Notes on a
REMARKABLE YEAR
### TABLE OF CONTENTS

- **LETTER FROM KEN LANGONE AND BOB GROSSMAN**
  - 02
- **PATIENT SAFETY AND QUALITY**
  - 04
- **MULTIDISCIPLINARY ADVANTAGE**
  - 10
- **RESEARCH**
  - 16
- **NYU SCHOOL OF MEDICINE**
  - 20
- **NEW APPOINTMENTS AND RECRUITS**
  - 24
- **CAMPUS TRANSFORMATION**
  - 28
- **PHILANTHROPY**
  - 32
- **DONORS**
  - 36
- **TRUSTEES**
  - 42
- **LEADERSHIP**
  - 43
- **FACTS AND FIGURES**
  - INSERT
LETTER FROM THE CHAIR OF THE BOARD AND THE DEAN & CEO

KENNETH G. LANGONE
CHAIR, BOARD OF TRUSTEES

ROBERT I. GROSSMAN, MD
DEAN & CEO
This past year was remarkable, as the following pages will attest. As a result of the commitment to safety and quality at Tisch Hospital and Hospital for Joint Diseases, we were ranked #1 for overall patient safety and quality among leading academic medical centers across the nation in the University HealthSystem Consortium (UHC) 2013 Quality and Accountability Study—and we just received word that we are once again ranked #1 for 2014. Meanwhile, NYU Langone is ranked #15 in the nation on U.S. News & World Report’s “Best Hospitals 2014–15 Honor Roll.” Finally, Tisch Hospital and Rusk Rehabilitation received Magnet™ recognition for nursing excellence for the third consecutive time, a distinction achieved by less than 2% of hospitals nationwide.

Groundbreaking results have come from both our basic science and clinical faculty in a wide range of areas, such as the role of oxytocin in autism; genetic mutations in epilepsy; the influence of epigenetics on aging and lifespan; the link between the gastrointestinal microbiome and obesity; and triggers for chronic inflammation in Alzheimer’s, atherosclerosis, and type-2 diabetes. In an era of declining federal funding, our NIH portfolio increased some 40% over the previous year, from $172.9 million in FY13 to $245 million in FY14.

In education, trailblazing initiatives, such as the implementation of our patient-centered, disease-focused Curriculum for the 21st Century and the launch two years ago of our first-of-its-kind three-year MD pathway, have burnished our reputation as a national leader in medical education reform. High-profile accomplishments such as these, together with outstanding student and faculty achievement statistics, have contributed to our ongoing rise on the U.S. News & World Report “Best Graduate Schools” rankings. Today, we are ranked in the top 20.

NYU Langone is experiencing a period of unprecedented growth and transformation. We opened the state-of-the-art Ronald O. Perelman Center for Emergency Services. This 22,000-square-foot facility more than triples the size of the former emergency department and offers an array of specialty services, including the KiDS of NYU Pediatric Emergency Care Center and the Comprehensive Stroke Care Center. We also broke ground on two major facilities: the Science Building, which will expand our current 550,000-square-foot research space, and the 21-story Kimmel Pavilion, which will redefine the healthcare environment as we know it and revolutionize the delivery of inpatient and acute care.

Our three-pronged mission continues to drive and inspire everything we do at NYU Langone. Whether it’s providing optimum care at all stages of life, creating groundbreaking physician-training programs that have real-world relevance, or expanding the frontiers of medical science, the talents and energies of our extraordinary community remain focused on our fundamental goals: to serve, to teach, to discover.
PATIENT SAFETY AND QUALITY

In 2013, NYU Langone ranked #1 for overall patient safety and quality among leading academic medical centers nationwide that participated in the University HealthSystem Consortium Quality and Accountability Study. Here are just a few reasons why.
Adem Gonultas, born at NYU Langone, September 2014.
AROUND-THE-CLOCK VIGILANCE FOR PRECIOUS NEW ARRIVALS

Few events in life are more wondrous than childbirth. At NYU Langone, where we deliver more than 5,000 babies every year, our goal is to ensure a safe, positive birthing experience for every one of our patients. Our family-centered philosophy emphasizes teamwork, preparedness, respect for mother-infant bonding, and, above all, a culture of safety and continual improvement. At the heart of that culture is a unique team of safety officers composed of veteran obstetricians who are available around-the-clock during labor and delivery for one purpose, and one purpose only: to ensure the well-being and safety of every patient on the floor. “We have our finger on the pulse of everything that’s happening in the labor and delivery unit,” says William E. Schweizer, MD, service chief and vice chair, clinical affairs medical director, Department of Obstetrics and Gynecology.

VETERAN HANDS PROVIDE A TRUSTED SAFETY NET

Iffath A. Hoskins, MD, has delivered thousands of babies during her 30 years as an obstetrician specializing in high-risk pregnancies. “With decades of experience comes the ability to comfortably manage any situation that arises,” says Dr. Hoskins, clinical associate professor, Department of Obstetrics and Gynecology.

Such expertise is essential in her role as director of NYU Langone’s Safety Officer Program, an innovative program consisting of an A-team of five veteran obstetricians, including Dr. Hoskins, who take turns monitoring the labor and delivery floor 24 hours a day, 365 days a year. “Our program ensures that while every patient in labor and delivery has her own attending physician, there is always another highly experienced clinician on the floor who can do anything for any patient at any time, whether it’s starting an emergency cesarean section or handling a patient when the attending physician is not immediately available,” says Dr. Hoskins.

Dr. Hoskins recalls one recent evening when a nurse caring for a patient in labor noticed a sharp drop in the baby’s heart rate. The patient’s attending physician was performing surgery, so the nurse called Dr. Hoskins, who was on the scene in seconds to address the problem. “Everyone on the floor takes comfort knowing that if the attending physician is unavailable, another veteran doctor will be on hand,” says Dr. Hoskins.

Dr. Schweizer (left) and Dr. Hoskins (middle) discuss a case in the labor and delivery unit.
“Giving birth is a joyous, celebratory event. Our safety officers are there to augment that positive experience. They stand in the shadows, ready to lend a seasoned hand if complications arise.”

What makes NYU Langone’s Safety Officer Program unique is that the officers have just one responsibility: to protect the well-being of patients in the labor and delivery unit. “Attending physicians have individual patients,” explains Dr. Hoskins. “For safety officers, our only patients are safety and quality.”

Safety officers also head safety rounds twice a day, monitor safety trends, file safety and quality reports as needed, and attend conferences and meetings, all to help keep the labor and delivery unit at its sharpest. Last year, for example, Dr. Hoskins and her fellow safety officers helped expand a cutting-edge protocol to quantify and monitor blood loss to prevent and treat hemorrhage, the number one cause of maternal death in the United States. “It’s made a significant impact,” says Dr. Hoskins. “The protocol allows us to nip bleeding complications in the bud at much earlier stages of the complication.”

SIMULATIONS TAKE SAFETY TRAINING TO A NEW LEVEL

It happens in a flash. A patient is recovering after a successful birth when she begins to bleed heavily. She calls for a nurse, who notices the patient’s vital signs faltering. What happens next will either stabilize the patient or escalate the emergency. Dr. Hoskins, assistant professor in the Department of Obstetrics and Gynecology, who helps lead the on-site simulation exercises.

The program employs professional actors who play the role of patients and high-tech mannequins that allow doctors and nurses to perform actual procedures. After each exercise, participants break down the team’s performance, discussing challenges and critical questions: Who was the leader? Did teammates close the loop on every conversation? Were instructions understood?

At NYU Langone, every obstetrician, nurse, anesthesiologist, and technician in the Department of Obstetrics and Gynecology has a chance to rehearse and analyze this and dozens of other emergency obstetrical scenarios, thanks to an innovative medical simulation program. Mandatory for all department staff, the simulations can take place at any time of the day. Some occur at the New York Simulation Center for Health Science, directed by Veronica Lerner, assistant professor in the Department of Obstetrics and Gynecology. Others occur on-site, in the emergency department, the delivery room, on the postpartum floor — anywhere actual obstetrical emergencies unfold. “Training staff in a real-world setting helps people respond faster and more effectively to crises,” says Jerome Lax, MD, associate director of OB Anesthesia in the Department of Anesthesiology, who helps lead the on-site simulation exercises.
EXECUTIVE SAFETY ROUNDS: HONEST CONVERSATIONS AMONG STAFFERS ENCOURAGE AN AWARD-WINNING CULTURE OF SAFETY AND QUALITY

Maxine Simon leads executive safety rounds on the endoscopy floor.

Four times a year, Maxine Simon, chief regulatory officer, and her colleagues in executive leadership visit more than 105 locations at NYU Langone, where they engage staff in frank discussions about patient safety. The visits, known as Executive Patient Safety Rounds, include clinical units like operating rooms and ambulatory care centers, but also extend to specialty groups such as food and building services. “It’s not about placing blame. It’s about understanding that the goal is to provide all of our staff with an opportunity to share information about safety issues,” says Simon. “It’s about understanding the root cause of issues that compromise safety and then facilitating solutions.”

