



About 5,000 babies are born at Tisch Hospital each year.



Tisch Hospital's new information desk.



Tisch Hospital's new elevator tower.

## At Tisch Hospital, a Half Century of Patient-Centered Care

*Since the Day Tisch Hospital Opened More Than 50 Years Ago, Patients Have Been at the Center of It All—and Three Generations of the Tisch Family Are Committed to Keeping It That Way*

On April 16, 2013—nearly half a century after Tisch Hospital first opened its doors in June 1963—NYU Langone Medical Center's flagship hospital unveiled its new lobby and other renovated areas to patients, visitors, and staff. Sparkling and spacious, the lobby is traversed by a long wall that separates the original bank of elevators from a new set that serves patient floors through an 18-story glass-encased tower. On that day, with the hospital marking its 50th anniversary,

the wall seemed to divide time as well as space. A quarter of a century earlier, in 1989, University Hospital—as it was then known—was renamed in honor of the Tisch family, longtime benefactors of the Medical Center. Their extraordinarily generous gift was spearheaded by the late Laurence A. Tisch, a trustee of New York University for 35 years and its chairman for 20 years, and his brother, the late Preston Robert Tisch, also a trustee of the university.

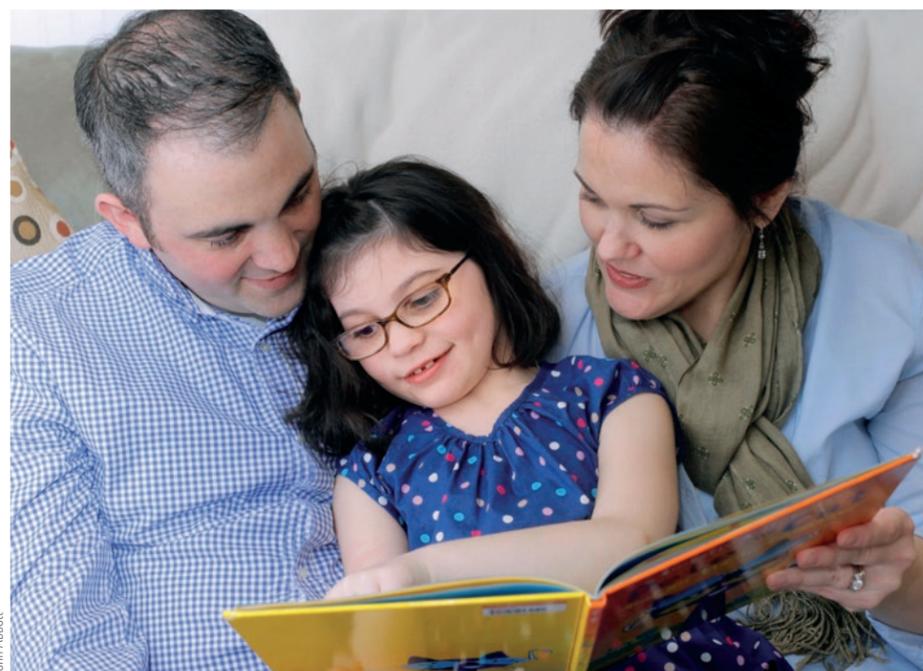
So in a sense, last spring Tisch Hospital was commemorating not only its birth, but its rebirth.

The elegant new lobby and soaring elevator tower were made possible by another landmark gift from the Tisch family. "This key component of our institution's ongoing transformation has entirely changed the user experience and would not have been fully realized without the Tisch family's support," says Vicki Match Suna, AIA, vice dean and

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## Left Brain, Right Brain

*Faced with a Lifetime of Relentless Seizures for Their Child, Parents Agree to an Unthinkable Cure*



For Emily Driscoll, shown with her parents Pete and Annemarie, a radical surgical procedure that entailed removing most of the left hemisphere of her brain offered a permanent cure to her damaging daily seizures.

Except for a slightly withered right arm and leg, Emily Driscoll looks and acts much like any other six-year-old. She loves to run around the house, chat up a storm, and read books with her parents. That she can do anything is a wonder, considering that she's missing the entire left side of her brain.

Seconds after birth, Emily suffered a catastrophic stroke, devastating her brain's left hemisphere. The tissue was silent, except for the occasional burst of electrical impulses that served only to trigger an epileptic seizure. Over the next 18 months, Emily developed slowly—well behind her peers. Even more troubling, the seizures persisted, threatening the healthy half of her brain. "The seizures weren't horrible," says her mother, Annemarie. "But she would have 50 to 60 clusters a day."

Emily's neurologist tried one seizure medication after another, but to little avail. When he recommended more powerful drugs—with more powerful side effects—Annemarie and her husband, Pete, balked. Annemarie scoured the Internet for another remedy. She came across a procedure called a hemispherectomy, which quells intractable seizures limited to one side of the brain by disconnecting or removing the offending hemisphere. With understandable trepidation, the Driscolls made an appointment with Howard Weiner, MD, professor of neurosurgery and pediatrics at

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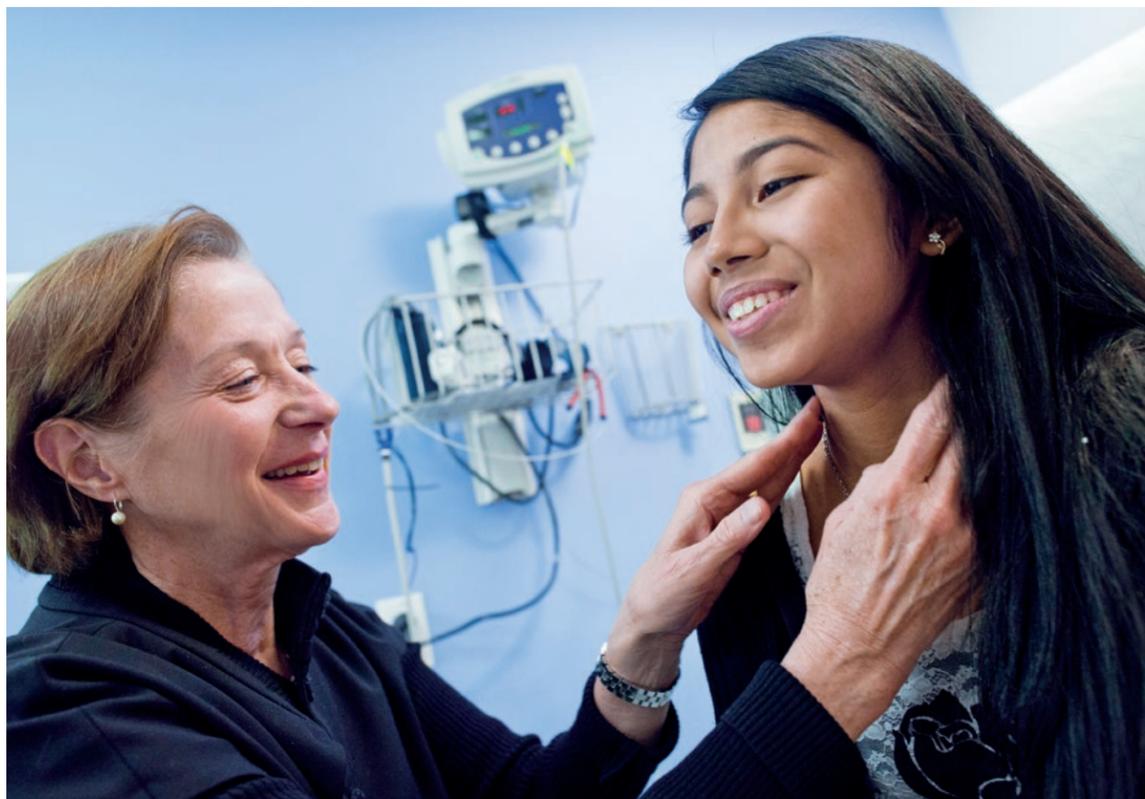
# A New Era for Children's Services

