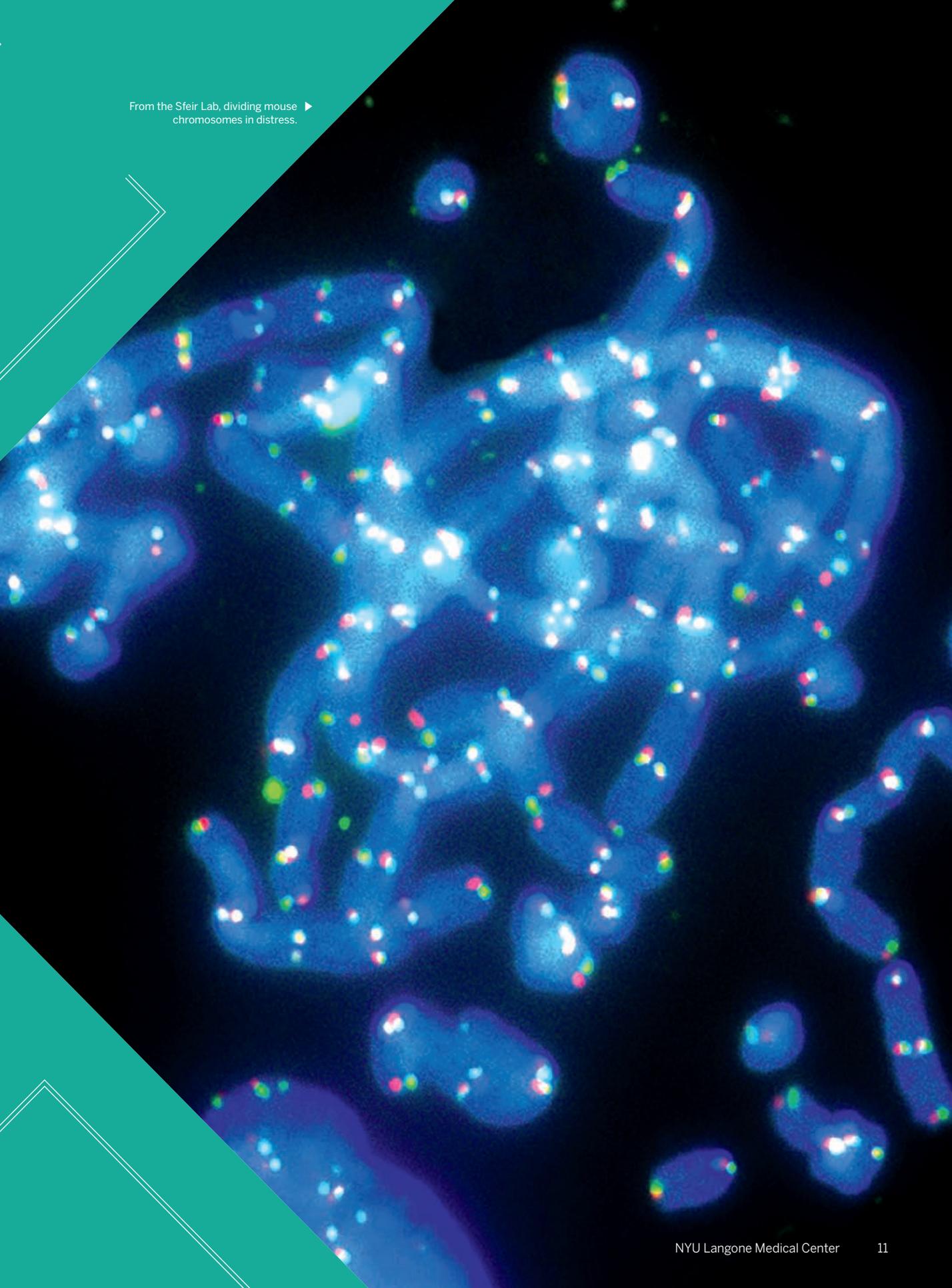


▲ Artwork from the Boeke Lab “grown” by genetically modified yeast cells.

RESEARCH

Our team of more than 400 interdisciplinary investigators is driving transformative developments in biomedical research and dramatically expanding opportunities to understand disease and improve human health. In 2016, we made remarkable strides in basic, translational, and clinical research, shortening the distance between the bench and bedside.

From the Sfeir Lab, dividing mouse
chromosomes in distress. ▶



Mending Broken Hearts

Emotional or physical stress can literally break your heart, and cardiologist Harmony Reynolds, MD, the Saul J. Farber Assistant Professor of Medicine at NYU Langone, aims to find out why. In a recent study published in *The American Journal of Cardiology*, Dr. Reynolds, a nationally recognized cardiac researcher, investigated 10 women who suffered from a mysterious and reversible illness called Takotsubo syndrome, sometimes dubbed broken-heart syndrome. In this condition, extreme emotional or physical duress or other triggers stun the heart and induce symptoms of a heart attack, like shortness of breath, chest pain, plummeting blood pressure, and even congestive heart failure.

For reasons unknown, Takotsubo syndrome is far more likely to affect postmenopausal women, many of whom have no evidence of arterial blockage—a particular expertise of Dr. Reynolds. The study found that compared to their healthy counterparts, the women with

a confirmed diagnosis suffered an imbalance between their parasympathetic and sympathetic nervous systems. (The former system helps the body calm down after an adrenaline surge mediated by the latter.)

The discovery has challenged conventional treatments that target the sympathetic nervous system and has inspired a follow-up study to determine whether bolstering the parasympathetic nervous system instead can prevent another attack.

“Knowing why this happens has the potential to completely change the way that the patient is treated,” says Dr. Reynolds. ■

“Knowing why this happens has the potential to completely change the way that the patient is treated.”

HARMONY REYNOLDS, MD
THE SAUL J. FARBER ASSISTANT PROFESSOR
OF MEDICINE

Harmony Reynolds, MD,
Cardiologist



Seeing DNA Mutations Long Before They Cause Harm

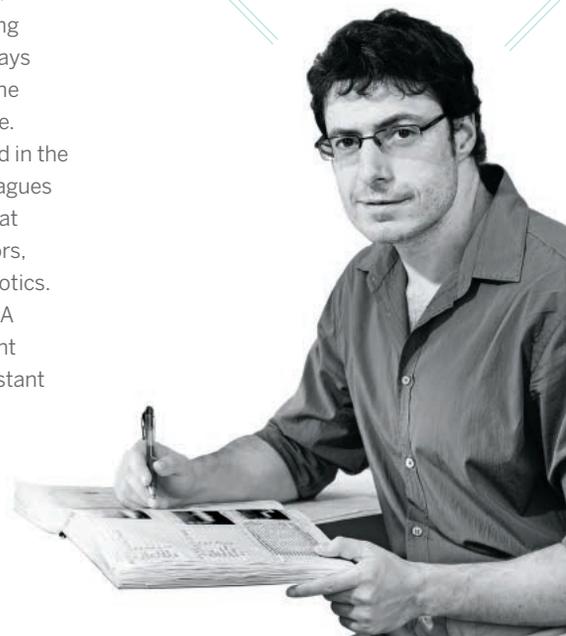
**Evgeny Nudler, PhD,
Molecular Biologist**

Some DNA errors are so rare that scientists struggle to distinguish between naturally occurring mistakes and artificial ones introduced by the sequencing process. As a consequence, researchers often fail to pinpoint spontaneous mutations that can give rise to cancer or deadly bacterial infections.