Simon, who refers to the visits as “listening rounds,” thinks of her team as a professional sounding board. Each visit begins with a volley of questions to staffers: Are you comfortable speaking up if you have a concern? Are you able to care for patients safely? How can leadership further support safety efforts on this unit? After each meeting, Simon’s team shares a summary of the session with staff to confirm what they heard, analyzes the feedback, and then works with leadership to address issues flagged in the meetings. “We want to be in compliance with all regulations, but it’s not so we can check off a box,” Simon explains. “It’s to help staff understand the intent of the regulation and the connection to patient safety.”

The open exchange often leads to important safety upgrades. During a recent visit to an inpatient unit, a staff member wondered why some of the patient bathrooms locked from the inside. If a patient fell, the staff observed, no one would be able to help. The issue was discussed among the unit’s leadership, and the few remaining bathroom locks were soon removed. Other conversations have led to redesigned workstations in the kitchen, medication labels that are easier to scan, and better gloves to handle dry ice when preparing for bone-marrow transplants.

“Our visits get staff involved in talking about how to make patient care better,” says Simon. “It’s about learning what staff believe are the impediments to good care.”
INFOGRAPHIC 9
NYU Langone
Medical Center

TECH UPGRADES IMPROVE PATIENT SAFETY

MYCHART
Information is power. That’s the big idea behind the recent redesign of MyChart, the patient portal to our Epic electronic medical records system. The software, which was given a user-friendly makeover last year, now affords more than 100,000 NYU Langone patients intuitive and instantaneous access to their medical records. Patients can view test results, review and schedule doctor appointments, renew prescriptions, and double check their medication history, including from their Android or iOS smartphones.

ELECTRONIC TRACKING IN THE EMERGENCY DEPARTMENT
Just as technology helps air-traffic control keep planes moving safely in the sky, a new electronic trackboard in the emergency department helps care providers deliver faster, more efficient care. Part of the Epic electronic medical records system, the trackboard displays the number of patients waiting for beds, how long it takes patients to receive care from the moment they register, where bottlenecks are most likely to arise, and other vital metrics that help leadership efficiently manage patient flow.

BEACON: AN ONCOLOGY ORDERING SYSTEM
Cancer care is complex. Last year, we debuted Epic’s Beacon oncology module at the Laura and Isaac Perlmutter Cancer Center to help streamline medication orders, notes, medical images, procedures, and protocols. The software gives clinicians the ability to manage a patient’s therapy across visits for the entire length of treatment; order and chart medications, tests, and procedures more effectively; and, most importantly, enhance patient safety.

WIRELESS EKG
The emergency department has installed a wireless electrocardiogram system that transmits EKG readings to a patient’s medical record in real-time, allowing a cardiologist to remotely monitor patients.

NURSE-CALL SYSTEM
A new nurse-call system allows patients to summon help from the nurse assigned to them instead of issuing a general notification to the entire nursing staff. It also lets patients specify the reason for their call, helping nurses respond faster and more efficiently.

1 MILLION +
Number of test results delivered to NYU Langone patients through MyChart, the portal to the Medical Center’s electronic medical records system, Epic, which gives patients access to the same data that their doctors use.

100,000 +
Number of NYU Langone patients with access to their medical records through MyChart.
At NYU Langone, multidisciplinary care is the practice of bringing together large teams of physicians, surgeons, nurses, occupational and physical therapists, radiologists, scientists, and many others to focus on a very precise target: an individual patient.
Members of the concussion leadership team, left to right: Dr. Laura Balcer, Dr. Steven Flanagan, Dr. Dennis Cardone, Dina Pagnotta, and Mara Sproul.
PRESTON ROBERT TISCH CENTER FOR MEN’S HEALTH:
A DIFFERENT KIND OF MEN’S HEALTH CLUB

Dr. Steven Lamm, medical director of the Preston Robert Tisch Center for Men’s Health, is all in favor of men being sensitive. But when it comes to health, he says, being too sensitive can get a man into trouble. “Men are very sensitive to criticism,” he explains. “They don’t want to go to a doctor to be told ‘You’re too heavy.’ ‘You drink too much.’ ‘You don’t exercise.’ They’re afraid the doctor will find something wrong that restricts their work or activities.”

Men’s reluctance to seek medical help comes at a steep price. On average, men die 5.4 years younger than women. Men — especially those who don’t have a partner to coax or cajole them to visit the doctor — tend to get lost in the healthcare system after their pediatric years. During middle age, fully a quarter of them start accumulating metabolic baggage: obesity, high blood pressure, and elevated blood sugar and cholesterol, putting them at risk for cardiovascular disease and diabetes.

The Preston Robert Tisch Center for Men’s Health, a multidisciplinary practice that opened in midtown Manhattan in January 2014, is a game changer. Occupying the entire second floor of 555 Madison Avenue, the center houses more than a dozen specialists in internal medicine, cardiology, gastroenterology, urology, endocrinology, dermatology, orthopaedics/sports medicine, mental health, and other areas. Complex cases or those requiring advanced procedures are referred to other departments and services within NYU Langone Medical Center, which, as a tertiary care institution, offers a broad array of resources and expertise.

“Our goal,” says Dr. Lamm, “is not just to provide the most advanced treatment for diseases that target men, but also to prevent these conditions. Men want to feel as if they’re going to a coach, not a repair man. We are very non-judgmental. This is a safe place for men — a health clinic that looks and feels like a private club.”

Lobby of the Preston Robert Tisch Center for Men’s Health.

“Men are sensitive to criticism. But if they’re told ‘You need to focus on your health, you’re going to be more vital, more vibrant, more powerful, smarter — you’re going to stay at the top of your game and get more out of life,’ then they perk up.”

DR. STEVEN LAMM
MEDICAL DIRECTOR OF THE PRESTON ROBERT TISCH CENTER FOR MEN’S HEALTH
Not long after 10-year-old Lea Lepiarz fell off the uneven parallel bars and smacked her head hard on a mat during gymnastics practice, she began to complain of headaches. A couple of days later, she was vomiting. Her mother, Lisa Lewis, took her to an emergency room, where they told her daughter to rest for a couple of days until her symptoms cleared. Anxious for a second opinion, Lewis took the recommendation of a friend and sought help at NYU Langone’s state-of-the-art Concussion Center, opened last year to help cut through the confusion of concussions and successfully treat cases like Lea’s, which are part of a growing epidemic of traumatic head injuries.

Last year, athletes alone suffered an estimated 4 million concussions in the U.S. Alarmingly, the number of Americans aged 11 to 22 admitted to the ER for sports-related concussions has shot up 60 percent in the past decade.

Head injuries affect everyone differently, and often require multidisciplinary care. The Concussion Center’s diverse team of more than 60 clinicians and physicians combines the latest evidence-based medicine, research, and education to treat all aspects of concussions. The facility delivers personalized care for every patient by drawing upon the expertise of board-certified and renowned clinicians from dozens of fields, including neuropsychology, audiology, emergency medicine, and occupational and physical therapy. “It’s about bringing the disciplines together, both for treating individuals with concussions and advancing the research,” says Dennis Cardone, DO, associate professor of orthopaedic surgery and chief of primary care sports medicine in the Department of Orthopaedic Surgery, and one of the new center’s three co-directors. “There are very few models like it out there.”

Under the care of her team at the Concussion Center, Lea made a full recovery, and was back at gymnastics practice in less than a month. Her mother now keeps the Center’s phone number handy for other parents. “I tell them that it’s the one place to go for all the answers,” says Lewis.
Multidisciplinary Advantage

COMPREHENSIVE STROKE CARE CENTER:
BEATING THE CLOCK TO SAVE LIVES

The man in his 60s was healthy and active, but when he walked up the subway stairs, he felt short of breath. When he got to the lobby of his office building, he collapsed. Taken to the Emergency Department of NYU Langone Medical Center, he was assessed by the Comprehensive Stroke Team and quickly sent for a CT scan. Brain cells die at the rate of 2 billion cells per minute, so those who treat stroke have a saying: “Time is brain.”

From arrival to cure, 82 minutes elapsed. Several days later, the patient walked out of NYU Langone with no neurological deficits.

Strokes — sometimes called “brain attacks” — are the leading cause of disability in adults and the third-leading cause of death, claiming the lives of some 150,000 Americans each year. These attacks are most often caused by a blocked artery supplying blood to the brain (ischemic stroke). NYU Langone was named Manhattan’s first primary stroke center in 2005, and today it is recognized as one of the leading centers of its type in the country. NYU Langone was also named one of the top 10 hospitals nationally for its neurology and neurosurgery programs in the 2013–14 U.S. News & World Report “Best Hospitals” rankings.

Dr. Koto Ishida consults with members of the Comprehensive Stroke Team.

Number of patients admitted to Tisch Hospital’s Neurology Unit with stroke-related symptoms every year.

500

The patient, in the throes of a major stroke, was treated with tPA, a clot-dissolving drug, and brought to the Interventional Radiology Unit, where the remainder of the clot was dissolved mechanically through microcatheters threaded from a vein in the groin up into the brain.
More than 5 million Americans suffer from Alzheimer’s disease, a progressive and incurable form of dementia that decimates nerve cells in the brain. The number of people with the disease is expected to double by 2050, and yet its cause remains unknown. The Center for Cognitive Neurology, or the CCN, was opened in January 2014 to change the course of Alzheimer’s and other devastating neurological conditions through interdisciplinary research and advanced clinical care.