Q&A with Dr. Catherine Manno, the Pat and John Rosenwald Professor of Pediatrics and Chair of the Department of Pediatrics

In the fall of 2011, longtime Medical Center Trustee Sylvia Hassenfeld transformed the future of pediatric services when she and the Hassenfeld Family Foundation made a gift of \$50 million to NYU Langone Medical Center to create the **Hassenfeld Children's Hospital**. Currently, Hassenfeld Children's Hospital embraces pediatric services throughout the Medical Center—both on campus and off campus, both inpatient and outpatient. When the Helen L. and Martin S. Kimmel Pavilion opens in 2017, it will house Hassenfeld Children's Hospital's new inpatient facility, NYU Langone's first comprehensive children's hospital, and Hassenfeld Children's Hospital will continue to embrace all clinical services for children.

In the fall of 2013, another extraordinarily generous donation was made to NYU Langone—this time, a leadership gift from one of our newest trustees, Trudy Elbaum

Gottesman, and her husband, Robert Gottesman, who for many years have been steadfast supporters of KiDS of NYU Langone. The Gottesmans' gift is being used to establish the **Sala Institute for Child and Family Centered Care** (see page 3). Representing a sea change in the care of children and their families, the institute integrates a host of pediatric support services, vastly expands these resources, and uses research and education to achieve better outcomes and improve best practices. *news & views* met recently with Catherine Manno, MD, the Pat and John Rosenwald Professor of Pediatrics and chair of the Department of Pediatrics, for her insights and perspectives on what she calls "an exciting new chapter for children's services and a comprehensively nurturing culture for children and their families."



Dr. Catherine Manno, chair of the Department of Pediatrics, with one of her patients.

## What makes the Sala Institute a game changer for pediatric care at NYU Langone?

The Sala Institute adds an entirely new dimension to our pediatric healthcare. By forging a partnership between families and healthcare providers, it creates a unique collaboration that ensures truly comprehensive care for a child who is ill or injured. It provides not only direct care, such as pain management and palliative care, but also psychosocial and other support services. The Sala Institute also makes Hassenfeld Children's Hospital a truly integrated hospital, where medical care is enhanced by this full spectrum of services, ranging from social work to nutrition and wellness. These kinds of services are so critical for truly comprehensive, quality care of pediatric patients and their families, and I'm proud to say that NYU Langone has the first children's hospital to offer them on this scope and scale. Additionally, through the institute's focus on research and education, the advances we make here will impact the care of children beyond NYU Langone.



## What does a pediatric hospital offer children that nonspecialty hospitals can't?

Childhood illnesses that require hospitalization are very different from those that afflict adults—in their symptoms as well as their treatments. So from a purely diagnostic and therapeutic perspective, the training required of a pediatrician or pediatric nurse also differs. It's also important for children to be cared for in a comforting, healing environment, one that is especially warm, welcoming, and reassuring. This is a hallmark of Hassenfeld Children's Hospital. Our proximity to Tisch Hospital is also a tremendous asset. Much of the progress in medicine, particularly in the area of drug development, is made in the adult population first. We learn so much from our colleagues who treat adults. We focus on innovations in pediatric medicine and draw lessons from advances in adult medicine and surgery that we can adapt to children.

## How would you describe the relationship between Hassenfeld Children's Hospital and the Sala Institute?

The two are intimately connected, creating a wonderful synergy. Hassenfeld Children's Hospital will have excellent clinical programs, and the Sala Institute, which will grow to full capacity over the



next three years, also supports clinical work, engages in robust research, and provides what you might call a cultural infrastructure—psychosocial support as well as quality and safety measures that enable each service to tie into all the others. In terms of the continuum of care provided by Hassenfeld Children's Hospital and the Sala Institute, there's nothing like this anywhere in the country.

## How will the design of Hassenfeld Children's Hospital serve its needs?

Hassenfeld Children's Hospital will have a separate entrance at street level and separate elevators that connect exclusively to all floors related to children's services. From the moment our pediatric patients arrive, this will help minimize the trauma of being in a hospital. Extensive forethought has been put into the way Hassenfeld Children's Hospital will be laid out and designed. On the seventh floor, for example, there will be three playrooms: one for teenagers, one for school-age children, and one for toddlers. We'll have conference space on each floor, affording a place for conversation outside of the patient's room. So if a physician wants to discuss something with the parents without the child being present, they'll have a dedicated, private space for that.



## When the Kimmel Pavilion opens in 2017, what will distinguish Hassenfeld Children's Hospital from other children's hospitals in the New York metropolitan area?

We'll have only single-patient rooms—68 of them. That's supportive not only of patient privacy, family involvement, bedside care, and infection control, but of the healing process itself.



## Sala, an Institute for Children and Their Families, Named in Honor of a Mother

*In the Words of Trudy Elbaum Gottesman, Vice Chair of KiDS of NYU Langone and Trustee of NYU Langone Medical Center*

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Before I became involved with KiDS of NYU Langone, I volunteered as an art therapist on the inpatient pediatrics unit of Tisch Hospital. I love children. I love babies. I saw that working with children who are seriously ill is challenging in so many ways, especially for the family. Yet, even children who are ill, when they are feeling up to it and are provided with the right resources, can enjoy their childhood.

Knowing that children are treated across the Medical Center, in both inpatient and outpatient facilities, my husband, Bob, and I wanted to support a plan that would create therapeutic services within a truly family-centered culture. We wanted to start right away and not wait until the new Hassenfeld Children's Hospital within the Kimmel Pavilion opens in 2017. We loved what was presented to us: a one-of-a-kind institute comprising four centers that would touch every part of a child's care. The institute also provides for research into best practices for patient safety and quality, and education for all staff who are a part of children's services. We were encouraged to name the institute and began brainstorming. The name Sala just felt right.

My mother, Sala Elbaum, was a Holocaust survivor. She was born in Poland, and when World War II began, she was 13—young and strong enough to be sent to a labor camp. She never again saw her parents, her two younger siblings, and many other members of her family. After the war, she immigrated to the US with my father, Izak, and my older brother, Steven. My younger brother, Danny, and I were born in this country. My parents' experience is never far from my mind, and it's a large part of the reason I empathize with the plight of families.

The Sala Institute honors my mother. She was a very gentle, loving woman, and her smile lit up the room. I remembered that *sala* is also the Spanish word for living room, and this is exactly what the institute that bears my mother's name hopes to provide: a safe, comforting environment for children and their families at a very difficult time in their lives. In just a few months, it is flourishing in ways I never could have imagined. People are moved that the institute is being named for a mom—everybody has a mother. I find myself asking people for their mother's first name and connecting to them in a very special way.