Now, a group led by Evgeny Nudler, PhD, the Julie Wilson Anderson Professor of Biochemistry in the Department of Biochemistry and Molecular Pharmacology at NYU Langone, has discovered a far more precise DNA-decoding method. Recently described in the journal *Nature*, the technique, called maximum-depth sequencing, is so sensitive, says Dr. Nudler, that it can directly identify the rare mutations

that some bacteria exploit to evade antibiotic drugs. "It could even help pinpoint cells in the bloodstream poised to become cancerous, long before they ever seed tumors," says Dr. Nudler, an investigator with the Howard Hughes Medical Institute.

In a second study, published in the journal *Science*, he and his colleagues discovered a crucial molecule that bacteria use to fix fatal DNA errors, including those caused by antibiotics. "Finding ways to cripple that DNA repair would represent a significant advance in the treatment of resistant infections," says Dr. Nudler. ■



Taking Aim at Rogue Telomeres to Thwart Lymphoma

**Agnel Sfeir, PhD,
Cell Biologist**

Telomeres consist of repetitive stretches of DNA that cap the ends of chromosomes and keep them from fraying. Agnel Sfeir, PhD, assistant professor of cell biology, studies what happens when that protective DNA gets damaged. In a study recently published in the journal *Cell Reports*, she and her colleagues described a previously unknown connection between mutations in a protein that normally protects telomeres, called POT1, and a fast-growing form of lymphoma.

Researchers once thought a mutated POT1 protein would prove fatal because of the ensuing chromosomal damage. But then how to explain cancers that not only survive with the

flawed protein but also seem to require it? Dr. Sfeir's new research suggests an answer: The POT1 error only leads to cancer when accompanied by a second mutation in a gene encoding the cancer-linked protein P53. This latter mutation prevents damaged cells from self-destructing, allowing the cancer cells to instead grow and spread.

"Our experiments have defined a previously unrecognized mechanism for telomere-driven genomic instability in cancer cells," Dr. Sfeir says. Her group's discovery, in turn, may reveal how some aggressive lymphomas can be thwarted and has already inspired clinical trials with new drugs. ■



Reversing the Damage of Multiple Sclerosis

When the immune system malfunctions and turns against the central nervous system, it can begin eating away the myelin sheath around nerve fibers in the brain and spinal cord. In multiple sclerosis—a neurodegenerative condition that affects an estimated 400,000 people in the US—progressive loss of this protective covering can disrupt critical signals between the brain and body.

After six years of experiments, NYU Langone researchers led by James Salzer, MD, PhD, professor of neuroscience and physiology, found that the deterioration might be stalled or even reversed in mice by enlisting

stem cells in the brain to generate new myelin. “Our findings make clear that there is a resident population of adult neural stem cells that we can target and recruit to treat the disorder,” reports Dr. Salzer, a member of NYU Langone’s Helen and Martin Kimmel Center for Stem Cell Biology and the Druckenmiller Neuroscience Institute.

As published in *Nature*, the researchers unexpectedly found that a component of the Hedgehog signaling pathway—one closely tied to neural stem cell development and the growth of some cancers—can slam the brakes on myelin repair.

In the study, mice with chemically

damaged myelin in the brain were given daily doses of an experimental drug, called GANT61, that effectively releases the brakes. Results showed that mice that received the drug for one month had 50 percent more myelin at the end of treatment than did untreated mice. Moreover, the treated mice were able to recover from an initial bout of MS-like paralysis and leg weakness, while untreated mice endured repeated bouts of symptoms similar to those experienced by people with the disorder.

“It’s an exciting target that hasn’t been explored,” says Dr. Salzer, and one that his group is actively pursuing. ■

**James Salzer, MD, PhD,
Neuroscientist**



“Our findings make clear that there is a resident population of adult neural stem cells that we can target and recruit to treat the disorder.”

JAMES SALZER, MD, PhD
PROFESSOR OF NEUROSCIENCE
AND PHYSIOLOGY

Reverse-Engineering the Human Genome to Advance Medicine

Roughly half of the human genome is composed of repetitive DNA stretches that can be cut and pasted into new locations. Jef Boeke, PhD, director of the Institute for Systems Genetics at NYU Langone, is clarifying how some of these chunks of DNA can move and influence development and diseases such as cancer.

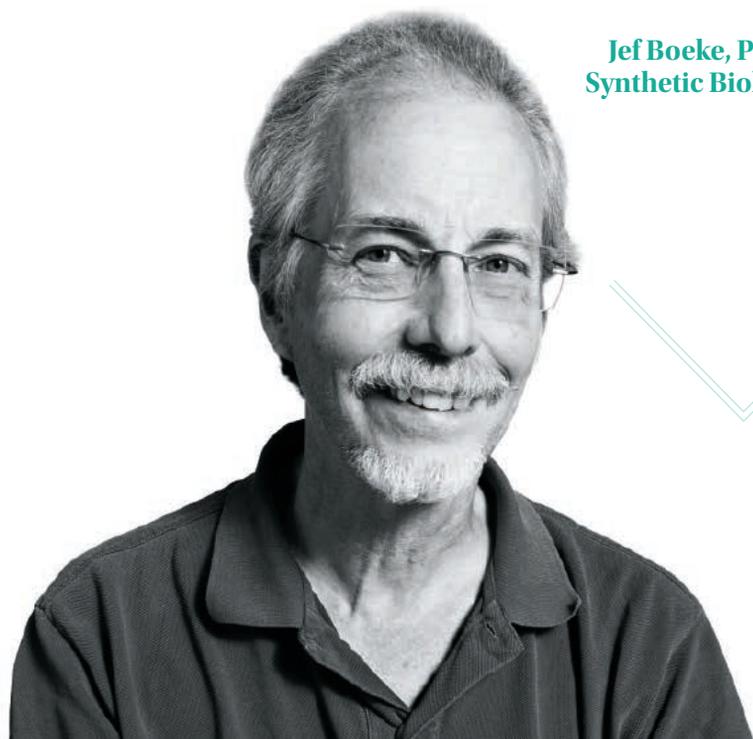
The lab's in-depth knowledge of DNA guides its major new direction: redesigning or synthesizing chromosomes and genomes from scratch. Dr. Boeke is leading an international project, now halfway complete, to construct the 12 million DNA letters of the baker's

yeast genome. In June 2016, he and collaborators proposed a far more ambitious endeavor called the Genome Project-Write. Announced in *Science*, the project aims to assemble the 3 billion DNA letters of the human genome, as well as other organisms' genomes, from their individual parts. To facilitate such work, Dr. Boeke has established the GenomeFoundry@ISG to automate critical steps in DNA writing.