The CCN builds on the accomplishments of NYU Langone’s esteemed Silberstein Alzheimer’s Institute, which since the 1980s has pioneered techniques to help identify Alzheimer’s in the early stages of the disease. Through collaborations with 20 NYU Langone research centers and laboratories, the CCN’s expertise now extends to a wide range of brain conditions, including memory disorders, dementia, Lewy body disease, prion diseases, and traumatic brain injury.

The efforts of CCN investigators have led to the discovery of the compound 2-PMAP, which has been shown to dramatically reduce the brain levels of a protein called amyloid associated with Alzheimer’s and other brain diseases, and a promising vaccine for chronic wasting disease, a neurodegenerative disease that afflicts deer and elk and threatens to leap to humans.

Core to CCN’s mission is the ability to bring scientific discovery to the bedside more efficiently and expeditiously, offering patients a seamless and integrated approach to the treatment of memory impairment and age-related brain disorders. “The CCN represents the best that medicine can offer to those suffering from neurocognitive disorders,” says the center’s director, Thomas M. Wisniewski, MD, professor of neurology, pathology, and psychiatry.

CpG treatment stimulates immune cells known as macrophages (green) to bind to and clear amyloid-beta plaques (red), hallmarks of Alzheimer’s disease, from the brain.
Our commitment to patient care begins in the laboratory where our team of award-winning investigators is exploring unlikely sources for answers to some of medicine’s most profound questions. For example, one NYU Langone researcher has found vital clues to human longevity and aging from ants...
Researcher Takahiro Ohde, PhD, and lab technician Maria Traficante.
FROM ANT FARMS, REMARKABLE CLUES TO LONGEVITY AND AGING

Ants have long been associated with ruined picnics and infested homes, but inside the laboratory of Danny Reinberg, PhD, professor of biochemistry and molecular pharmacology, and a Howard Hughes Medical Institute investigator, the lowly insect enjoys a far more enlightened reputation. And for good reason: Not only are ants among the most successful families of insects on Earth, but they may also hold the secrets to human aging and disease.

Dr. Reinberg has spent the past 30 years researching how genes manufacture proteins, workhorse molecules responsible for building and repairing every cell in the body. (If genes are blueprints, proteins are the construction workers.) He’s particularly interested in understanding the environmental influences on DNA, an emerging field known as epigenetics, which studies how molecular signals activate or deactivate genes.

Six years ago, Dr. Reinberg began an HHMI-funded collaboration with researchers from Arizona State University and the Wistar Institute to study the epigenetics of ants. Few species offer a better window onto the emerging science. While ants within a colony all share the same DNA, their lifespans can vary dramatically depending largely on environmental cues. A queen ant can live on average 25 years, depending on its species, while a worker ant might die within two years, even though both ants began life with the same genetic blueprint.

Dr. Reinberg and his colleagues, who tend to dozens of ant colonies in their lab, seek to understand the cascade of molecular signals and chemicals responsible for such striking differences in longevity and behavior. By shedding light on the machinery that turns genes on and off, essentially modifying genetic blueprints, they hope to develop ways to silence disease-causing genes and proteins. For example, Dr. Reinberg’s lab has found evidence of epigenetic factors in some types of cancer.

70,000

Number of eggs a queen carpenter ant can lay in a single lifetime.

Dr. Danny Reinberg in his laboratory with ant colonies stored in plastic bins.
To study ant genes and the mechanisms that control them, Dr. Reinberg and his team began by sequencing the genomes of two ant species. From there, the researchers have discovered a major clue to ant longevity. Among a species of ant known as jumping ants, a worker ant can transform into a queen ant if the queen of a colony becomes ill or weak. Along with this promotion comes a dramatic boost in longevity. In their search for a biochemical explanation, the researchers have found that these so-called pseudoqueens overexpress two enzymes associated with aging, telomerase and SIRT1. They have also identified “chemical clamps,” or epigenetic markers, that wrap around genes and modify protein production. And, this year, the researchers have genetically engineered an ant model that allows them to more closely study the faulty patterns of gene expression that can fuel tumor growth. “Ants are a phenomenal model for exploring the molecular forces that influence gene expression and health,” says Dr. Reinberg. The researchers in his lab, including Takahiro Ohde, a postdoctoral fellow who specializes in evolutionary biology, help maintain this impressive collection, which consists of two species: the carpenter ant from Florida and the jumping ant from India. “It’s hard to keep the ants’ environment stable and consistent,” says Dr. Ohde, who joined Dr. Reinberg’s lab nearly two years ago from Japan. “Ants are very sensitive to stress.” For example, a queen ant will stop laying eggs, threatening the survival of the colony and the success of an experiment, if her nest gets too dirty, its temperature spikes above or below 77 degrees Fahrenheit, or if workers are fed the wrong food. Unlike many other insects, the ants in the Reinberg lab have a very fussy diet. The carpenter ants nosh on frozen beetle larva, sugar, honey, eggs and vitamin supplements, while the jumping ants feed almost exclusively on live crickets. But for Dr. Ohde, all the maintenance is worth it: “It’s fascinating to observe their extraordinarily coordinated behavior.”
With boundary-pushing initiatives like the Three-Year MD Pathway, the Institute for Innovations in Medical Education, and the New York Simulation Center for the Health Sciences, NYU School of Medicine continues to reshape medical education and aim for new heights in academic excellence.
Dr. Steven Abramson leads a team of physicians and medical students during Saturday-morning grand rounds.
A YEAR OF ACHIEVEMENTS & BREAKTHROUGHS

A mere four years after its implementation, NYU School of Medicine’s groundbreaking Curriculum for the 21st Century (C21) is bearing rich fruit. The first cohort enrolled in the new patient-centered, disease-focused curriculum achieved the highest average scores ever at NYU School of Medicine (SoM) on Part 1 of their Boards. Moreover, on Match Day for the NYU SoM Class of 2014, the first to complete the entire C21 Curriculum, the proportion of students matched to top-ranked residency programs was the school’s highest ever. The hard metrics are now in, and they clearly demonstrate the success of a program that integrates formal “classroom” knowledge with clinical experience and develops in students the communication and cultural competency skills they will need to practice medicine in the years ahead.

NYU SoM the first nationally ranked medical school to allow accelerated entry into any specialty. Earning a medical degree in three years reduces the cost of medical school by an estimated 25 percent and allows new physicians to enter the workplace earlier and practice longer. Students selected for the program are also accepted to residencies in NYU Langone postgraduate training programs. This circumvents the time, money, and anxiety involved in auditioning for competitive residency programs and provides greater continuity between the students’ undergraduate medical training and their residencies.

The Three-Year MD Pathway is just one facet of the radical rethinking of medical education that is underway at today’s NYU School of Medicine. Other highlights include the remarkable successes of both the Institute for Innovations in Medical Education (IIME) and the New York Simulation Center for the Health Sciences (NYSIM) at Bellevue Hospital Center.

Collaboration among teams in the New York Simulation Center for the Health Sciences.
INSTITUTE FOR INNOVATIONS IN MEDICAL EDUCATION

As part of its ongoing drive to develop and apply transformative innovations in teaching, learning, and assessment at every level of NYU Langone Medical Center, NYU School of Medicine launched the Institute for Innovations in Medical Education (IIME) in November 2013, with Marc Triola, MD, associate professor of medicine and associate dean for educational informatics, as its inaugural director. The Institute’s multidisciplinary team of clinicians, educators, education scientists, and informaticians is working to improve the skills of teachers, the performance of students, and ultimately the health of patients by combining new strategies of pedagogy with cutting-edge educational technologies and medical informatics.

A key goal of the institute is to develop a system of personalized medical education using “big data” (large data sets obtained through NYU Langone’s Education Data Warehouse) to create new mechanisms for evaluating the experience and competence of each trainee and the effectiveness of educational programs. IIME programs and initiatives support an environment of continuous learning through the data-driven integration of NYU Langone’s education and clinical missions.

The Institute is home to the Division of Educational Informatics, the source of such groundbreaking educational technology tools as the virtual microscope and the BioDigital Human (an online 3D interactive virtual human body), and the Division of Education Quality and Analytics, which develops new methods of assessing and ensuring the quality of educational experiences across NYU Langone.

NEW YORK SIMULATION CENTER FOR HEALTH SCIENCES

A unique collaboration between NYU Langone Medical Center and the City University of New York (CUNY), the New York Simulation Center (NYSIM) is one of the largest, most advanced urban health simulation and training facilities in the nation. The 25,000-square-foot center offers doctors, nurses, EMTs, and other healthcare personnel the opportunity to confront challenging, real-world scenarios — from multiple-patient triage and incident command to surgical and clinical emergencies — using state-of-the-art mannequins and plastic body parts that can seize, bleed, be sedated, or even give birth. Standardized patients — professionally trained actor-patients — with a variety of “ailments” help trainees learn patient management and treatment techniques.