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### **Hassenfeld Children's Hospital is often referred to as "a hospital without walls." How so?**

Wherever children are treated at NYU Langone Medical Center, regardless of the location, they are patients of Hassenfeld Children's Hospital. This includes the Center for Children at the Hospital for Joint Diseases, the Laurence D. and Lori Weider Fink Children's Ambulatory Care Center, and the Stephen D. Hassenfeld Children's Center for Cancer and Blood Disorders. While the Kimmel Pavilion will serve as the home of our state-of-the-art pediatric inpatient units and perioperative services, Hassenfeld Children's Hospital extends beyond its boundaries throughout the entire Medical Center.

### **Will Hassenfeld Children's Hospital be able to treat virtually any childhood disease?**

We're fully staffed with more than 150 full-time pediatric subspecialists, as well as pediatric nurses, social workers, child life specialists, nutritionists, and other caregivers. Hassenfeld Children's Hospital has the expertise to treat virtually any pediatric illness.

### **The Sala Institute has an ambitious agenda to create a new model of pediatric care. How will it translate that mission into action?**

The institute is comprised of four centers. They are interconnected, but each has a dedicated focus and expertise.

*The Center for Child and Family Resilience* focuses on an individual child and family's experience, involving a multidisciplinary team that includes a psychiatrist, psychologist, social worker, child life/creative arts therapist, and nutritionist.

*The Center for Child and Family Experience* includes a Family Advisory Council, Youth Advisory Council, and the resources to ensure that youth and family advisers are involved in all aspects of program planning and future projects for Hassenfeld Children's Hospital.

*The Center for Patient Safety and Quality* provides the resources and expertise to implement and advance quality and safety initiatives, with parents as our partners in this effort, to ensure that we do our best for each child.

*The Center for Education, Learning, and Innovation* is the intellectual heart of the Sala Institute. As we develop innovative practices that integrate the expertise of all of our centers, we'll partner with health services researchers to assess the outcomes and ensure that the institute is fulfilling its potential.

In its entirety, the Sala Institute is building a foundation for collaboration and partnership between our staff and the families of children treated here. It catapults NYU Langone to a new level of excellence.

### **You've been a part of this vision since you came to NYU Langone. What does it mean to you personally to see it moving closer to being fulfilled?**

When Dean Grossman recruited me five years ago, he assured me that children's services would be one of his top priorities. His consistent guidance and wisdom are key drivers to the reality of Hassenfeld Children's Hospital. KiDS of NYU has championed children for more than 20 years, working very hard to get us where we are today. Then, of course, we have so many extraordinarily generous families—the Hassenfelds, the Gottesmans, the Tisches, and others—who have supported us in such a fundamentally important way. To share their vision for children's services, to know that we're helping the city serve the medical needs of its youngest citizens—nearly 1.8 million of them—with unparalleled excellence, is both a privilege and a joy. We aspire to be as world-class as the Medical Center we're a part of, and we're doing everything we can to deserve that description.

### **What drew you to pediatrics?**

A fundamental love for childhood and those who pass through it. Even as a young adult, I was fascinated by working with children, and that continued through medical school. At 12, I decided that I was going to become a pediatrician. When children laugh, my ear turns. It happens every day, and I look forward to hearing their laughter in the halls of Hassenfeld Children's Hospital.



# Saving Molly's Skin

## Stricken with Melanoma, a Young Woman Beats the Odds on Two Fronts: Becoming Cancer Free and Starting a Family

Growing up in a large family in Tulsa, Oklahoma, Molly Cesarz had always loved the idea of living in New York City. So at the age of 26, she took a job teaching Spanish at Regis High School in Manhattan. "I jumped right in," she says. That was just before 9/11—a cauldron that forged her identity as a New Yorker. Before long, though, she met and fell in love with a financial analyst named John.

In 2002, Cesarz noticed that a mole on her upper left arm kept bleeding. At the urging of her mother, a physician, she consulted a dermatologist, who had the mole biopsied. The mole turned out to be just the tip of the iceberg: melanoma, a potentially fatal form of skin cancer that metastasizes rapidly, threatening vital organs. When detected and properly treated in its early stages, melanoma has a cure rate of greater than 90%, but once it has metastasized, this aggressive cancer can claim its victim in a matter of months. According to the National Cancer Institute, 76,690 new cases of melanoma were diagnosed in the US in 2013, resulting in 9,480 deaths.

Cesarz was referred to Richard Shapiro, MD, associate professor of surgery, director of surgical oncology operations, and a member of NYU Langone Medical Center's Interdisciplinary Melanoma Cooperative Group, a nationally renowned center at the forefront of melanoma research and treatment. Nearly 30 years ago, dermatologists at NYU Langone developed the criteria for detecting melanoma, encapsulated in the mnemonic ABCDE. *A* is for asymmetry, where half the mole is unlike the other. *B* is for border, where the mole is irregularly shaped, scalloped, or poorly defined. *C* is for color, where there is variation from one area to another or different shades of tan, brown, black, and sometimes white, red, or blue. *D* is for diameter, where a mole is wider than a pencil eraser, and *E* is for evolving, where a mole changes in size, shape, or color over time.

Dr. Shapiro made a wide, deep excision to remove the cancerous tissue, and also removed a nearby lymph node. The news just got worse. Analysis of the lymph node revealed that the cancer had spread,

requiring another operation. "It was pretty bleak," recalls Cesarz. "Dr. Shapiro said that the chances of it spreading further were at least 50%, which would have substantially increased my risk of dying. I really did go through all those steps of grief—denial, anger, whatever. My mother said, 'You have a fighting chance,' and I said, 'But I don't want a fighting chance!' I finally did get to the point where I accepted that I might die."

Dr. Shapiro explained to Cesarz that battling melanoma is a lifelong process. Even years of postsurgical treatment with interferon, a protein that blocks viral cell replication, can't guarantee that there won't be a recurrence. "With melanoma," says Dr. Shapiro, "you're never out of the woods."

After the second surgery, Cesarz continued teaching, but many days she struggled to cope with flulike symptoms caused by interferon. In the summer of 2003, soon after her treatment concluded, she and John became engaged. "He never flinched," says Cesarz. "He's been my rock throughout this whole thing." They married in 2004.

The couple wanted children, but Dr. Shapiro suggested holding off for a few years. "There's a theoretical action between melanoma and reproductive hormones," he explains, "so we do worry that pregnancy can reactivate the cancer." Moreover, he says, melanoma is a type of cancer that can reach the placenta and fetus. Despite a new melanoma on her right calf during her first pregnancy in 2008 (it was successfully excised and had not spread), their first child was born healthy in 2009. The Cesarzes now have three boys, and their mother remains cancer free.

In 2011, Cesarz posed with one of her sons for a book featuring successfully treated NYU Langone melanoma patients (soon after, the book became the basis for a Medical Center exhibition on skin cancer survivors). Her portrait, with others, now hangs in the Laura and Isaac Perlmutter Cancer Center. For the photo shoot, survivors wore T-shirts adorned with images of supermodels and celebrities who posed in the nude for a skin cancer awareness campaign called "Protect the Skin You're In." Marc Jacobs International, the shirts' designer and manufacturer, donates the entire proceeds from their sales to skin cancer research at NYU Langone. The company's president, Robert Duffy, is himself a former patient of Dr. Shapiro.