One of the major goals, Dr. Boeke says, is to encourage new technology that can dramatically reduce the cost of synthesizing large DNA segments. Building genes and

genomes and analyzing them in cells, he adds, may allow scientists to compare genetic variants and understand which sequences contribute to health and disease.

In another game-changing project, Dr. Boeke is collaborating with NYU Langone's Transplant Institute and other researchers to grow human organs in pigs—an audacious effort to alleviate a critical shortage of organs that kills 22 people a day. ■



**Jef Boeke, PhD,
Synthetic Biologist**

One of the major goals, Dr. Boeke says, is to encourage new technology that can dramatically reduce the cost of synthesizing large DNA segments.



Pioneer

&

Heal

PATIENT CARE

Many of our 5,000 physicians and surgeons are leaders in their fields, pushing the boundaries of innovative medicine and making possible what once seemed impossible.





Game Changer: Heart Surgery without the Surgery

At 73, Nancy Clayton was in superb physical shape, maintaining a daily regimen that involved an hour of practice with her rowing team or an hour of CrossFit training—sometimes both. What's more, she did all this despite a congenital defect in her aortic valve that twice required open-heart surgery. But then she began feeling short of breath. Doctors near her Southern California home diagnosed a new problem: a severely weakened mitral valve. Left untreated, she'd go into heart failure. Making matters worse, her previous surgeries made a third operation—even a minimally invasive procedure—dangerous.

Clayton soon found her way to Mathew Williams, MD, director of the Heart Valve Center at NYU Langone, who offered a compelling alternative.

Dr. Williams, the first surgeon in the US trained in both interventional cardiology and cardiac surgery, specializes in a nonsurgical technique for replacing diseased heart valves. The technique—called transcatheter valve repair—involves the use of X-ray and other imaging devices to guide a new valve, tucked into a catheter, to the heart through a tiny nick in the groin. Patients often go home the next day without a single stitch.

A decade ago, most cardiac surgeons would have scoffed at the idea of such a noninvasive technique. Today, it's already been used worldwide to replace diseased aortic valves in more than 200,000 patients deemed too old or frail for open-heart surgery. Dr. Williams alone has performed nearly 3,000 transcatheter aortic valve

“TAVR has changed the standard of care for aortic valve disease in older patients. If we can do something similar for mitral valve disease, it'll be transformative.”

AUBREY GALLOWAY, MD
THE SEYMOUR COHN PROFESSOR OF
CARDIOTHORACIC SURGERY



replacements, known as TAVR—more than any cardiac surgeon in the nation.

“TAVR has changed the standard of care for aortic valve disease in older patients,” says Dr. Williams’ colleague at the Heart Valve Center, Aubrey Galloway, MD, the Seymour Cohn Professor of Cardiothoracic Surgery and chair of NYU Langone’s Department of Cardiothoracic Surgery. “If we can do something similar for mitral valve disease, it’ll be transformative.”

Repairing the mitral valve percutaneously—that is, through a nick in the skin—is more challenging since the mitral valve is more complex and harder to reach than the aortic valve. Yet Dr. Williams’ team—including

new team member Muhamed Saric, MD, PhD, director of echocardiography and clinical director of noninvasive cardiology—continues to push the boundaries of nonsurgical valve replacement. Last August, Clayton became one of the first people in the world to receive an artificial mitral valve nonsurgically. As part of an ongoing clinical trial, the team has since implanted the device in four more patients.

Clayton, for her part, was back in the gym just a few months after her procedure. Today, she’s feeling 100%. “This technology represents the future,” Dr. Williams says, “and I hope that someday we can offer it to everyone.” ■



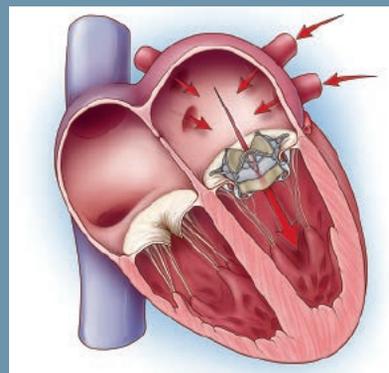
“This technology represents the future, and I hope that someday we can offer it to everyone.”

MATHEW WILLIAMS, MD
DIRECTOR OF THE HEART VALVE CENTER
AT NYU LANGONE

How to Implant an Artificial Mitral Valve without Invasive Surgical Tools

Nancy Clayton is one of the first people in the world to receive a new catheter-based device designed expressly to replace a diseased mitral valve. It’s a two-stage design, with an anchoring ring installed separately from the valve itself. Using real-time X-ray and echocardiographic images to guide him, Clayton’s doctor, Mathew Williams, MD, a pioneer in nonsurgical heart valve repairs at NYU Langone, positioned the anchoring ring inside the diseased valve.

The anchor secures the replacement valve, which consists of a metal scaffold and natural tissue that can collapse to the width of a pencil. It can also be withdrawn and repositioned repeatedly to achieve the best fit—a major safety feature. “With other devices, once you’ve placed it, you’re done,” explains Dr. Williams. “There’s no retrievability.” Once the new valve was in place, the leakage from Clayton’s mitral valve stopped completely.



Sharing Life: Organ Transplantation

Nearly 120,000 Americans, including 8,400 people in the New York metropolitan area, are currently waiting for a lifesaving organ transplant. But up to 40 percent of them will never receive one, either because they'll become too ill to withstand the operation or will die waiting for a suitable donor.

In a bid to improve those statistics, last year NYU Langone recruited internationally recognized transplant surgeon and kidney transplantation expert Robert A. Montgomery, MD, DPhil, to lead its new Transplant Institute. Most recently, Dr. Montgomery served as chief of the Division of Transplantation and director of the Comprehensive Transplant Center at The Johns Hopkins Hospital.

Among the techniques Dr. Montgomery has helped develop is minimally invasive surgery to remove donor kidneys, making it possible for more people to donate because the procedure is much less traumatic than a traditional open operation. In addition, he's pioneered novel approaches to reduce the risk of organ rejection, and to advance "domino" kidney transplants, which

involve multiple pairs of donors and recipients and enable transplants that otherwise could not take place.

"NYU Langone has been at the forefront of many innovations in transplantation, most notably its work in liver and facial transplantation," Dr. Montgomery says. "With the escalation of illnesses like diabetes, and with the institution expanding its reach into more communities, there's an imperative for us to broaden our scope, strengthen key services like kidney transplantation, and develop and implement new innovations and surgical approaches to help our growing and increasingly diverse patient population."