The center hosts a wide range of health professionals, including students and residents at the affiliated nursing, medical, dental, and allied health schools of NYU and CUNY, as well as practicing physicians and nurses at NYU Langone Medical Center. What makes NYSIM so special is not only its advanced technology, but also its ability to bring together nurses, doctors, medical students, and first responders in a collaborative multidisciplinary setting. The benefits to both the healthcare professionals and the patients they treat are many and profound.

$1 MILLION

Amount awarded to NYU School of Medicine in December 2013 by the American Medical Association as part of its Accelerating Change in Medical Education initiative.

40,000+

Number of learner visits hosted by NYSIM to date, along with 2,600 simulation courses delivered for NYU Langone and CUNY medical, nursing, and dental students; residents; and staff physicians and nurses.
NEW APPOINTMENTS AND RECRUITS

The ability to attract, nurture, and retain outstanding talent is a hallmark of NYU Langone Medical Center.

Dr. Eduardo Y. Rodriguez, the recently appointed chair of the Department of Plastic Surgery.
APPOINTMENTS

RUTH LEHMANN, PhD
Unlocking the secrets of germ cells — the cells that link generations and ensure the survival of a species — has been the driving passion of Ruth Lehmann, PhD, during her pioneering career in developmental genetics and stem cell biology. The Laura and Isaac Perlmutter Professor of Cell Biology and director of the Helen L. and Martin S. Kimmel Center for Stem Cell Biology, the Skirball Institute of Biomolecular Medicine, and the Helen L. and Martin S. Kimmel Center Biology and Medicine, Dr. Lehmann joined the NYU School of Medicine faculty as professor of cell biology in 1996, and in December 2013 was named chair of the Department of Cell Biology. An inspired leader as well as a scientist of truly international stature, Dr. Lehmann earned her doctoral degree from the University of Tübingen, Germany; completed her postdoctoral training at the MRC Laboratory of Molecular Biology in Cambridge, England; and served on the faculty at the Whitehead Institute for Biomedical Research and the Department of Biology at MIT.

Dr. Lehmann’s seminal discoveries on the emergence, formation, and migration of germ cells have inspired at least two generations of developmental biologists and have earned her numerous honors throughout her career, including appointment as an investigator of the Howard Hughes Medical Institute and election to the American Academy of Arts and Sciences, the National Academy of Sciences, and the European Molecular Biology Organization. In 2011, she received the Society of Developmental Biology’s Conklin Medal, which recognizes distinguished and sustained research in the field, and was named an NYU Langone Medical Center Master Scientist.

ANDREW D. ROSENBERG, MD
Last December, Andrew D. Rosenberg, MD, professor of anesthesiology and orthopaedic surgery, was appointed chair of the Department of Anesthesiology. His appointment adds to a long and distinguished career in anesthesiology, much of it completed at NYU Langone. Dr. Rosenberg, who was formerly chief of anesthesiology at NYU Langone’s Hospital for Joint Diseases and executive vice chair of the Department of Anesthesiology, completed his residency, chief residency, and a cardiac anesthesiology fellowship at the Medical Center before joining the faculty in 1984 as a cardiac-anesthesiology attending physician.

An internationally recognized leader in orthopaedic anesthesia, Dr. Rosenberg has introduced workshops in regional anesthesia at the major anesthesiology meetings in the United States and abroad. He was chair of the 2012 annual meeting of the American Society of Anesthesiologists, which had over 14,000 attendees, and was general chair of the New York State Society of Anesthesiologists Postgraduate Assembly for three years after serving as scientific chair for the three previous years. In 2012, he served as president of the Academy of Anesthesiology.

Dr. Rosenberg has published widely on the subjects of regional anesthesia, outcomes in orthopaedic anesthesia, neurotoxicity of local anesthetics and antiseptics, and infection control. He is also an innovator in simulation education, having developed simulators for teaching ultrasound-guided regional anesthesia.
## New Appointments and Recruits

### IANNIS AIFANTIS, PhD

Why do blood cells sometimes turn cancerous? Iannis Aifantis, PhD, professor of pathology at NYU School of Medicine and a faculty member of the Perlmutter Cancer Center, has devoted his career to finding the answer. An internationally recognized immunologist and cancer biologist, Dr. Aifantis, who was appointed chair of the Department of Pathology last June, has made seminal contributions to the understanding and treatment of T-cell acute lymphoblastic leukemia (T-ALL), a common form of childhood leukemia that causes the overproduction of immature white blood cells. By studying mutations isolated from leukemia patients, he has implicated multiple proteins in the T-ALL process and has opened up entirely new lines of inquiry within his lab.

Born in Greece, Dr. Aifantis completed his postdoctoral studies at the Paris Descartes University in the laboratory of immunologist Harald von Boehmer. As a postdoctoral fellow, he followed Dr. von Boehmer to the Dana-Farber Cancer Institute and Harvard Medical School. He later established his own laboratory at the University of Chicago, joining NYU Langone in 2006. In 2009. His other honors include the American Cancer Society Research Scholar Award, a Cancer Research Institute Young Investigator Award, the Sidney Kimmel Foundation for Cancer Research Scholar Award, the Society for Hematology and Stem Cells McCulloch and Till Award, the Leukemia & Lymphoma Society Scholar Award, the Dana Foundation Neuroimmunology Award, and the Vilcek Prize for Creative Promise in Biomedical Science.

### MARC TRIOLA, MD

“Virtually the entire world’s knowledge is available at our fingertips through amazing new technologies,” says Marc Triola, MD, associate dean for educational informatics at NYU School of Medicine and associate professor of medicine. “The challenge for the modern learner is how to find the best answer when a million answers are available.”

In November, Dr. Triola was appointed the inaugural director of the Institute for Innovations in Medical Education (IIME) at NYU School of Medicine, a center established to help explore new ways to combine the latest educational strategies with the latest technological solutions.

Dr. Triola earned his medical degree from NYU School of Medicine. He also completed his residency there, serving as chief resident for the Internal Medicine Training Program. He went on to complete a Research Fellowship in Medical Informatics at Icahn School of Medicine at Mount Sinai before joining the faculty of NYU Langone in 2004. Dr. Triola’s research experience and expertise include computer-based medical education, the use of virtual patients, and the assessment of change in knowledge and attitudes resulting from computer-assisted instruction. He chairs numerous committees at the state and national levels focused on the future of the health profession’s educational technology development and research. He recently published his first textbook, “Biostatistics for the Biological and Health Sciences.”

---

### APPOINTMENTS

<table>
<thead>
<tr>
<th>MARC TRIOLA, MD</th>
<th>“Our goal is to use computer-based tools to help students learn better and make better decisions,” adds Dr. Triola.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IANNIS AIFANTIS, PhD</td>
<td>implicated multiple proteins in the T-ALL process and has opened up entirely new lines of inquiry within his lab.</td>
</tr>
</tbody>
</table>

---
RECRUITS

EDUARDO Y. RODRIGUEZ, MD, DDS
In 2012, Eduardo Rodriguez, MD, DDS, made history as he led a multidisciplinary team of more than 150 medical experts at the R Adams Cowley Shock Trauma Center at the University of Maryland Medical Center in the most extensive and comprehensive full face transplant to date. The following November, Dr. Rodriguez was appointed NYU Langone’s new chair of the Department of Plastic Surgery, director of the Institute of Reconstructive Plastic Surgery, and the Helen L. Kimmel Professor of Reconstructive Plastic Surgery. Dr. Rodriguez brings to his work a rare combination of skills and expertise. After earning his doctorate of dental surgery from NYU College of Dentistry, he completed his residency in oral and maxillofacial surgery at Montefiore Medical Center/ Albert Einstein College of Medicine. He earned his medical degree from the Medical College of Virginia, then graduated from the combined plastic surgery program at Johns Hopkins Hospital/ University of Maryland Medical Center, and later completed a fellowship in microsurgery at Chang Gung Memorial Hospital in Taipei, Taiwan.

JEF BOEKE, PhD, DSc
Among his many distinctions, geneticist Jef Boeke, PhD, DSc, ranks as one of the world’s foremost experts on brewer’s yeast, a civilization-shaping organism better known in scientific circles as Saccharomyces cerevisiae. Last April, Dr. Boeke and a team of international researchers announced the synthesis of the first fully functional yeast chromosome, marking the most comprehensive genome redesign ever performed. This achievement, published in Science, affords researchers an unprecedented opportunity to explore genetic interactions and functions central to biology and human health. A member of the National Academy of Sciences and a pioneer in the emerging field of synthetic biology, Dr. Boeke joins NYU Langone from the Johns Hopkins University School of Medicine. As head of NYU Langone’s newest institute, set to occupy space in the Alexandria Center for Life Sciences building next year, Dr. Boeke will oversee an exciting new hub for modern genetics research, which will employ the latest tools and insights from a wide array of disciplines, including human genetics, computational science, and biological engineering, to build upon the Medical Center’s existing expertise in genetics. “It’s a major initiative to bring together this level of expertise under one roof,” says Dr. Boeke.