The incidence of melanoma in younger women is on the rise, notes Dr. Shapiro, due in part to the popularity of tanning salons (not the case with Cesarz), so he's pleased to see fashion models taking a stand against the bronze look. Moreover, ongoing financial support from Marc Jacobs International funds a large portion of NYU Langone's melanoma research program.

"We're identifying gene mutations we can target with a whole new arsenal of drugs, with very few side effects," Dr. Shapiro explains. "Marc Jacobs International enables us to focus on treating patients and developing new treatments, rather than constantly scrambling for funding."

Cesarz has her own reason to be grateful to Marc Jacobs International. "It's nice to be able to thank someone—other than God and the doctors," she says.



John and Molly Cesarz at home with their boys, Quinn, Timmy, and Charlie.

John Abbott

## Left Brain, Right Brain *(continued from page 1)*

NYU Langone Medical Center, one of about a dozen surgeons in the US who specialize in this, the most radical of neurosurgeries.

"It's a drastic solution," Dr. Weiner admits. "But in cases like Emily's, it's the only option. Frequent seizures, even small ones, are associated with serious developmental and cognitive delays. Also, it's really hard on the family, constantly living on an eggshell, wondering when the next big seizure and the next ER visit will be."

Despite the risks, the Driscolls opted for surgery. "I'm a surgical nurse," says Annemarie. "If you can fix something, you fix it."

The operation was performed on January 4, 2010. "I remember driving to the hospital the night before, thinking, 'They're going to take half my kid's brain out.'" Annemarie recalls. "'What kind of parent does something like this?'"

In a four-hour procedure, Dr. Weiner removed most of Emily's left hemisphere, save for a small portion of the frontal and occipital lobes. "In most cases, we just disconnect the electrical connections between the brain's two halves and try to preserve as much

brain tissue as possible," he explains. "This reduces complications, such as brain swelling and fluid buildup in the damaged hemisphere. In Emily's case, most of the tissue had formed dangerous, fluid-filled cysts, so it was best to remove them."

The seizures stopped immediately, never to return. Today, with the help of a variety of therapists, Emily is gradually catching up to her peers. She still has trouble with fine motor control of her right limbs, and she's missing a portion of the visual field on her right side. Such deficits are typical of hemispherectomy patients and never fully heal, according to Dr. Weiner, who has performed dozens of these operations.

Nonetheless, the Driscolls are thrilled with Emily's progress. "She's a true joy," says Annemarie. "She's going to kindergarten in a couple of weeks. Who would have thought? We were told she may never even walk or talk. NYU Langone's docs did a great job. It's great to know that they are there in case she needs anything in the future."

After a hemispherectomy, the future is hard to predict. "The younger the patient, the better the long-term outcome," explains Dr. Weiner. "Young brains are

more 'plastic'—that is, more capable of reorganizing in response to injury."

Meanwhile, the Driscolls can take some comfort in the story of Elena Del Peral of Ghent, New York. Twenty years ago, Del Peral suffered a stroke in utero, resulting in injuries similar to Emily's. She underwent a hemispherectomy at NYU Langone at age six, also performed by Dr. Weiner. Afterward, she had one last seizure, and then they stopped. For years, she struggled in school, particularly in math and science. Then, during her sophomore year of high school, something happened. "I became smart," she says. "I know that's weird to say. But everything got easy for me, and I knew what I wanted to do in life."

In 2012, Del Peral enrolled in college, eyeing a career in communications. A straight-A student, she made dean's list her first two semesters.

None of her friends or teachers ever guesses what's she been through, and she rarely tells them. Whenever a friend unwittingly kids her about having a "half-brained" idea, Del Peral has a good laugh. "That doesn't bother me," she says. "I'm smarter than half the people who say that to me."

# GIFTS & GIVING

Philanthropy That Supports NYU Langone's Patients, Faculty, and Medical Students

## A Committed Couple

*Forsaking an Engagement Ring, Dan and Danielle Stern Pledged Their Devotion to Each Other by Focusing on Children in Need*

When Dan and Danielle Stern, now a married couple, started talking about their engagement, their conversation naturally turned to a ring. "I knew I didn't want a traditional diamond," says Danielle. "I wanted something yellow or purple." The Sterns, who run a tutoring and college-prep service for high school students and live in a cozy but cramped rental apartment in Manhattan's East Village, soon learned that the kind of diamond Danielle had in mind is extremely rare—and can cost a small fortune. "We could save a life with that kind of money," she said to her fiancé.

Dan, 40, explains that their concerns about buying a diamond went beyond its financial impact. "Both my parents and Danielle's always emphasized the importance of giving back, even when you don't have much to give," he says. "That's the nature of being part of a community. We decided we wanted to honor our engagement by symbolically giving our ring to people in our community who really need help."

They set out to find a suitable charity. "We did a lot of research, trying to find the right fit," says Danielle, 31. That search made them realize that they wanted to pick an institution close to home. NYU Langone Medical Center seemed a natural choice, as their immediate neighborhood is populated by many students who attend New York University. Then, they took a tour of NYU Langone's Stephen D. Hassenfeld Children's Center for Cancer and Blood Disorders. Everything about the intimate center, from its holiday parties to its clown visits, is meant to keep patients and their families centered on life, not illness.

"Our program has its own personality," explains Hassenfeld's medical director, William Carroll, MD, the Julie and Edward J. Minskoff Professor of Pediatrics and director of the Laura and Isaac Perlmutter Cancer Center. "The 360-degree care  
*(continued on page 6)*



Joshua Bright

At NYU Langone's Stephen D. Hassenfeld Children's Center for Cancer and Blood Disorders, Dan and Danielle Stern visit with a young patient.

## A Rare Illness, a Rare Gift

*After Their Daughter Was Diagnosed with Behçet's Syndrome, David and Lisa Goldman Vowed to Help Other Youngsters Get the Treatment They Need*



Mike Weymouth

Dr. Yusuf Yazici grew up in Istanbul, Turkey, where his father (also a rheumatologist) founded and still runs the largest Behçet's treatment and research center in the world.

ry Alexandra to the bathroom," says her mother, Lisa. "Watching her suffer was the hardest thing we've ever had to do."

The rheumatologist made a tentative diagnosis: Behçet's syndrome. A mysterious autoimmune disorder, Behçet's affects a wide range of body tissue. Although its origin is unknown, genetic as well as environmental factors are suspected. Because there's no definitive test for Behçet's, doctors detect it by looking for mouth ulcers combined with at least two other signs: genital ulcers, eye lesions, skin lesions, or blistering in response to a needle poke. The disease may also attack the nerves, brain, blood vessels, or intestines. Without proper treatment, Behçet's can lead to permanent disability—even death. The disease is rare in the United States (5 cases per 100,000 people), but more common in those countries along the ancient Silk Road linking China to the Mediterranean. Few doctors,