As the inaugural director of NYU Langone's Transplant Institute, Dr. Montgomery will unify and expand various transplant programs. "NYU Langone has key strengths in transplantation, but to move to the next level, we needed to shift from traditional siloed services to a single institute," he says. "The Transplant Institute will reduce fragmentation and inefficiencies, manage costs, expand services, and allow us to



"NYU Langone has key strengths in transplantation, but to move to the next level, we needed to shift from traditional siloed services to a single institute."

ROBERT A. MONTGOMERY, MD, DPHIL
DIRECTOR OF THE TRANSPLANT INSTITUTE
AT NYU LANGONE



1,000+

**NUMBER OF
KIDNEY TRANSPLANTS
DR. MONTGOMERY
HAS PERFORMED**

8,400

**PEOPLE WHO ARE IN
NEED OF A TRANSPLANT
AND LIVE IN THE NEW YORK
METROPOLITAN AREA**

collaborate on research and training.”

Dr. Montgomery and his colleagues plan to begin lung transplants by next year, as well as expand the use of bone marrow transplants alongside organ transplants to reduce the chances of rejection. “We want to be the place to go in New York City for the treatment and care of end-stage organ disease,” he says.

Having performed more than 1,000 kidney transplants, Dr. Montgomery says the operation never becomes routine for him. “It’s always magical when you let blood flow into an organ, and something so lifeless suddenly animates,” he explains. “I wax poetic every time I see it.” ■

120,000

**AMERICANS CURRENTLY
WAITING ON A LIFESAVING
ORGAN TRANSPLANT**

NYU Langone’s Growing Transplant Program

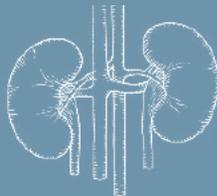
Under the umbrella of the Transplant Institute, NYU Langone is significantly expanding transplantation services. Here’s a look at what’s ahead.

LIVER



By the end of 2016, surgeons performed 40 liver transplants (up from 19 in 2015), with approximately 80 projected annually in five years. The number of liver transplants from live donors will also increase to make more organs available to patients in need.

KIDNEY



By the end of 2016, NYU Langone performed 100 kidney transplants (up from 29 in 2015), with about 200 projected annually in five years.

LUNG



In 2017, surgeons plan to perform NYU Langone’s first lung transplant, becoming only the second medical center in New York State to provide this treatment. About 35 lung transplants are projected annually in five years.

BONE MARROW



NYU Langone currently performs mostly autologous transplants, in which stem cells from the patient’s own blood or marrow are harvested, frozen, and returned to the patient. In 2017, through a collaboration with Johns Hopkins, it will also perform allogeneic transplants, in which a patient receives a donor’s stem cells to reconstitute their marrow and attack any remaining cancer cells.



▲ Rae Rokosh, MD, '16, now a resident in surgery at NYU Langone

Train

|
&
|

Innovate

EDUCATION

There is no greater good than educating the next generation, and no profession more worthy of such cultivation than medicine.

Our novel three-year MD program, multidisciplinary Institute for Innovations in Medical Education, and comprehensive programs of financial aid are allowing us to prepare gifted young men and women to assume leadership roles in medicine.

David Rhee, MD, '16, now a resident in internal medicine at NYU Langone





Brian Sanders, MD, '16, now a resident ▲
in otolaryngology–head and neck surgery
at NYU Langone

The Three-Year Pathway, Refined

Few moments in a medical student's life are more pivotal—and stressful—than the residency match. It consumes much of the fourth year of medical school, as students travel for interviews and do “away” rotations, which are more or less auditions for residency.

As an alternative, in 2013 NYU School of Medicine launched the novel Three-Year MD Pathway, a program that allows select students who are certain of which specialty they want to pursue to skip the final year altogether and start residency one year sooner than conventional students. Last summer, in a testament to the program's success, 15 of the 16 members of the inaugural class graduated, entering residency programs, mostly at NYU Langone.

So far, the compressed schedule hasn't hampered performance. In fact, it's done just the opposite. “Third-year students outperformed fourth-year students in terms of clinical skills and knowledge on tests conducted in our simulation center last spring,” reports Steven B. Abramson, MD, vice dean for education, faculty, and academic affairs, and chair of the Department of Medicine.

While members of the debut class had to be accepted into the pathway—making their residency choice on day one of medical school—members of subsequent classes can now apply for accelerated study midway through their first year. The opportunity to “opt in” later is proving popular: in the second class, 12 students were

accepted at the outset of medical school and 10 more opted in.

NYU School of Medicine will continue to evaluate students in the program and follow them through their residencies. “This isn't just a fast track,” says Joan Cangiarella, MD, director of the Three-Year MD Pathway and associate dean for education, faculty, and academic affairs. “It's also a unique opportunity to follow and assess learners across the continuum of undergraduate-graduate medical education.”

As part of that broader effort, NYU School of Medicine leads a consortium of 12 medical schools with three-year accelerated medical pathway programs—up from 8 the year before. Supported by a four-year, \$250,000 grant from the Josiah Macy Jr. Foundation, the consortium aims to set national standards for accelerated pathways, provide opportunities for collaboration, and offer guidance to institutions considering the implementation of an accelerated program. “Our big goal over the next few years is getting the rest of the medical profession to accept the notion of an accelerated pathway,” Dr. Abramson concludes. ■



▲ Devon Ryan, MD, '16, now a resident in orthopaedic surgery at NYU Langone

Priced Out? Not Here.

One shouldn't have to come from a wealthy family or incur crushing debt to become a doctor. Yet the cost of medical education continues to climb, and the social consequences are profound. The prospect of debt—\$165,000 on average for medical students—turns many gifted young people away from medicine to seek careers elsewhere, and students from underrepresented minority groups may also shy away from applying to medical school when faced with daunting financial challenges.

But NYU School of Medicine is determined that the cost of medical training must not discourage future doctors from pursuing their dreams. "We have three main goals: to matriculate the very best applicants, to recruit a diverse student body, and to have our students graduate with the least amount of debt possible," says Rafael Rivera, MD, associate dean for admissions and financial aid.

In 2016, the school met, and even exceeded, all these targets. The grade-point average and Medical

College Admission Test scores of the incoming class were the highest they've ever been; 20% of the class came from minority populations, including African-Americans, Latinos, Native Americans, and others; and student debt continued a downward trajectory.

"We pride ourselves on having student indebtedness that is below the average at both private and public medical schools nationwide," says Dr. Rivera. He credits this distinction to a strong institutional commitment to financial aid, the generosity of donors, and fruitful collaborations among colleagues in Development, Alumni Affairs, the Office of Financial Aid, and the Office of Finance. He adds, "What we do here—both in terms of lowering costs and offering financial aid, and in terms of fostering diversity in our student body—will have an enormous impact on healthcare delivery for years to come." ■



▲ Xinlin Chen, MD, '16, now a resident in psychiatry at NYU Langone

“What we do here—both in terms of lowering costs and offering financial aid, and in terms of fostering diversity in our student body—will have an enormous impact on healthcare delivery for years to come.”