Dr. Boeke will continue his explorations of the yeast genome as the director of the newly established Institute for Systems Genetics at NYU Langone, a role he assumed in early 2014. A member of the National Academy of Sciences and a pioneer in the emerging field of synthetic biology, Dr. Boeke joins NYU Langone from the Johns Hopkins University School of Medicine. As head of NYU Langone’s newest institute, set to occupy space in the Alexandria Center for Life Sciences building next year, Dr. Boeke will oversee an exciting new hub for modern genetics research, which will employ the latest tools and insights from a wide array of disciplines, including human genetics, computational science, and biological engineering, to build upon the Medical Center’s existing expertise in genetics. “It’s a major initiative to bring together this level of expertise under one roof,” says Dr. Boeke.
Real Estate Development and Facilities reached many key milestones for the campus transformation projects, as well as other construction and real estate initiatives designed to provide comfort and convenience and meet the growing needs of our faculty, staff, and patients.

Rendering of Helen L. and Martin S. Kimmel Pavilion, scheduled to open in 2017.
On April 22, nearly 18 months after Tisch Hospital's previous Emergency Department was destroyed by Hurricane Sandy, the Ronald O. Perelman Center for Emergency Services opened its doors. In its first four months of operation, it treated more than 21,000 patients. The facility, more than triple the size of its predecessor, is expected to treat more than 65,000 patients annually.

Designed to be flexible and scalable to accommodate fluctuations in patient volume, the Perelman Emergency Center is equipped with 40 treatment spaces, including three resuscitation rooms, negative pressure isolation rooms, and separate entrances for ambulances and walk-ins. In recent years, an increasing number of young families have moved into NYU Langone Medical Center’s surrounding community, resulting in a surge of pediatric emergency visits. To serve this need, the KiDS of NYU Pediatric Emergency Care Center has been created. For the first time, Tisch Hospital has an Emergency Department with separate areas to welcome and treat children — and most important, pediatric specialists are on-site 24/7.

Supported by a staff of more than 200 physicians, nurses, and technicians, the Perelman Emergency Center brings emergency medical care to its highest level. “With the opening of our new Emergency Department,” says Lewis Goldfrank, MD, the Herbert W. Adams Professor of Emergency Medicine and chair of the Department of Emergency Medicine, “we’re able to deliver emergency care in a place that’s recognized by patients and providers alike as truly exceptional.”

The Perelman Emergency Center is a cornerstone of NYU Langone’s campus transformation. “From start to finish, the planning, development, and construction of the Perelman Emergency Center was a highly collaborative effort involving individuals from across the Medical Center,” says Vicki Match Suna, AIA, vice dean and senior vice president of Real Estate Development and Facilities. “From its well-planned spaces and efficient workflows to its cutting-edge medical technologies, it will serve as a model for the many dramatic improvements planned as part of our ongoing campus transformation.”
One evening in March, New Yorkers no doubt noticed a giant barge with cranes unloading a crate the size of a mobile home. The object in transit, earmarked for delivery across town to NYU Langone Medical Center, was a heat recovery steam generator — part of an interlocking system of boilers, transformers, turbines, and emergency generators being assembled under the roof of NYU Langone’s new, state-of-the-art Energy Building. The multi-step process of connecting the building’s new emergency generators to Tisch Hospital and making them operational is complete.

The 71,000-square-foot structure will relieve the power strain on the infrastructure of NYU Langone’s main campus, meeting 70% of its electricity needs and all of its steam requirements. As a co-generation plant, the Energy Building will use combined heat and power technology to convert fuel to electricity and heat. Heat from this process, which in most electric power plants goes up the smokestack, will then be used to generate steam, which is currently purchased. Thanks to the savings on steam and operating efficiencies, NYU Langone expects to cut its energy bill by some $17 million annually. “This new facility will improve the reliability and resiliency of our utility services,” notes Paul Schwabacher, senior vice president for facilities management.

Located at 30th Street and the FDR Service Road, the new Science Building will provide an inviting and prominent southern entrance, dramatically enhancing the Medical Center’s profile on 30th Street. The 16-story building will integrate research facilities and services strategically so that researchers, clinicians, and students can all work more efficiently and collaboratively. With 365,000 square feet, the expansive building will also enable NYU School of Medicine to accommodate new recruits and projected growth in funded research. The laboratory floors are designed to be open, efficient, flexible, and easily adaptable, with cutting-edge, shared equipment to accommodate advances in research over time. The facility will incorporate 10 floors of wet bench laboratories, core facilities, a vivarium, and public areas. The Science Building, which incorporates green design approaches and sustainable technologies, is scheduled to open in 2017.
As part of its campus transformation, NYU Langone has added 11 new sites, and has expanded existing practices across the five boroughs and into Westchester County. New acquisitions include the leasehold interest for 333 East 38th Street, which houses NYU Langone's Center for Musculoskeletal Care, the largest freestanding facility of its kind in the country, and its Outpatient Surgery facility. Nearby is the Ambulatory Care Center at 240 East 38th Street, a 24-story tower that houses a broad range of programs and services. Other additions include the expansion of cancer-care programs in Brooklyn and Long Island, including the addition of a new infusion center; a third floor at NYU Langone Ambulatory Care Center West Side for gastroenterology, cardiology, and multispecialty services; the expansion of primary care services at Trinity Center in lower Manhattan; and a fourth floor at NYU Langone Columbus in Rego Park, Queens, for endoscopy, ultrasound, and physical therapy.

To make way for construction of the new Helen L. and Martin S. Kimmel Pavilion, several structures were demolished and many departments were relocated. By the end of 2014, foundations for the new structures were 50 percent complete. When the 800,000-square-foot Kimmel Pavilion opens in 2017, it will house 374 private inpatient rooms, 30 procedure rooms, and public amenities.

Kimmel will also be home to Hassenfeld Children's Hospital, a state-of-the-art inpatient facility offering world-class care for children and their families. The facility will be the only one of its kind in New York City to offer all private rooms, a design choice intended to improve bedside care, infection control, and patient healing.
PHILANTHROPY

Remarkable gifts made by remarkable people are transforming every corner of the Medical Center, from emergency medicine and pediatric services to cancer care and veterans’ health.

The new glass-encased elevator tower at Tisch Hospital.
Tisch Family

The Tisch Family: Three Generations of Giving

Venture anywhere near Kips Bay or take a sail along the East River just below the Queensboro Bridge, and the Tisch family’s commitment to creating the best hospital in New York City hangs boldly in the air. Tisch Hospital has been a beacon for patients from across the city and a familiar and comforting landmark on the East Side of Manhattan for over 50 years.

“You walk through the front door of Tisch Hospital, and you are enveloped by the warmth that it makes you feel,” says Leon H. Pachter, MD, chair of the Department of Surgery and a member of the Tisch Hospital “family” for his entire life, having completed medical school and residency training here. The Tisch family’s generosity is evidenced in so many ways that make a real difference in the lives of our patients and families. The most recent example was unveiled in 2013, with the opening of a spacious new lobby. An 18-story glass-encased elevator tower is a showcase, with cabs that move 700 feet per minute and panoramic views of the East River and the lower Manhattan skyline.

“This project is a triumph of design,” says Vicki Match Suna, AIA, vice dean and senior vice president of NYU Langone’s Department of Real Estate Development and Facilities.

The unveiling dovetailed with the 50th anniversary of Tisch Hospital, which was renamed in 1989 for the Tisch family in honor of the late Laurence A. Tisch and his brother, the late Preston Robert Tisch, both former trustees of New York University.

In thinking about the Tisch family’s impact on the Medical Center, Dr. Pachter recalls the best advice he ever received. “My high school basketball coach told me that despite being the best player on the team, I couldn’t score without the ball. The Tisches have given us the ball.”

The Tisch family’s philanthropic legacy spans three generations: Thomas J. Tisch and his wife, Alice, serve on the Board of Directors, and Alice serves as chair of KiDS of NYU, which supports inpatient and outpatient programs for children across NYU Langone. Meanwhile, Joan H. Tisch has supported the Preston Robert Tisch Center for Men’s Health and the Joan H. Tisch Center for Women’s Health.

Tisch Hospital, a part of New York City for more than a half-century, is poised to care for future generations of people who seek the distinct care and dedication that make this place so special.

GOLDEN ANNIVERSARY

For over 50 years, our flagship Tisch Hospital has served as the institution’s clinical hub and a primary training ground for medical students, residents, and fellows.
**Laura and Isaac Perlmutter**

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal budget cuts threatened the Medical Center’s progress, they refused to stand idle.</td>
<td>The Perlmutes' gift extends a three-decade commitment to the Medical Center.</td>
</tr>
<tr>
<td>Laura and Isaac Perlmutter, both trustees of the Medical Center, were knowledgeable about the many advances underway at the NYU Cancer Institute, one of only 68 U.S. cancer centers designated by the National Cancer Institute.</td>
<td>Mrs. Perlmutter joined the NYU Langone community in 1978 as a volunteer in the Medical Center’s gift shop.</td>
</tr>
<tr>
<td>Laura and Isaac Perlmutter pledged a gift in excess of $50 million to cancer research and treatment at the Medical Center, a gift so transformative that the NYU Cancer Institute was renamed in their honor.</td>
<td>(Her apartment was just across the street.) She later served as president of the Tisch Hospital Auxiliary from 1985 to 1992. Mr. Perlmutter, CEO of Marvel Entertainment, is also passionate about supporting the Medical Center, having lost family members to substandard medical care abroad.</td>
</tr>
</tbody>
</table>

**LAURA AND ISAAC PERLMUTTER**

- Laura and Isaac Perlmutter, both trustees of the Medical Center, were knowledgeable about the many advances underway at the NYU Cancer Institute, one of only 68 U.S. cancer centers designated by the National Cancer Institute. In fact, Laura Perlmutter had been a member of NYU Langone’s Cancer Advisory Board since 2005.