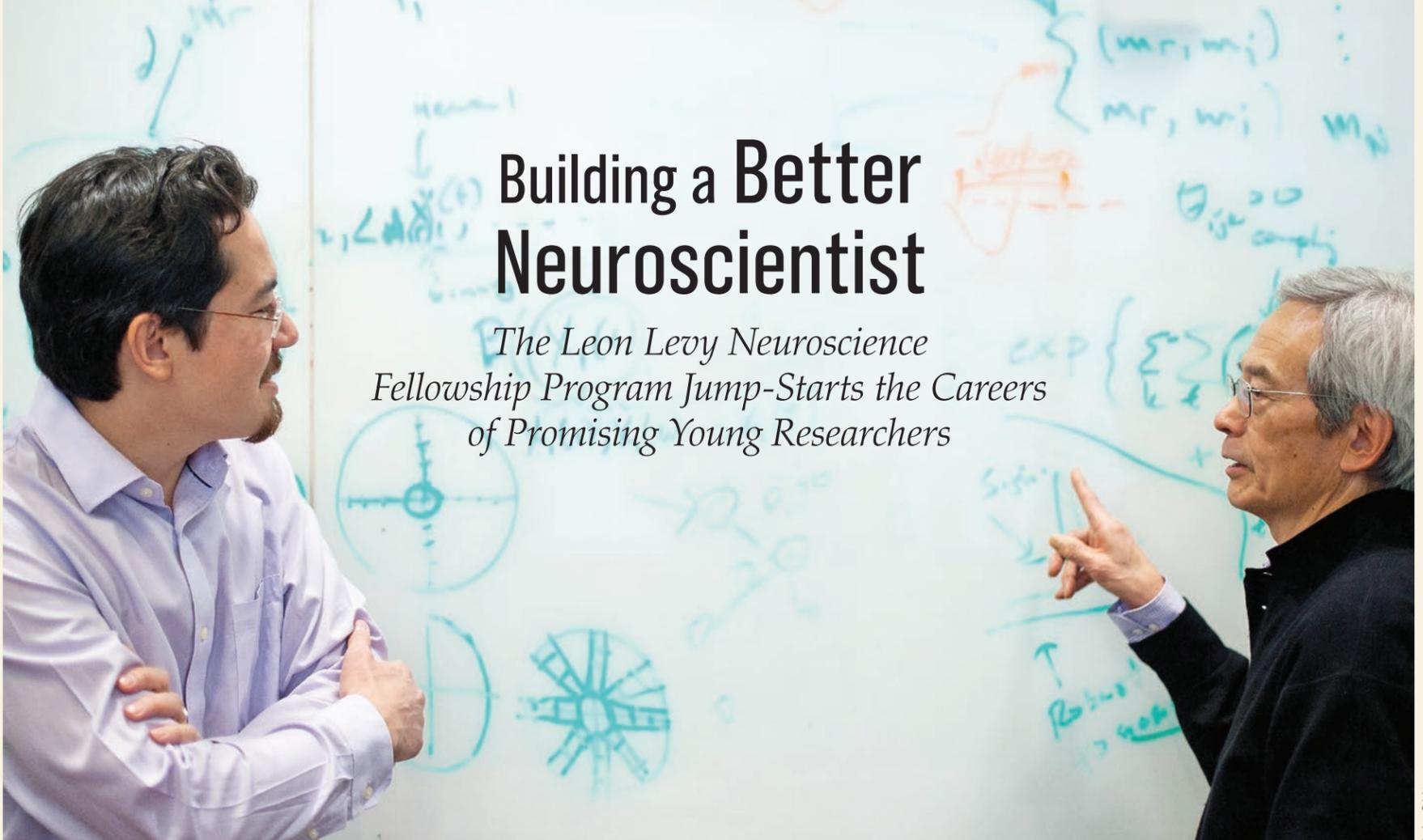
even rheumatologists, have enough experience with Behçet's to properly diagnose it or treat it.

As Alexandra's condition deteriorated, her parents sat by her bedside frantically googling for information. Each search seemed to turn up the same name: Yusuf Yazici, MD, assistant professor of medicine and director of the Behçet's Syndrome Evaluation, Treatment, and Research Center at NYU Langone's Center for Musculoskeletal Care. "I said, 'I've got to see this man,'" David Goldman recalls.

Dr. Yazici grew up in Istanbul, Turkey, where his father (also a rheumatologist) founded and still runs the largest Behçet's treatment and research center in the world. The son launched NYU Langone's center  
*(continued on page 7)*

It seemed like a cold. Nothing more than a cold. But it was June of 2012, an odd time of year for 13-year-old Alexandra Goldman—or any youngster, for that matter—to catch a virus. Then came mouth ulcers, followed by skin sores. Alexandra's joints began to ache, and her eyes grew red and swollen.

Her father, David, is an emergency medicine physician, but he'd never seen anything like this. Neither had the family's pediatrician, who referred the Goldmans to a pediatric rheumatologist at a hospital in Gainesville, Florida, 100 miles from their home in Orlando. Alexandra was admitted and given steroids intravenously to curb her inflammation, but over the next month, she grew progressively worse. Her arms developed excruciating nerve pain, and her left leg grew numb and weak. "My husband had to car-



Joshua Bright

# Building a Better Neuroscientist

*The Leon Levy Neuroscience Fellowship Program Jump-Starts the Careers of Promising Young Researchers*

Dr. Lucas Sjulson, research assistant professor of neuroscience and physiology, and psychiatry, left, shown with Dr. Richard Tsien, the Druckenmiller Professor of Neuroscience and director of NYU Langone's Neuroscience Institute, is one of five early career neuroscientists who have been awarded grants by the Leon Levy Neuroscience Fellowship Program.

As a philanthropist, the late Leon Levy lavished funds on everything from New York City cultural institutions to Israeli archaeological digs, but neuroscience research held a special claim on his benevolence. The legendary financier had majored in psychology, and he credited his success as an investor largely to his insights into human behavior. "My husband was a great friend and admirer of the Nobel Prize-winning brain researcher Torsten Wiesel," recalls Levy's widow, Shelby White, who was his partner in giving throughout their 20-year marriage. "He was very interested in how the mind works."

After his death, White established the Leon Levy Foundation to fund projects her spouse would likely have supported. Last fall, when Stacie Grossman Bloom, PhD, formerly executive director of the Druckenmiller Neuroscience Institute and now senior executive director for administration and policy at NYU Langone Medical Center, submitted a proposal with her colleagues titled "Building a Better Neuroscientist," the foundation responded with a generous grant. The Leon Levy Neuroscience Fellowship Program provides stipends and career support for five early-career scientists who show extraordinary promise. "We want to encourage talented young postdocs to do creative interdisciplinary research," says White, "and we're willing to take risks."

At a time when federal funds are scarce, especially for scientists just starting out, that kind of backing can make a big difference—not only for individual researchers, but for the field as a whole. "If we don't give young people an opportunity to get on the funding track, we're facing the prospect of a lost generation of neuroscientists," says the fellowship program's codirector, Glenn Saxe, MD, the Arnold Simon Professor of Child and Adolescent Psychiatry, chair of the Department of Child and Adolescent Psychiatry, and director of the NYU Child Study Center. "This generous program will help us keep research options open for the best and the brightest, who might otherwise move into other career opportunities."

Since 2007, the foundation has funded a smaller fellowship program for early-career neuroscientists (the Leon Levy Research Professors Program) at the NYU Child Study Center. The new program, administered by the Neuroscience Institute, is open to scientists throughout NYU Langone. Leon Levy Neuroscience Fellows

spend one or two years conducting research on a full-time basis. Along with financial support, they receive training in career skills, such as leadership, grant writing, lab management, and translating basic research into new clinical treatments. Each fellow is mentored by three senior neuroscientists from different disciplines, who'll help them develop a career plan. Fellows also participate in the annual Leon Levy Neuroscience Symposium, where they exchange ideas with researchers throughout the New York metropolitan area.