RAFAEL RIVERA, MD
ASSOCIATE DEAN FOR ADMISSIONS
AND FINANCIAL AID

Training Doctors in the Information Age

Advances across a spectrum of technology—from big-data analytics to connectivity that links people to people, people to machines, and machines to machines—are shaking up the ways in which medical students and residents learn.

A central change agent at NYU School of Medicine is the Institute for Innovations in Medical Education (IIME), led by NYU Langone's Marc Triola, MD, associate professor of medicine and associate dean for educational informatics. One of the nation's largest medical-innovation education groups, IIME comprises educators, education scientists, informaticians, and developers who collaborate on ways to transform teaching and learning. "As patient care evolves, medical education needs to evolve along with it," says Crystal Mainiero, the institute's executive director. "IIME helps us stay ahead of the technology curve."

In the past year, IIME piloted several tools that are bringing computer-assisted instruction, student evaluation and assessment, and learning analytics to the next level.

Here, the highlights:

A COMET's Tale

End-of-shift evaluations are a vital part of medical training, but traditionally they've been private conversations between a resident or medical student and faculty. Now, thanks in part to IIME's Learner iPad Program, which provides every medical student and resident with an iPad Mini, NYU School of Medicine students receive on-the-

spot skills assessments, mediated by an innovative app called COMET, for Collaborative Organizational Mobile Evaluation Tool. Launched last summer in partnership with the Emergency Medicine Advanced Elective and the Pediatrics Clerkship, COMET allows learners to complete a self-assessment at the end of their shift or after an oral presentation during rounds, while faculty members use that very same iPad to immediately complete their own assessment of the student. With the push of a button, the COMET app displays a comparison of the student and faculty member's assessments, initiating a real-time face-to-face conversation about a student's clinical performance.

The power of COMET goes beyond real-time feedback. Data collected from the assessments will be aggregated and analyzed over time to gain insights into how students learn and to develop more-effective teaching strategies.

The Right Message at the Right Time

The amount of information available at a medical student's fingertips is vast. But it's often difficult to quickly and effectively navigate to the appropriate resources. Tiny Bluetooth transmitters are starting to change that.

Known as iBeacons, these devices are able to precisely sense a user's smartphone or iPad location and transmit personalized messages to the device, triggering proximity-aware content.

Working with the Morphological and Developmental Basis of Medicine faculty, IIME has piloted iBeacons in the

anatomy laboratory. The beacons sense when students enter the lab, and send them the materials they will need for that session—from PDFs to Web pages to videos. The beacons can also direct a student to explore specific areas of the body using three-dimensional models of cadavers or pathology specimens, depending on the student's physical location within the lab and where they are in their coursework.



▲ Yasaman Yaghoubian, MD, '16, now a resident in obstetrics/gynecology at NYU Langone

21st-Century Crystal Ball

Thanks to the advent of predictive analytics, the age-old dream of foreseeing the future is fast becoming a reality in medical education. Predictive analytics use technology and statistical methods to comb through massive amounts of data and create algorithms to anticipate future outcomes—essentially turning knowledge into action. At NYU School of Medicine, data is continually

collected from students' iPads and drawn into NYU Langone's Education Data Warehouse, where information from an array of sources can be mined, informing strategic planning and program evaluation, as well as assessing student progress. "We want to be able to act quickly on data," says Dr. Triola, "so that we can ensure student success and the best outcomes possible." ■



"As patient care evolves, medical education needs to evolve along with it. IIME helps us stay ahead of the technology curve."

CRYSTAL MAINIERO
EXECUTIVE DIRECTOR, INSTITUTE FOR
INNOVATIONS IN MEDICAL EDUCATION





Build

|
&
|

Enhance

CAMPUS TRANSFORMATION

NYU Langone's Campus Transformation is the most sweeping revitalization program in its history, dramatically reshaping the institution—not only physically, but clinically, scientifically, and educationally. Through a host of renovation and construction projects, we are fulfilling an overarching strategic vision: to offer a seamless patient experience on our main campus, expand our research and education enterprises, and build a robust infrastructure that will meet our space and energy needs well into the future.



KIMMEL PAVILION UPDATE

In June 2016, the Helen L. and Martin S. Kimmel Pavilion reached its full height when the last steel beam was hoisted into place. An 830,000-square-foot clinical-care facility with a patient-centered design, the Kimmel Pavilion will adjoin NYU Langone’s flagship Tisch Hospital. The buildings will be connected on floors where procedures and imaging are performed, as well as on the lobby level concourse, to foster a seamless patient experience. When the Kimmel Pavilion opens in 2018, it will be the only hospital in New York City with all single-bed inpatient rooms, which enhance infection control, allow for a more efficient work flow, and better accommodate a patient’s family and visitors. It will house the Hassenfeld Children’s Hospital of New York. Other highlights include state-of-the-art procedure rooms and advanced IT systems with interactive digital displays in patient rooms. The building will be equipped with a three-megawatt heating and power system to improve energy efficiency and reduce operating costs.



ENERGY BUILDING UPDATE

NYU Langone’s new Energy Building—the centerpiece of the Medical Center’s strategy to be independent, reliable, and resilient in the event of a citywide power outage—was substantially completed in 2016 and is now operational. The 71,000-square-foot, environmentally friendly building houses a cogeneration plant that reduces energy consumption and emissions. The plant can generate up to 11 megawatts of electric power, which will meet approximately 70% of the future electrical needs of the main campus, and 100% of its steam needs. When connected to the new Helen L. and Martin S. Kimmel Pavilion and the Science Building in 2018, the cogeneration plant will cut NYU Langone’s utility costs by an estimated \$17 million annually. The plant’s gas turbine generator and boilers can operate on either natural gas or on-site liquid fuel oil (if gas service is interrupted)—the cornerstone of the Medical Center’s commitment to meeting New York City’s goal of a 50% reduction in greenhouse gas emissions.



TISCH HOSPITAL

A state-of-the-art hybrid operating room—so called because it combines a lead-lined catheterization lab used for imaging blood vessels, and a conventional OR equipped for open surgery—opened in April on the sixth floor of Tisch Hospital, adjacent to an existing hybrid OR. Twice the size of a conventional operating theater, the hybrid OR is designed for nonsurgical procedures used to treat heart, brain, and vascular conditions. The room’s sophisticated imaging tools enable surgeons to peer inside the body, navigating through blood vessels. Its centerpiece is a low-dose X-ray machine with a robotic camera that affords views from any angle. “Hybrid ORs are game changers,” explains Mathew Williams, MD, a pioneer in catheter-based heart valve repairs and the director of NYU Langone’s Heart Valve Center. “Without them, many of the most complex, minimally invasive cardiac, vascular, and neurovascular procedures would be difficult or even impossible.” The sixth floor also acquired two endoscopy procedure suites with a nurses’ station, storage space, and two bays for patients awaiting procedures.