**Trudy Elbaum Gottesman**

<table>
<thead>
<tr>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trudy Elbaum Gottesman at 13 lost most of her family in the Holocaust, the institute expands the way they were helped nearly 25 years ago when centered care — such as a team of highly skilled, compassionate physicians gave magnificent care to one of their own children, and to the family as a whole.</td>
<td>For the Gottesmans, the gift is a unique opportunity to help children and families during difficult and frightening times, much in a team of highly skilled, compassionate physicians gave magnificent care to one of their own children, and to the family as a whole.</td>
</tr>
<tr>
<td>Trudy Elbaum Gottesman loves children. Long before she volunteered as an art therapist on the inpatient pediatrics unit of Tisch Hospital, the experience opened her eyes to the challenges of children who are seriously ill, but it also gave her enormous hope. “A child who is sick is not a sick child,” says Mrs. Gottesman. “Even children who are ill, when they are feeling up to it and are provided with the right resources, can enjoy their childhood.”</td>
<td>That insight helped inspire Trudy and her husband, Robert, to donate a visionary gift last fall to establish the Sala Institute for Child and Family-Centered Care. Named after Mrs. Gottesman’s mother, Sala Elbaum, who at 13 lost most of her family in the Holocaust, the institute expands the way they were helped nearly 25 years ago when centered care — such as a team of highly skilled, compassionate physicians gave magnificent care to one of their own children, and to the family as a whole.</td>
</tr>
</tbody>
</table>

**TRUDY ELBAUM AND ROBERT GOTTESMAN**

- Trudy Elbaum Gottesman loves children. Long before she volunteered as an art therapist on the inpatient pediatrics unit of Tisch Hospital, the experience opened her eyes to the challenges of children who are seriously ill, but it also gave her enormous hope. “A child who is sick is not a sick child,” says Mrs. Gottesman. “Even children who are ill, when they are feeling up to it and are provided with the right resources, can enjoy their childhood.”

**Putting Children and Their Families at the Center of Pediatric Healthcare**

- Believed to be the largest donation for pediatric psychosocial and other support services ever made to a medical center anywhere, the gift promises to transform the care NYU Langone provides for children. It also supports research into best practices for patient safety and quality, and education for all staff who are a part of children’s services.

**Putting Children and Their Families at the Center of Pediatric Healthcare**

- Believed to be the largest donation for pediatric psychosocial and other support services ever made to a medical center anywhere, the gift promises to transform the care NYU Langone provides for children. It also supports research into best practices for patient safety and quality, and education for all staff who are a part of children’s services.
A NEW ERA FOR EMERGENCY SERVICES

New Yorkers generally know how to make the most of small spaces, but in 2012 the 6,900-square-foot Emergency Department (ED) at Tisch Hospital was beyond creative workarounds. Between 2000 and 2009, the number of patients admitted to the cramped facility had ballooned by 50 percent, reaching 45,000 annually. Expansion plans were already underway when Hurricane Sandy struck in 2012, flooding NYU Langone with 15 million gallons of water and temporarily shuttering the undersized but historic ED.

Now, thanks to a $50 million donation from NYU Langone’s lifetime trustee Ronald O. Perelman, chairman and chief executive officer of MacAndrews & Forbes Holdings Inc., the battered facility has been transformed into a state-of-the-art ED with triple the capacity. The revamped complex, which fully reopened in April 2014 as the Ronald O. Perelman Center for Emergency Services, is now spacious enough to treat more than 50,000 patients annually. It features two triage rooms, 40 treatment areas (up from 22), three resuscitation rooms, negative pressure isolation rooms, a pharmacist on duty 24/7, and separate entrances for ambulances and walk-ins. It also boasts a dedicated space for children.

Mr. Perelman, who ranks among the 10 largest donors in NYU Langone history, has been deeply involved with the Medical Center for three decades. He previously provided the Ronald O. Perelman Fund to support biomolecular medicine at NYU School of Medicine, and he continues to support the Perelman Center for Emergency Services will undoubtedly have a long-lasting impact on the community in extraordinary ways,” says Mr. Perelman, who was troubled by the critical shortage of emergency services in the lower regions of Manhattan. “I am thrilled to be a part of this new chapter.”

RONALD O. PERELMAN

A GIFT TO HEAL THE INVISIBLE WOUNDS OF WAR

Alexandra and Steve’s son served in the United States Marine Corps, and Steve and Alex’s fathers served in World War II and the Korean War, respectively. They believe that we all have an obligation to serve those who serve and protect the United States, and they are committed to helping veterans cope with the physical and psychological injuries of war. Since their initial gift, the Cohens have increased their total support of the center to nearly $30 million. The additional funding supports the Cohen Military Family Clinic, which offers free mental health services to both veterans and their families, and additional research into PTSD and traumatic brain injuries (TBI). In 2013, the Cohens donated $17 million to establish the Steven and Alexandra Cohen Veterans Center at NYU Langone, a state-of-the-art research and treatment center for veterans of its kind, aims to advance the search for better diagnostics and treatments for PTSD and TBI. Mr. Perelman, who ranks among the 10 largest donors in NYU Langone history, has been deeply involved with the Medical Center for three decades. He previously provided the Ronald O. Perelman Fund to support biomolecular medicine at NYU School of Medicine, and he continues to support the Perelman Center for Emergency Services will undoubtedly have a long-lasting impact on the community in extraordinary ways,” says Mr. Perelman, who was troubled by the critical shortage of emergency services in the lower regions of Manhattan. “I am thrilled to be a part of this new chapter.”

ALEXANDRA AND STEVEN COHEN

Among the 1.7 million Americans who have served in the wars in Iraq and Afghanistan, an estimated 20 percent have developed post-traumatic stress disorder (PTSD), while an additional 10 percent suffer from traumatic brain injuries (TBI). Alexandra and Steven Cohen have deep, personal ties to veterans’ issues. Since their initial gift, the Cohens have increased their total support of the center to nearly $30 million. The additional funding supports the Cohen Military Family Clinic, which offers free mental health services to both veterans and their families, and additional research into PTSD and traumatic brain injuries (TBI). In 2013, the Cohens donated $17 million to establish the Steven and Alexandra Cohen Veterans Center at NYU Langone, a state-of-the-art research and treatment center for veterans of its kind, aims to advance the search for better diagnostics and treatments for PTSD and TBI. Mr. Perelman, who ranks among the 10 largest donors in NYU Langone history, has been deeply involved with the Medical Center for three decades. He previously provided the Ronald O. Perelman Fund to support biomolecular medicine at NYU School of Medicine, and he continues to support the Perelman Center for Emergency Services will undoubtedly have a long-lasting impact on the community in extraordinary ways,” says Mr. Perelman, who was troubled by the critical shortage of emergency services in the lower regions of Manhattan. “I am thrilled to be a part of this new chapter.”
DONORS

HISTORIC PARTNERS WHO HAVE MADE GIFTS TOTALING FROM $10 MILLION TO OVER $100 MILLION BY END OF FISCAL YEAR 2014 (8/31/14)

$100 MILLION+

The Druckenmiller Foundation
Helen L. and Martin S. Kimmel†
Elaine A. and Kenneth G. Langone
The Family of Wilma S. and Laurence A. Tisch†
Marica and Jan Vilcek

$10 MILLION – $99,999,999

American Cancer Society
Anonymous (3)
Clarissa and Edgar M. Bronfman Jr.
Leon H. Charney
The Steven and Alexandra Cohen Foundation
Dr. Jerome S. Coles† and Mrs. Geraldine Coles
Colton Family Foundation
Dysautonomia Foundation, Inc.
Edith K.† and Frederick L. Ehrman†
Laurence and Lori Fink
Charlette† and Henry E. Fleck†
Bill & Melinda Gates Foundation
Arlene and Arnold Goldstein†
Sylvia K. Hassenfeld† and the Hassenfeld Family Foundation
The Irma T. Hirschl Trust
Howard Hughes Medical Institute
Stanley Allan Isenberg, MD ’43†
KiDS of NYU Langone
Kate Macy Ladd Fund
The Leukemia & Lymphoma Society
Evan F. Lilly Memorial Trust
Ruth† and Leonard Litwin
Frederick Lueders†
Suzanne† and Thomas Murphy Sr.
myFace
National Multiple Sclerosis Society
Ronald O. Perelman
Laura and Isaac Perlmutter
Bernard and Irene Schwartz†
Henry R. Silverman
Klara and Larry Silverstein
The Skirball Foundation
Mr. and Mrs. Joel E. Smilow
Anita† and Joseph Stockler†
The Family of Joan H. and Preston Robert Tisch†