The first crop of fellows is already hard at work, conducting the kind of cutting-edge research that few early-career neuroscientists can afford to pursue. Take Anli Liu, MD, assistant professor of neurology, who is studying the neural

networks involved in memory processing in healthy people and those with neurological disorders such as epilepsy. She's also exploring the use of transcranial current stimulation to enhance certain sleep stages—often disrupted in epilepsy patients—that seem to be crucial to memory consolidation. "We don't have any real

effective therapies to offer these patients, and it's a huge quality-of-life issue," she says. "The fellowship has given me time to engage in a difficult, ambitious project that requires a long-term commitment. I'm very grateful for that."

Lucas Sjulson, MD, PhD, a research assistant professor of neuroscience and physiology, and psychiatry, is searching for ways to use gene therapy to treat addiction, anxiety, and mood disorders. "I'm at a stage where I don't have enough of a track record to qualify for NIH funding," he says. "Most other funding sources come with restrictions—you can't buy equipment, for example. The Leon Levy Fellowship is enabling me to start doing experiments I wouldn't be able to do otherwise. It's been really liberating."

"Neuroscience is at a critical point," explains Richard Tsien, DPhil, the Druckenmiller Professor of Neuroscience, director of the Neuroscience Institute, and the fellowship program's other codirector. "There have been tremendous advances in recent years, from the molecular-genetic-cellular level on up. But in this economic climate, we need help from farsighted donors in order to push our understanding even further—to take what we know about the brain's basic workings and apply it to treating diseases. The Leon Levy Foundation's investment is going to have incredible returns."

*The first crop of fellows is already hard at work, conducting the kind of cutting-edge research that few early-career neuroscientists can afford to pursue.*

## A Committed Couple *(continued from page 5)*

we provide focuses on both the physical and emotional well-being of the entire family. We don't want children to just survive cancer. We want them and their families to be well—and because we do cure most kids, we focus on the future. I think that impressed the Sterns. By enhancing various amenities and social events, gifts like theirs can have a significant impact on the daily lives of our patients."

Less than a year earlier, Dan's father had died of pancreatic cancer. "During the last few months of his life, he went through a lot of hospitals," recalls Dan. "The doctors were just so busy trying to keep people alive that they couldn't spend a lot of time addressing emotional needs." Hassenfeld's holistic approach resonated with the Sterns. "I saw how kids got treated like

it was the best day of their life," says Dan. They decided to donate their engagement ring fund to Hassenfeld, with the promise of further financial support.

That wasn't all, either. After spending more time at Hassenfeld, the couple saw how their tutoring business, Metro Academic Prep, could benefit patients who fall behind in school due to their treatment regimens. One of their tutors had recently been tutoring a boy with leukemia who, coincidentally, will be attending New York University in the fall. "He still continued working to get into college," recalls Dan. "He was doing homework, studying for the SAT. I remember thinking, 'It's not just about surviving. We all need something to live for.'"

Donating their tutoring services became a way for the Sterns to extend their initial gift into a long-term

commitment to Hassenfeld. "We have the resources to offer academic support, college prep, and application counseling for seriously ill high-school students," says Dan. "My staff wants to be part of this, as well. They love the idea of contributing their time." Eventually, the Sterns hope to offer grade school tutoring as well.

So what kind of ring did Dan slip on Danielle's finger when he popped the question? Well, long before their decision to do without a diamond, the Sterns were walking through a street fair one day when they noticed a pretty vintage ring with a small purple stone, perhaps an amethyst. Price: \$50. Danielle remarked how beautiful it was. Dan secretly circled back and bought it for her. "For all I know the stone is plastic," says Danielle, "but I love it."

# Rescuing Kids at Risk

*Bolstered by Private Seed Gifts and Federal Support, the Child Study Center Partners with Child Welfare and Juvenile Justice Systems Nationwide to Help Heal the Wounds of Childhood Trauma*

"When you look at kids in juvenile detention facilities, a great many of them have experienced trauma in their own lives," notes Glenn Saxe, MD, the Arnold Simon Professor of Child and Adolescent Psychiatry and chair of the Department of Child and Adolescent Psychiatry. "If we can understand what drives them to violence, and then set up clear interventions, we can change their lives for the better. Otherwise, we know where many of these kids are heading: adult prisons or psychiatric inpatient facilities."

His words carry the wisdom of a career devoted to helping children overcome the effects of abuse, domestic violence, and other traumas. When these are left untreated, the result is frequently substance abuse,

violent behavior, school dropouts, even suicide attempts. Dr. Saxe helped design Trauma Systems Therapy, an approach used in a dozen states to assess and treat children with traumatic stress. As director of NYU Langone's Child Study Center (CSC), he has also overseen the development of other tools for identifying and treating at-risk children. The challenge, Dr. Saxe acknowledges, is bringing all these tools to bear in the real world.

Recognizing CSC's potential for making a significant national impact on at-risk children, two private donors—Michele Barakett, PhD, and Jane Bloomgarden, PhD, along with her husband, David Bloomgarden, MD—recently made generous seed gifts to support Dr. Saxe's vision. "As a school-based psychologist, I'm impressed by Glenn Saxe's comprehensive approach to treating traumatized children," says Dr. Barakett. "You can't just offer such children a weekly therapy session. They need treatment based on carefully tested methods." For their parts, Dr. Jane Bloomgarden, a clinical psychologist, and Dr. David Bloomgarden, an endocrinologist, are delighted that the treatment approach that Dr. Saxe and his colleagues have implemented in juvenile detention facilities, child welfare settings, and hospitals is proving to help children override traumatic life experience.

Both private gifts helped CSC develop and evaluate new intervention tools, refine screening measures, supplement important data, and seek federal support. Indeed, the seed funding paved the way for major federal grants that have launched a new CSC initiative aimed at integrating the best



clinical approaches into the nation's child welfare and juvenile justice systems. The federal grants awarded to CSC and its partner organizations include \$3.2 million from the Administration for Children, Youth and Families to improve screening and treatment of foster-care children in New York State; \$1.6 million from the Substance Abuse and Mental Health Services Administration (SAMHSA) to provide trauma-focused services at New York City's juvenile detention centers; and \$1.6 million, also from SAMHSA, to disseminate trauma-related treatment and services to child welfare systems nationwide.

"This is the first time a leading research institution and physicians who treat traumatized children—both at NYU Langone Medical Center and

Bellevue Hospital Center—are partnering with city, state, and federal child welfare and justice systems to effect measurable change," says Dr. Saxe.

On the foster care project, CSC is teaming up with New York City's Administration for Children's Services (ACS), the Ulster County Department of Social Services, and the New York State Office of Children and Family Services. The project is training child welfare workers in trauma assessment and treatment within pilot efforts in The Bronx and Ulster County. In

the juvenile detention effort, CSC is working with ACS and Bellevue to treat incarcerated youngsters and provide trauma-related training to officers at several New York City facilities.