SID AND RUTH LAPIDUS HEALTH SCIENCES LIBRARY

Save for a small circulating collection in the medical humanities and bioethics, the new Sid and Ruth Lapidus Health Sciences Library is essentially a library without books. Yet it houses more volumes—in the form of 50,000 e-books—than ever before. It also provides access to 15,000 e-journals and 250 databases, as well as to the vast holdings of New York University’s libraries. Named for its benefactors, an NYU Langone trustee and his wife, the facility is notable for being the first all-digital library of a long-established American medical school. The library, which opened in June 2016, is centrally located on the ground floor of the Medical Science Building, occupying roughly the same space as its predecessor, which was destroyed by Superstorm Sandy in 2012. To accommodate the approximately 800 daily patrons, there are six small group study rooms, a quiet reading room, a common lounge, a large classroom, a technology innovation room, and a large interactive display. Some 30 computer workstations take the place of a card catalog. A two-story-high display wall showcases rotating exhibits of artifacts relating to NYU School of Medicine’s 175-year history and the medical profession.



SCIENCE BUILDING

NYU Langone plans to double its laboratory space over the next several years, and the new Science Building, a 16-story biomedical research facility to be completed next year, will play an integral role in that expansion. Situated along East 30th Street and the FDR Service Road, the building incorporates 10 floors of state-of-the-art laboratory space, core facilities, a vivarium, public meeting areas, and a café. Augmenting the Medical Center's existing strength in biomedical research, the building will accommodate new recruits and projected growth in funded research. Its environmentally friendly design—open, flexible, and adaptable—will enable investigators, clinicians, and students to work efficiently and collaboratively. In 2016, the building's exterior was completed, its elevators were installed, and a bridge to the adjoining Smilow Research Center was built to help integrate clinicians and researchers throughout the Medical Center. Outfitting of laboratories will continue into 2017.

ALEXANDRIA CENTER FOR LIFE SCIENCE, WEST TOWER

NYU Langone is expanding its off-campus research capabilities by constructing a 120,000-square-foot research facility at the Alexandria Center for Life Science, West Tower, at 430 East 29th Street. The Alexandria Center is New York City's first and only life science and technology urban campus. In 2016, construction on the second and third floors of the West Tower was completed for NYU Langone biomedical researchers in the Department of Microbiology and in the Division of Infectious Diseases in the Department of Medicine. The two floors also house a new Animal Biosafety Level 3 facility, including a vivarium and an insectary.



NYU LUTHERAN MASTER PLAN

The NYU Lutheran Master Plan establishes a framework for capital projects that enhance patient access and care at NYU Lutheran and its network of ambulatory care facilities. Key initiatives include a new acute-care building on NYU Lutheran's main campus in southwest Brooklyn, modernization and expansion of the mother-baby unit, an increase in the proportion of private patient rooms and the number of beds in the intensive care and step-down units, renovation and expansion of the Cardiac Catheterization Lab, and a new 16-bed observation unit adjacent to the Emergency Department for short-stay hospitalizations. Offsite projects include a new cancer center and an ambulatory-surgery center with six operating rooms and two endoscopy suites.

Attract

&

Retain

APPOINTMENTS AND RECRUITS

NYU Langone's excellence in patient care, scientific research, and medical education stems from its success in another area: our ability to recruit and retain the best minds in medicine and biomedical research.



BRET J. RUDY, MD

Bret J. Rudy, MD, was appointed executive hospital director and senior vice president of NYU Lutheran Medical Center, an acute care teaching hospital in southwest Brooklyn’s Sunset Park neighborhood. Dr. Rudy previously served as NYU Lutheran’s chief medical officer. In his new role, Dr. Rudy is responsible for improving operational efficiencies and enhancing the scope and quality of care and services at NYU Lutheran.

A longtime faculty member and board-certified adolescent medicine physician at NYU Langone, Dr. Rudy earlier served as vice chair of the Department of Pediatrics. Prior to

assuming his leadership posts at NYU Lutheran, he was instrumental in laying the groundwork for the establishment of pediatric subspecialty services there, including pediatric gastroenterology, pulmonology, and cardiology, and a pediatric hospitalist program. Dr. Rudy has since played a central role in the overall transformation of NYU Lutheran’s quality initiatives and clinical programs. He earned his MD from the University of Pittsburgh School of Medicine and completed his residency and fellowship training at the Children’s Hospital of Philadelphia.



JOSEPH WEISSTUCH, MD

Joseph Weisstuch, MD, was appointed chief medical officer of NYU Lutheran Medical Center, having previously served as assistant chief medical officer. In his new role, he oversees the institution’s quality and safety measures, ensuring that NYU Langone’s culture, as well as its rigorous standards, are integrated at NYU Lutheran. Dr. Weisstuch, a board-certified nephrologist, leads a team

focused on patient outcomes, community health, and the use of proven best practices for clinical care.

A member of the NYU Langone community for 35 years, he earned his MD from NYU School of Medicine and completed his residency and fellowship training at Tisch Hospital and Bellevue Hospital Center.



ANDREW S. CHI, MD, PHD

Physician-scientist and brain tumor expert Andrew S. Chi, MD, PhD, was appointed the new chief of neuro-oncology at the Laura and Isaac Perlmutter Cancer Center.

Dr. Chi, who joins the faculty following a distinguished career at Massachusetts General Hospital, Dana-Farber/Harvard Cancer Center, and Harvard Medical School, will lead all neuro-oncologic-related programs. In addition, he will colead the Brain Tumor Center with John G. Golfinos, MD, chair of the Department of Neurosurgery.

Dr. Chi's clinical work includes the neuro-oncologic treatment of primary brain tumors, metastatic tumors of the central nervous system, and the neurologic complications of cancer. His

research focuses on the identification of molecular alterations that underlie the development, progression, and treatment resistance of brain tumors.

He earned his MD and a PhD in biochemistry and molecular biology from Chicago Medical School and did his residency in neurology at Massachusetts General Hospital and Brigham and Women's Hospital. He completed fellowship and postdoctoral research at Dana-Farber Cancer Institute/Massachusetts General Hospital.

Dr. Chi has received more than a dozen scientific awards and honors and has served as principal or coinvestigator for 16 clinical trials.



HELEN EGGER, MD

Helen Egger, MD, a distinguished child psychiatrist and researcher, was appointed chair of the Department of Child and Adolescent Psychiatry and director of the Child Study Center.

Dr. Egger joined Hassenfeld Children's Hospital of New York at NYU Langone from Duke University Medical Center, where she served as chief of the Division of Child and Family Mental Health and Developmental Neuroscience and vice chair for Integrated Pediatric Mental Health in the Department of Psychiatry and Behavioral Sciences.