† Deceased
## DONORS WHO MADE NEW GIFTS & PLEDGES
IN FISCAL YEARS 2013 (9/1/12 TO 8/31/13) AND 2014 (9/1/13 TO 8/31/14)

### $40 MILLION+

- Anonymous
- The Perelman Family Foundation
- Laura and Isaac Perlmutter

### $25 MILLION–$39,999,999

- The Steven and Alexandra Cohen Foundation

### $10 MILLION–$24,999,999

- Anonymous (2)
- Colton Family Foundation
- Klara and Larry Silverstein
- Marica and Jan Vilcek

### $5 MILLION–$9,999,999

- Clarissa and Edgar M. Bronfman Jr. Foundation
- Elaine A. and Kenneth G. Langone
- The Leukemia & Lymphoma Society
- Bernard and Irene Schwartz Foundation

### $1 MILLION–$4,999,999

- Anonymous (5)
- Timur Artemyev
- Saida H. Baxt, MD & Sherwood A. Baxt, MD
- Robert B. Bell, Esq.
- Marc H. Bell
- Bezos Family Foundation
- Marjorie and Walter W. Buckley Jr.
- Lisa Pevaroff Cohn and Gary D. Cohn
- Annette P. and Ian M. Cumming
- Ann I. and Helmut F. Dederding
- Dysautonomia Foundation, Inc.
- Rhona D. and Frank S. Ehrlich
- Elekta AB
- Ellison Medical Foundation
- Laurence and Lori Fink
- William E. Flaherty
- The Ralph S. French Charitable Foundation
- Miriam Goldman
- J. Ira & Nicki Harris Family Foundation
- KiDS of NYU Langone
- Murray Koppelman
- David J. Levidow Revocable Trust
- The Philip & Janice Levin Foundation
- The Leon Levy Foundation
- Joel V. Levy Trust
- Estate of Frederick J. Lueders
- The Lustgarten Foundation
- Estate of Irwin D. Mandel
- G. Harold & Leila Y. Mathers Charitable Foundation
- Mebane Charitable Foundation, Inc.
- Janet and Thomas Montag
- myFace
- National Multiple Sclerosis Society
- The New York Stem Cell Foundation
- Robin Hood
- Linda Gosden Robinson and the Robinson Family
- The Louis and Rachel Rudin Foundation, Inc.
- Fondation Lily Safra
- Saudi Arabian Cultural Mission
- The Morris and Alma Schapiro Fund
- Rosa Scharf
- The Peter Jay Sharp Foundation
- The Simons Foundation
- William & Lynda Steere Foundation
- Joseph S. and Diane H. Steinberg Charitable Trust
- Brett Cohen Sundheim and Daniel S. Sundheim
## Donors

### $1 MILLION – $4,999,999 continued

- John Templeton Foundation
- Jan & Marica Vilcek Charitable Remainder Unitrust
- The J & M Vilcek Foundation
- Ann Lublin Witus, MD

### $500,000 – $999,999

- Alzheimer’s Association
- American Heart Association, Inc.
- The American Ireland Fund
- Julie Wilson Anderson and Dwight Anderson
- Anonymous (2)
- Avon Foundation, Inc.
- Arnold and Mabel Beckman Foundation
- Blavatnik Family Foundation
- Breast Cancer Research Foundation
- The Susan Thompson Buffett Foundation
- J. Christopher Burch
- Sukey Caceres-Novogratz and Michael E. Novogratz
- Estate of Marion B. Carstairs
- Sue and Sean Cullinan
- Estate of Richard M. Greifer
- Estate of Mortimer Grunauer
- Heffter Research Institute
- The Irma T. Hirschl Trust
- Human Frontier Science Program
- Joseph B. Jacobs, MD
- Marc Jacobs International, LLC
- Knapp Family Foundation
- Estate of Helen G. Koss
- Philip K. Koss Family Trust
- James and Marjorie Kuhn
- Evan F. Lilly Memorial Trust
- Making Headway Foundation, Inc.
- March of Dimes Foundation
- Estate of Stephen C. Moss
- New York State Health Foundation

### $100,000 – $499,999

- The David and Lucile Packard Foundation
- Purjes Foundation
- Estate of Benjamin Rogala
- Judy and Michael H. Steinhardt
- Alice M. & Thomas J. Tisch Foundation
- Warner Foundation
- Sandra R. Weinstein, PhD, and Martin Weinstein, PhD
- JoAnn Wellner

- Aetna Foundation, Inc.
- Alex’s Lemonade Stand Foundation
- The ALS Association
- The Alzheimer’s Drug Discovery Foundation
- American Association for Cancer Research
- American Brain Foundation
- American Cancer Society
- American College of Phlebology
- Amie’s Place Foundation
- Anonymous (4)
- Arbor Pharmaceuticals, Inc.
- Arnhold Foundation Inc.
- Arthritis Foundation
- Association of University Radiologists
- Armen Avanessians
- Felicia B. Axelrod, MD
- Barbara G. Bady
- Bank of America
- Alain J.P. Belda
- Diane Belfer
- Denise Benmosche and Robert H. Benmosche
- James R. & Frances H. Berger Foundation
- Ilana and Benjamin Berinstein
- The Bloomgarden-Willner Family
- Katherine and Todd Boehly
- Boston Scientific
- Brain & Behavior Research Foundation
- Carol and Edward Braniff
The Honorable and Mrs. Nicholas F. Brady
Breast Cancer Alliance, Inc.
Clarissa and Edgar M. Bronfman Jr.
William H. Browne
BTIG, LLC.
Christian and Emily Candy
Cardiovascular Associates
The Annie E. Casey Foundation
Charina Endowment Fund
Leon H. Charney Foundation Inc.
The Chelnik Family
The Chemotherapy Foundation, Inc.
Kathryn Cassell Chenault, Esq., and
Kenneth I. Chenault
Child Welfare Fund
Elisabeth J. Cohen, MD, and
Robert I. Grossman, MD
The Lynne Cohen Foundation for
Ovarian Cancer Research
Lauren Tessler Corrigan, Esq., and
Patton Corrigan
Crofoot Cattle Company, Inc.
Sally C. Curtin
Dalessandro Foundation
The Dana Foundation
Dart NeuroScience
Elizabeth B. Dater Jennings and
William M. Jennings Jr.
Deutsche José Carreras Leukämie-Stiftung
Doris Duke Charitable Foundation
Janet M. Standard and Werner K. Doyle, MD
Druckenmiller Foundation
Fiona B. and Stanley F. Druckenmiller
Estate of Joseph Edlin
The Enoch Foundation
Epilepsy Foundation
Roseanne Faig, MS, and Douglas E. Faig, MD
Gertrude & Louis Feil Family
Carol S. Feinberg and Kenneth Gilman
FGP Plastic Surgery Associates
Erwin Fisch
David M. Fishel
Fisher Center for Alzheimer’s Research
Sarah and David J. Fiszel
Samuel C. and Judith H. Florman
The Foundation Fighting Blindness
Foundation to Promote Open Society
Fried Family Foundation
The Friedberg Charitable Foundation
Jay M. Furman, Esq.
Morris and Gertrude Furman Foundation
Sandra Ganzi Cuyler and Walter Ganzi
Chillin with Adam—
The Adam Gaynes Foundation
The Glaubinger Foundation
Vivian Glueck Rosenberg and Henry Rosenberg
Daniel A. Gold
Ronnie and Michael Goldfield, MD
Goldman, Sachs & Co.
Barbara Goldstein Amster and Arthur Amster
Estate of Basil Gordon
Estate of Jocelyn A. Greenidge
Melvin J. Gunsberg, MD
Celeste A. Guth
Hagedorn Fund
The Harkness Foundation for Dance
Matthew N. Harris, MD
Reba N. Herson
F. Hoffmann-La Roche Ltd.
Helen Hoffritz Charitable Trust
The Holman Family Foundation
Benjamin H. Homan Jr. Charitable Trust
Max and Sunny Howard Memorial Foundation
Hyundai Hope on Wheels
The Iacocca Family Foundation
Estate of John Imarisio
Intimate Apparel Square Club
Jacobson Family Foundation
Joan & Jerome Jakubovitz Foundation
The Robert Wood Johnson Foundation
Sonia and Paul Tudor Jones
I. Kallman Company
### DONORS

**$100,000 – $499,999 continued**

- The Mel Karmazin Foundation
- Fritz and Adelaide Kauffman Foundation
- Louis and June E. Kay Foundation
- Kevin and Masha Keating Family Foundation
- W. M. Keck Foundation
- The Kellar Family Foundation
- James M. Kenny
- Sidney Kimmel Foundation for Cancer Research
- Kristen and Alexander Klabin
- Susan G. Komen Race for the Cure®
- Krell Family Foundation
- Estate of Pauline Kyle
- Lake Road Foundation
- The Jacob & Valeria Langeloth Foundation
- Ruth and Sidney Lapidus
- Ann Tenenbaum Lee and Thomas H. Lee
- The Leeds Family Foundation
- Peter Lefkow, MD,
  - Charitable Lead Annuity Trust
- Levine Family Foundation
- Estate of Leah W. Linn
- Lannie W. Lipson
- Barbara and Robert P. Luciano
- Lupus Research Institute
- Helen and Rita Lurie Foundation
- Paula and Eric Madoff
- Hailen Mak, MD, MPH
- Edward Mallinckrodt Jr. Foundation
- Manhasset Women’s Coalition
  - Against Breast Cancer
- Manhattan Eye Foundation, Inc.
- Estate of Estelle A. Manning