The SAMHSA national dissemination grant creates a partnership with the National Child Traumatic Stress Network, which includes 150 academic and community centers. The grant has funded a new training center operated by NYU Langone and KVC Health Systems, a Midwestern child welfare group, offering seminars on traumatic stress to mental health professionals and other practitioners in five states in the Midwest.

"The issues are complex and very difficult," says Dr. Saxe, "but sometimes by doing things a little differently, you can change lives—perhaps even save them."



"Sometimes an overly punitive approach gets in the way of understanding what's causing kids to behave the way they do," says Dr. Glenn Saxe, the Arnold Simon Professor of Child and Adolescent Psychiatry and chair of the Department of Child and Adolescent Psychiatry.

## A Rare Illness, a Rare Gift *(continued from page 5)*

in 2005, and it remains the only one of its kind in North America. "In New York City, there are a lot of people of Asian and Mediterranean ancestry," Dr. Yazici explains, "so Behçet's is more prevalent than in many places." He and his colleagues have treated more than 1,200 of these patients, and they share their expertise with physicians in the US and abroad.

David Goldman e-mailed Dr. Yazici, who confirmed Alexandra's diagnosis after a phone conference and began consulting with her rheumatologist on a course of treatment. They settled on a regimen of powerful immunosuppressants, which quickly began to clear up her symptoms. "The important thing with Behçet's is to start

aggressive treatment before any permanent damage is done," explains Dr. Yazici. "Once you turn off the disease, in 60 to 70% of patients it stays away for good."

Within a few weeks, Alexandra was well enough to travel to New York with her family for a visit with Dr. Yazici. "He was so reassuring," she recalls. "He told me he'd seen hundreds of patients like me who were now in remission. That made me feel much more confident, and less alone."

Today, Alexandra is completely well, though she will remain on a maintenance dose of immunosuppressants for another two years. She's even gone back to one of her passions—dancing. In gratitude, she and her parents started the

Goldman Family Charitable Fund, which pays for transportation, room, and board for up to five young patients a year to come to NYU Langone's Behçet's center from distant locations. The gift was inspired by patients the Goldman family met who had been diagnosed too late or treated inadequately and were still suffering the consequences years later.

"I could relate to them so well, and I wanted to help them so badly," says Alexandra, who's aiding the fund-raising effort by selling her own handmade jewelry online.

"We were incredibly fortunate to find Dr. Yazici," adds her mom. "We're happy to be able to give other kids that chance, too."

# An All-Expenses-Paid Trip to a Noble Profession

*Thanks to the Silverstein Scholarship Fund, a Select Group of Students Can Focus on a Single Goal: Becoming the Best Doctors They Can Be*

When Hon Chau's parents emigrated from Hong Kong in 1997, they arrived in New York with a few hundred dollars and no English. Settling in Chinatown, they found work in small garment factories and on construction sites, where speaking English was not required.

Chau, an only child, grew up speaking Cantonese at home and translating whenever the American world intersected with his parents' lives. They encouraged him to do well in school. "My mother made sure I did my homework," he says. But Chau needed little prodding to excel. Pursuing the American Dream was simply the next generational step in his parents' quest for a better life. From an early age, he took up dance and graphic design, but he had a particular passion for biology.

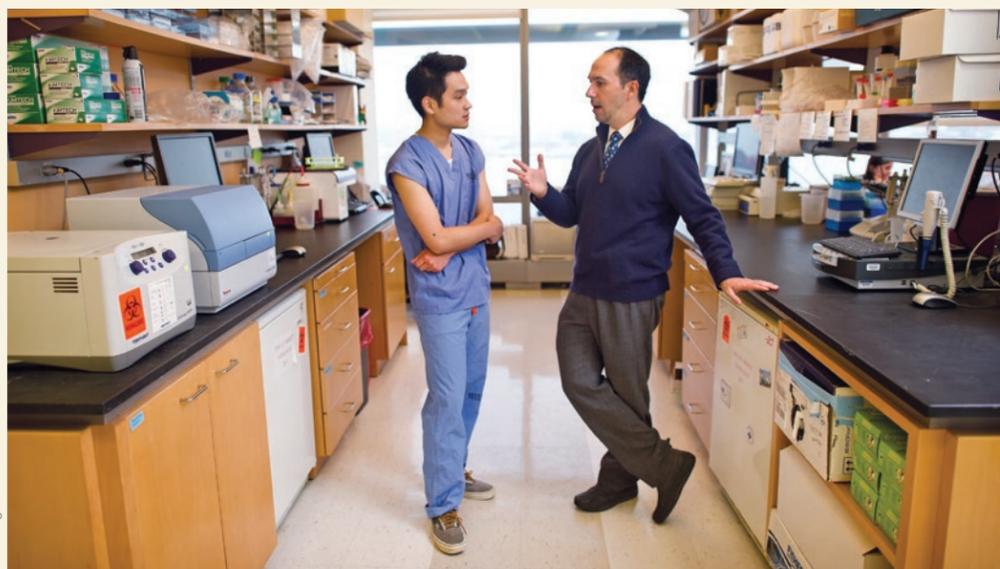
With virtually no family resources to support his ambitions, every decision was colored by financial realities, which only made him work harder. Chau was accepted by Stuyvesant High School, Manhattan's premier public secondary school for gifted students. As a scholarship student at New York University, he studied at the Center for Developmental Genetics and volunteered at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, where he learned about patient-centered medicine. "Before I volunteered, I thought medicine was all very scientific and factual," he says, "but I saw that talking to patients and getting their point of view is an important part of the healing process."

The exposure to a hospital setting convinced Chau to apply to medical schools. His parents were not enthusiastic. "They are very proud people," he explains, "and they knew medical school would cost more than they could ever afford." Nevertheless, Chau followed his instincts, applying to several medical schools and resigning himself to years of student loan debt. In February 2013, he was accepted by NYU School of Medicine, among others.

Then, one day in April, he received a phone message from Rafael Rivera, MD, associate dean for admission and financial aid. Dr. Rivera was calling to inform Chau that if he enrolled at NYU School of Medicine, he would receive a full four-year scholarship, including room and board. At first, Chau thought it was a practical joke. "I was suspicious," he admits. "But when I called Dr. Rivera back, and he confirmed for me that it was true, I had no words. When I first told my parents, they were in disbelief. It was a game changer for all of us."

The scholarships are funded by Klara Silverstein and her husband, Medical Center and University Trustee Larry Silverstein. The couple, married for more than 55 years, are longtime benefactors of the University and the Medical Center. Klara Silverstein is a leader on the Child Study Center Advisory Board, and both she and her husband are passionate about helping New Yorkers, especially with philanthropic commitments to education.

The Silverstein Scholarships are awarded to five highly promising applicants each year. Like his fellow scholarship recipients, Chau will not have to face the mountain of loan debt (more than \$160,000) that burdens most medical students



First-year medical student Hon Chau (left) visits Dr. Jeffrey Berger, assistant professor of medicine, in his laboratory to learn more about one of his interests: cardiovascular disease.

for many years after graduation. "That gives me so many more options," explains Chau, a first-year student. "If I want to, I can go into a nonsurgical field that earns less money."

The Silverstein scholars are selected primarily on the basis of merit, although financial need is considered. "We look for both academic and personal excellence in applicants," says Dr. Rivera, "paying special attention to extracurricular and volunteer activities. We believe these students have the attributes to become leaders in medicine."