Dr. Egger is known for her seminal work in preschool mental health and

developmental epidemiology. In addition to her studies of anxiety in preschool-age children, Dr. Egger has developed innovative tools to gather and analyze information about children's emotions and behaviors. Among these tools is an iPhone app for parents to screen young children for autism and other disorders.

A cum laude graduate of Yale University School of Medicine, Dr. Egger completed an internship at Georgetown University Medical Center and residencies, as well as postdoctoral training, in child and adult psychiatry at Duke.



MARY PAT GALLAGHER, MD

Distinguished pediatric endocrinologist Mary Pat Gallagher, MD, was named the inaugural director of the new Robert I. Grossman, MD, and Elisabeth J. Cohen, MD, Pediatric Diabetes Center at NYU Langone. Newly recruited in 2016, Dr. Gallagher, assistant professor of pediatrics, previously served as codirector of the pediatric diabetes program at the Naomi Berrie Diabetes Center at Columbia University Medical Center for more than 10 years. She was also an assistant professor of pediatrics and an assistant attending at the Morgan Stanley Children's Hospital of New York-Presbyterian.

As part of Hassenfeld Children's Hospital of New York at NYU Langone, the Pediatric Diabetes Center, supported by an anonymous

\$10 million gift, will provide comprehensive care and support for children and families living with diabetes, one of the most common chronic diseases among school-age children. In collaboration with the Sala Institute for Child and Family Centered Care, the center will also provide comprehensive psychosocial support and wellness services.

After earning an MD from the University of Medicine and Dentistry of New Jersey, Dr. Gallagher was chief resident in pediatrics and then a fellow in pediatric endocrinology at Columbia University Medical Center. Her articles have been published in numerous peer-reviewed journals, including *Diabetes*, *The Journal of Pediatrics*, and *Pediatric Diabetes*.



LEENA GANDHI, MD, PHD

Thoracic cancer physician and researcher Leena Gandhi, MD, PhD, was appointed director of thoracic medical oncology at the Laura and Isaac Perlmutter Cancer Center. In this role, Dr. Gandhi is building a lung cancer program focused on advancing clinical care and increasing translational and clinical research, particularly in immunotherapies.

Prior to joining the Perlmutter Cancer Center, Dr. Gandhi served at the Dana-Farber Cancer Institute, Brigham and Women's Hospital, and Harvard Medical School. At Dana-Farber, she was a member of the Lowe Center for Thoracic Oncology and the Early Stage Drug Development Center.

Her research is focused on novel

therapies for the treatment of lung cancer, and biomarkers of tumor progression. In 2014, she served as lead investigator on a seminal phase 1 clinical trial that found that PD-1 expression in lung cancer patients correlated with the efficacy of anti-PD-L1 checkpoint inhibitors.

Dr. Gandhi received her MD from NYU School of Medicine and her PhD in molecular and cell biology from the University of California, Berkeley. She completed her residency at Massachusetts General Hospital and did fellowship training in medicine and hematology/oncology at Harvard Medical School, Dana-Farber/Partners in Cancer Care, and Brigham and Women's Hospital.



SHOHEI KOIDE, PHD

Shohei Koide, PhD, an internationally recognized leader in protein engineering, was named the inaugural director of an innovative new biologics research program at the Laura and Isaac Perlmutter Cancer Center. Biologics are medicinal products derived from biological, as opposed to chemical, resources.

Dr. Koide joined the Perlmutter Cancer Center after serving on the faculty of the University of Chicago, most recently as director of the medical school's biomolecular nuclear resonance facility and a member of its Commission on Cancer Biology.

He is known for his work in the development of "monobodies," designer binding proteins with antibody-like

properties, and in integrating rational design and molecular evolution technologies for biologics development. His research has been directed to the design and engineering of protein recognition interfaces, which is the fundamental knowledge that contributes to the creation of new biologics.

Dr. Koide earned his PhD in agricultural chemistry from the University of Tokyo and did a postdoctoral research fellowship at The Scripps Research Institute in La Jolla, California. He has published more than 90 peer-reviewed articles and holds several US and overseas patents on findings resulting from his research.



DOUGLAS A. LEVINE, MD

Internationally recognized surgeon and scientist, Douglas A. Levine, MD, joined the faculty as director of the Division of Gynecologic Oncology at the Laura and Isaac Perlmutter Cancer Center and director of the Department of Obstetrics and Gynecology.

Dr. Levine, whose seminal biomarker research has helped advance the early detection and treatment of ovarian cancer, comes to NYU Langone after a distinguished career at Memorial Sloan Kettering Cancer Center, where he served as an attending physician and head of the Gynecology Research Laboratory.

He received his MD from Mount Sinai School of Medicine and did his residency in obstetrics and gynecology at Mount Sinai Medical

Center. Dr. Levine then completed a gynecologic oncology fellowship at Memorial Sloan Kettering and two years of laboratory research there. A prolific researcher and educator, he has authored or coauthored more than 150 peer-reviewed publications and two textbooks. His many awards and honors include the American College of Obstetricians and Gynecologists Mentor Award and the 2013 Foundation for Women's Cancer Excellence in Ovarian Cancer Research Prize. He has also been active in the NIH-sponsored Cancer Genome Atlas project and is a member of the Scientific Advisory Committee of the Ovarian Cancer Research Fund, the Clarity Foundation, and the Honorable Tina Brozman Foundation.



ROBERT A. MONTGOMERY, MD, DPHIL

Robert A. Montgomery, MD, DPhil, an internationally renowned transplant surgeon, was appointed inaugural director of NYU Langone's new Transplant Institute. His charge is to broaden the Medical Center's existing expertise in transplantation and advance surgical approaches that address the needs of a growing and increasingly diverse patient population. Previously, he served as chief of the Division of Transplantation at The Johns Hopkins Hospital, where he was director of the Comprehensive Transplant Center and the Incompatible Kidney Transplant Program.

At Johns Hopkins, Dr. Montgomery's groundbreaking work included laparoscopic innovations for live-kidney donation, now a standard practice

worldwide. His team also accomplished many other firsts, including multiway donor, or domino, exchanges. These occur when a living kidney donor who is not compatible with a particular recipient donates a kidney to another recipient, and that recipient's original, incompatible donor provides a kidney to another patient. This enables two recipients to receive healthy kidneys, where no transplants were possible before.

Dr. Montgomery earned his MD from the University of Rochester School of Medicine and his DPhil from Balliol College at the University of Oxford, England. He completed his surgical training and postdoctoral fellowships at Johns Hopkins.



FEZA REMZI, MD

Renowned colorectal surgeon, Feza Remzi, MD, was appointed director of NYU Langone's Inflammatory Bowel Disease Center. Dr. Remzi is a pioneer in the surgical treatment of inflammatory bowel disease and other complex colorectal conditions, employing minimally invasive approaches. He specializes in rectal operations that spare the sphincter, reoperative abdominopelvic surgery, and procedures involving J-pouches—an alternative way for patients who have had their colons and rectums removed to store and pass stool.