- Stanley S. Marcus, MD
- Michael S. Margiotta, MD
- Estate of Cora Marks
- Patricia M. and Robert H. Martinsen Foundation
- Louis Marx Jr.
- María-Teresa Vivas de Mata and
  - Andres Mata Osorio
- Andrea and Anthony Melchiorre
- Vivian and Edward Merrin
- Edward and Sandra Meyer Foundation, Inc.
- Allison and Roberto Mignone
- Marcia D. Miller
- Gerald Minkowitz, MD
- Julie C. and Edward J. Minkoff
- The Ambrose Monell Foundation
- Moti Partners
- Philip Munger
- Karen and Thomas S. Murphy Jr.
- Thomas S. Murphy Sr.
- Muscular Dystrophy Association Inc.
- New Tamarind Foundation
- Patricia A. Newburger and Bradley J. Wechsler
- Barbara and Barry Novick
- Sarah and Frank Olson
- Opera Gallery
- OrthoSensor, Inc.
- Norman L. Peck
- Mary Q. Pedersen
- Peter G. Peterson
- Ramesh Babu Pitti, MD
- Frances Platzer
- Amy Pollner Moritz
- Carol and Sheldon H. Pressler
- David L. Ramsay, MD
- H. Lewis and Susan H. Rapaport
Alan and Jill Rappaport  
Ira M. Resnick Foundation  
Richard Paul & Ellen S. Richman  
Private Family Trust Foundation  
The Riley Family Foundation  
Florence and Joseph P. Ritorto  
Daniel Rosenbloom, Esq.  
The Edward John & Patricia Rosenwald Foundation  
Mary Rossick-Kern and Jerome Howard Kern, Esq.  
Damon Runyon Cancer Research Foundation  
The Fan Fox and Leslie R. Samuels Foundation  
Louise and Joshua Samuelson  
Sandler O’Neill & Partners, LP  
Olga M. Santiago, MD  
The Schwartz Family Foundation  
Bernard and Irene Schwartz†  
Deborah and Steven Shapiro  
Susan Stein Shiva Foundation  
Tracy and Stanley Shopkorn  
William and Sylvia Silverstein Foundation, Inc.  
Kenneth and Claudia Silverman Family Foundation  
Henry R. Silverman  
Silverstein Properties, Inc.  
Carl Simons  
Alexandrine and Alexander Sinsheimer Fund  
Joel E. Smilow Charitable Trust  
Gordon and Norma Smith Family Foundation  
Norma and Gordon H. Smith  
Beatrice Snyder Foundation  
Carla Solomon and Anthony Magliocco Jr.  
Mary and David Solomon/ Goldman Sachs Gives  
Ginny and Steven Spiegel  
St. Baldrick’s Foundation  
Debora Staley  
Dr. Axel J. Stawski  
Ellen S. Steinberg, MD, and Jay Steinberg, MD  
Simon H. Stertz, MD  
Estate of Norma Stillman  
The Stringer Foundation  
Sunovion  
SV Urology Associates Research Fund  
Theresa and Joseph N. Sweeney  
Synthes, Inc.  
Lady Tata Memorial Trust  
Tomorrow Foundation, Inc.  
Kristin and Kenan K. Turnacioglu, PhD  
Claudia and Carey Turnbull  
United Healthcare Services, Inc.  
Miranda and Lucas Van Praag  
Wachtele Lipton Rosen & Katz Foundation  
Patricia and David J. Watkins  
Samuel Waxman Cancer Research Foundation  
Sharon Wee and Tracy Fu  
J. Weinstein Foundation  
Michael & Leah Weisberg Family Foundation  
Whitehall Foundation, Inc.  
Jules L. Whitehill, MD Trusts  
Vincent Wilkinson Foundation  
Judith Pleasure Willner, MD, and Joseph H. Willner, MD  
Charles F. Wolf Scholarship Fund  
Bob Woodruff Foundation  
Roslyn Younger Revocable Trust  
Stanley Zinberg, MD, MS

† Deceased
TRUSTEES

BOARD OF TRUSTEES

Kenneth G. Langone, Chair

Laurence D. Fink, Co-Chair

Dwight Anderson
Marc H. Bell
Mamdouha S. Bobst
Geraldine H. Coles
Elizabeth B. Dater
Alvin H. Einbender
Lola Finkelstein
Louis P. Friedman
Aubrey Galloway, MD
Stuart Garay, MD
George E. Hall
Iрма R. Hilton, PhD
Harley Lippman
William A. Perlmuter
Eleanor J. Piel, Esq.
Robert A. Press, MD, PhD
Stanley Shopkorn
Henry R. Silverman
Robin L. Smith, MD, MBA
Michael R. Stoler
Sam A. Sutton

Dwight Anderson
Marc H. Bell
Mamdouha S. Bobst
Geraldine H. Coles
Elizabeth B. Dater
Alvin H. Einbender
Lola Finkelstein
Louis P. Friedman
Aubrey Galloway, MD
Stuart Garay, MD
George E. Hall
Iрма R. Hilton, PhD
Harley Lippman
William A. Perlmuter
Eleanor J. Piel, Esq.
Robert A. Press, MD, PhD
Stanley Shopkorn
Henry R. Silverman
Robin L. Smith, MD, MBA
Michael R. Stoler
Sam A. Sutton

EX-OFFICIO

Robert Berne, PhD
Martin Dorph
Robert I. Grossman, MD
John Sexton

As of October 22, 2014
# LEADERSHIP

<table>
<thead>
<tr>
<th><strong>NEW YORK UNIVERSITY</strong></th>
<th><strong>NYU LANGONE MEDICAL CENTER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>MARTIN LIPTON, Esq.</td>
<td>KENNETH G. LANGONE</td>
</tr>
<tr>
<td>Chair, Board of Trustees</td>
<td>Chair, Board of Trustees</td>
</tr>
<tr>
<td>JOHN SEXTON</td>
<td>ANDREW W. BROTMAN, MD</td>
</tr>
<tr>
<td>President</td>
<td>Senior Vice President and</td>
</tr>
<tr>
<td></td>
<td>Vice Dean for Clinical</td>
</tr>
<tr>
<td></td>
<td>Affairs and Strategy,</td>
</tr>
<tr>
<td></td>
<td>Chief Clinical Officer</td>
</tr>
<tr>
<td>ROBERT BERNE, MBA, PhD</td>
<td>KATHY LEWIS</td>
</tr>
<tr>
<td>Executive Vice President for Health</td>
<td>Senior Vice President for Communications and Marketing</td>
</tr>
<tr>
<td></td>
<td>JOSEPH LHOTA</td>
</tr>
<tr>
<td></td>
<td>Senior Vice President and</td>
</tr>
<tr>
<td></td>
<td>Vice Dean, Chief of Staff</td>
</tr>
<tr>
<td></td>
<td>VICKI MATCH SUNA, AIA</td>
</tr>
<tr>
<td></td>
<td>Senior Vice President and</td>
</tr>
<tr>
<td></td>
<td>Vice Dean for Real Estate</td>
</tr>
<tr>
<td></td>
<td>Development and Facilities</td>
</tr>
<tr>
<td></td>
<td>NADER MHERABI</td>
</tr>
<tr>
<td></td>
<td>Senior Vice President and</td>
</tr>
<tr>
<td></td>
<td>Vice Dean, Chief Information Officer</td>
</tr>
<tr>
<td></td>
<td>NANCY SANCHEZ</td>
</tr>
<tr>
<td></td>
<td>Senior Vice President and</td>
</tr>
<tr>
<td></td>
<td>Vice Dean for Human Resources and Organizational Development and Learning</td>
</tr>
</tbody>
</table>

| STEVEN B. ABRAMSON, MD | DAFNA BAR-SAGI, PhD          |
| Senior Vice President and Vice Dean for Education, Faculty and Academic Affairs | Senior Vice President and Vice Dean for Science, Chief Scientific Officer |

| BERNARD A. BIRNBAUM, MD | RICHARD DONOGHUE             |
| Senior Vice President and Vice Dean, Chief of Hospital Operations | Senior Vice President for Strategy Planning and Business Development |

| ANNETTE JOHNSON, JD, PhD | GRACE Y. KO | KATHY LEWIS |
| Senior Vice President and Vice Dean, General Counsel | Senior Vice President for Development and Alumni Affairs | Senior Vice President for Communications and Marketing |

| JOSEPH LHOTA | VICKI MATCH SUNA, AIA |
| Senior Vice President and Vice Dean, Chief of Staff | Senior Vice President and Vice Dean for Real Estate Development and Facilities |

| NADER MHERABI | NANCY SANCHEZ |
| Senior Vice President and Vice Dean, Chief Information Officer | Senior Vice President and Vice Dean for Human Resources and Organizational Development and Learning |