Dr. Remzi comes to NYU Langone from the Cleveland Clinic, where he served as chair of the Department of Colorectal Surgery. A native of Turkey, he earned his MD from Hacettepe

University School of Medicine in Ankara and completed his general surgery residency and fellowship in colon and rectal surgery at the Cleveland Clinic.

The author of more than 320 peer-reviewed articles and book chapters, Dr. Remzi has held leadership positions in several surgical societies and serves on the executive council of the American Society of Colon and Rectal Surgeons.



JEFFREY S. WEBER, MD, PHD

Immunotherapy expert Jeffrey S. Weber, MD, PhD, was appointed deputy director of the Laura and Isaac Perlmutter Cancer Center, overseeing its work in experimental therapeutics.

Dr. Weber's research focuses on experimental therapeutics and drug development, particularly immunotherapy and checkpoint inhibitory antibody development in melanoma and other cancer types. His laboratory interests are in the monitoring and characterization of T cell responses in patients with cancer who are undergoing immunotherapy and the establishment of animal models to further understandings of immune modulation.

Before joining the Perlmutter

Cancer Center, Dr. Weber served as a senior member of the H. Lee Moffitt Cancer Center in Tampa, Florida, and director of its Donald A. Adam Comprehensive Melanoma Research Center. He earned his MD from NYU School of Medicine and his PhD in molecular cell biology from The Rockefeller University. He did his residency at the University of California, San Diego, and completed fellowship training in medical oncology and tumor immunology at the National Cancer Institute.

Dr. Weber has published more than 150 peer-reviewed articles and sits on the scientific advisory boards of numerous cancer institutions and foundations.



KWOK-KIN WONG, MD, PHD

The Perlmutter Cancer Center at NYU Langone named noted clinician-scientist Kwok-Kin Wong, MD, PhD, as its new chief of hematology and medical oncology. Dr. Wong joined the institution after a decades-long career at Harvard Medical School and the Dana-Farber Cancer Institute. A professor of medicine and a practicing clinical oncologist, his world-renowned research has provided new insight into the genetic and environmental causes of lung-cancer, enabling testing of novel lung cancer therapies. He is widely recognized for elucidating the link between mutated genes, such

as EGFR and ALK, and PI3 kinases, and lung-cancer development.

Dr. Wong earned his MD and PhD in the Integrated Program in Cellular, Molecular, and Biophysical Studies at Columbia University's College of Physicians and Surgeons. He completed a residency in internal medicine at Massachusetts General Hospital and a fellowship in hematology-oncology at Dana-Farber. His laboratory has been consistently funded by the NIH and NCI, as well as by the National Institute on Aging.



ITAI YANAI, PHD

Itai Yanai, PhD, was named the inaugural director of NYU Langone's Institute for Computational Medicine, a hub for multidisciplinary efforts to answer the most pressing biological and medical questions, using innovative computational approaches and data-driven research. Dr. Yanai, professor of biochemistry and molecular pharmacology, came to NYU Langone from the Technion–Israel Institute of Technology, where his research focused on gene regulation through the lens of evolution and embryonic development. His laboratory pioneered

a method for analyzing single-cell gene expression, now used in his lab to explore the progression of cancer and the process of infection.

Widely recognized for his contributions to science, Dr. Yanai has received many distinctions, including a 2014 fellowship at the Radcliffe Institute for Advanced Study at Harvard University and the Krill Prize of the Wolf Foundation for Excellence in Scientific Research. In 2002, he became the first person to earn a PhD in bioinformatics from Boston University.



Support

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Sustain

PHILANTHROPY

Major gifts from generous benefactors made it possible for us to offer scholarships to more students at NYU School of Medicine and provide outstanding care for children with diabetes, a growing epidemic in the United States.

A Perfect Prescription: Debt-Free Medical School

Generous, farsighted philanthropists make it possible for NYU School of Medicine to offer a select group of gifted students an entirely debt-free education and to defray a great deal of the cost of medical training for others.

The cost of a world-class medical education should not deter future doctors from following their dreams. Several significant scholarship funds have allowed NYU School of Medicine to attract exceptionally gifted students and to offer admission to young men and women who represent the diversity of our nation, and have given students the opportunity to pursue their passions rather than seek out the most lucrative career paths. The legacy of such scholarships is a cadre of physicians driven by the desire to serve and equipped

with the skills to meet the changing healthcare needs of an increasingly diverse spectrum of patients.

In 2016, 34 students at NYU School of Medicine received full scholarships financed by philanthropy, including these scholarship funds:

- The **Silverstein Scholarship Fund**, established in 2012 by Medical Center Trustee **Larry Silverstein and his wife, Klara**, provides full-tuition scholarships for five students annually with selections based largely on academic merit, although financial need is considered. In 2016, the total number of Silverstein Scholars reached 25.
- In 2016, **Jan T. Vilcek, MD, PhD**, celebrated microbiologist, Medical Center Trustee, and faculty member of NYU School of Medicine, along

with his wife, Marica, funded two full-tuition, merit-based scholarships, bringing the total number of Vilcek Scholars to 12.

- The **Kenneth G. Langone Scholarship Fund** awarded 15 scholarships in 2016. Created in honor of Mr. Langone, chair of the Board of Trustees of NYU Langone Medical Center, the fund was launched in 2011 with an anonymous \$5 million gift. ■

A New Center Addresses a Major Health Concern among Children and Adolescents

Diabetes is one of the most common chronic illnesses in school-age children. In the US, both type 1 and type 2 diabetes are increasing among children and young adults. A new pediatric diabetic center tackles the problem.

In 2016, an anonymous \$10 million gift established the new Robert I. Grossman, MD, and Elisabeth J. Cohen, MD, Pediatric Diabetes Center. Named in honor of NYU Langone's Saul J. Farber Dean and CEO and his wife, Elisabeth J. Cohen, MD, professor of ophthalmology

at NYU School of Medicine, the center expands the internationally recognized care provided to children and adolescents by the Hassenfeld Children's Hospital of New York at NYU Langone.

"Elisabeth and I are enormously humbled with this extraordinary gesture of support for the work we do at NYU Langone in pediatric medicine," says Dr. Grossman. "Our institution has long been a leader in the field of pediatric endocrinology. This gift will serve to strengthen our already outstanding

clinical, academic, and research programs and offers a new center in which we can provide multidisciplinary care and support for children and families living with all forms of diabetes."

Distinguished pediatric endocrinologist Mary Pat Gallagher, MD, serves as the center's inaugural director. ■

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Design: Ideas on Purpose
Photography: Sasha Nialla, Michael Grecco
Writer: Celia Gittelson
Produced by the Office of Communications and Marketing, NYU Langone



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