Chau says that meeting Larry Silverstein, president and CEO of Silverstein Properties, Inc., a leading real estate development and investment firm, in his office above Ground Zero was an unforgettable experience. "I was in the fifth grade when the twin towers went down," recalls Chau, "and here I was with the man who heads the company that owns the property the World Trade Center occupied."

Upon receiving the Valentine Mott Founders Award at Dean's Honors Day in 2012, Silverstein gave an emotional acceptance speech. "One morning recently, Klara and I had a chance to meet the first five scholarship recipients," he told the audience. "It was the sweetest way to start the week. These are five extraordinary medical students who gave hugely of themselves in high school and college. It was such a moving experience for us to learn what this opportunity means to them—that it enables them to focus on the most important thing in their lives right now: becoming the best doctors they can be."

## Adults in Toyland

Adults in Toyland Casino Night raised over \$850,000, a record, for pediatric psychosocial programs at the Stephen D. Hassenfeld Children's Center for Cancer and Blood Disorders and expansion of facilities and faculty recruitment within the Department of Pediatrics. More than 600 guests attended the event, held on February 27 at The Plaza Hotel.



1. Dr. Catherine Manno.
2. Hassenfeld Committee event cochairs Harlan Fabrikant Saroken, Kate Goodman, Susie Block Casdin, Adi Beltzman, Michael Weaver, Kelly Kennedy Mack, and Patti Kim. Not shown: Kim Goodwin, Morgan Hertzan.
3. Dean Robert I. Grossman, MD; Susi Wunsch; and Alice Tisch.
4. Susie Block Casdin, Anne L. Keating, and Ellie Block.
5. Janet and Dr. Howard Ginsburg and Trudy Gottesman.
6. Joan Haffenreffer, of presenting sponsor Citi, and Max Winer.

## For Those Struggling with Alcohol Addiction, a Primary Care Visit May Be the First Step on the Road to Recovery

For patients with diabetes, asthma, depression, or any number of other chronic conditions, treatment typically begins in a doctor's office. For those struggling with alcohol addiction, however, the road to recovery, if it exists at all, rarely involves a physician, nurse, or primary care visit. Of the estimated 18 million Americans with alcohol-dependence problems, only about 1 million seek treatment, and the majority receives only counseling.

This glaring lack of medical attention is one reason why alcohol abuse kills an estimated 80,000 people a year, making it a leading cause of preventable death. "Most people try to deal with alcohol problems on their own, often unsuccessfully," says addiction specialist Joshua Lee, MD, assistant professor of population health and medicine. "Alcohol disorders are destructive and too often fatal. We simply have not done enough to recognize and treat them."

Fortunately, a new generation of medications, such as extended-release naltrexone, a drug that blocks opioid receptors in the brain and blunts the urge to drink, promises to do for alcohol addiction what drugs such as Prozac did for depression: move its treatment into a primary care setting, where health professionals can monitor patients from one visit to the next.

Clinical research has shown that naltrexone is effective at reducing rates of heavy drinking (defined as more than four drinks for men and three for women on any one occasion). Furthermore, naltrexone prescribed during primary care visits is as effective as more intensive therapy. Yet less than 10% of patients receive naltrexone or any other medication for alcohol-use disorders.

Part of the problem is sticking to the medication regimen. In pill form, naltrexone (approved by the Food and Drug Administration in 1994) must be taken once a day. "It's a big challenge," explains Dr. Lee. "The disease process itself, heavy drinking, undermines adherence."

In 2010, the FDA approved the extended-release formulation of naltrexone, administered as an intramuscular injection once a month. But at a retail out-of-pocket cost of \$1,000 a month—nearly 10 times the price of the pill—some physicians, insurance companies, and patients question its affordability.

To address these concerns, Dr. Lee will soon begin recruiting patients for a clinical trial, funded by the National Institute on Alcohol Abuse and Alcoholism, that will follow 234 adults with alcohol dependence over six months. The goal is to compare the efficacy of the two formulations when administered in a primary care setting, and to determine if the extra cost of the injection is offset by fewer complications from drinking, such as trips to the emergency department.

A broader aim, says Dr. Lee, is to raise awareness about medical options for treating alcohol abuse. "This study may help convince general practitioners that alcohol use disorders are common and chronic problems they can do something about."



## Study of Epilepsy Patients Reveals Genetic Risk Factors

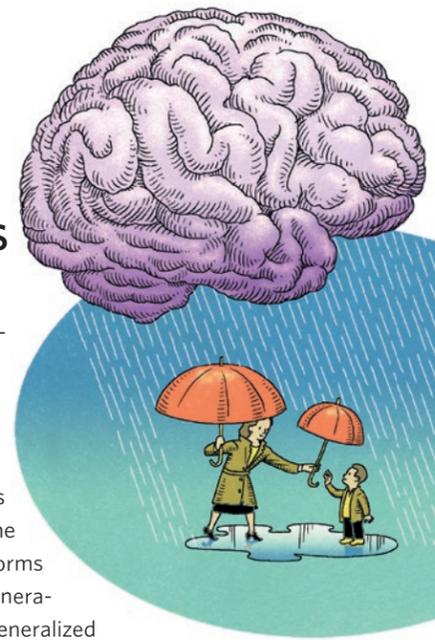
Neurologists and epilepsy researchers from NYU Langone Medical Center are among scientists who have discovered 329 random genetic mutations associated with two of the most severe forms of epilepsy. Though it's well known that many forms of epilepsy are strongly influenced by genetics, there has been relatively little progress in identifying the genetic differences that contribute to most forms of severe epileptic encephalopathies. "For generations, we have been treating most forms of generalized epilepsies with no idea what causes the disease," says study co-author Ruben I. Kuzniecky, MD, professor of neurology, who is codirector of the NYU Comprehensive Epilepsy Center and director of epilepsy research. "Now, for the first time, we have identified clear genetic risk factors in patients with severe epilepsy."

The findings, published in the journal *Nature*, are the first to emerge from the largest investigation into the genetics of epilepsy ever conducted. The study, known as the Epilepsy Phenome/Genome Project (EPGP) and representing 27 medical centers from around the world, is led by Dr. Kuzniecky and Daniel Lowenstein, MD, professor and vice chair of the Department of Neurology at the University of California, San Francisco (UCSF), and director of the UCSF Epilepsy Center. Since 2007, when the project began, its team has collected blood samples and clinical information from more than 4,000 patients with epilepsy and their family members. NYU Langone contributed data for 430 patients. The goal of the project is to find molecular targets that will transform the way epilepsy is diagnosed and treated.

Characterized by abnormal electrical activity in the brain that causes chronic seizures, epilepsy is one of the most common neurological disorders, affecting 1 to 2 in 100 people worldwide. For more common types of epilepsy, the condition is thought to arise from a combination of inherited mutations and random mutations that occur after birth. Identifying these mutations is critical to understanding why some people with a family risk of the disease never develop it, while others do, and why certain medications are more effective in some patients than others. "Two people could have the same mutation but express it differently clinically," explains Dr. Kuzniecky. "But we know that the disease follows certain patterns." The identified mutations were also found to overlap with autism spectrum disorder and severe developmental disorders, suggesting that the disorders may share common molecular miscues.

Funded by a \$15 million EPGP grant and a second sequencing grant, the EPI-4K grant, from the National Institute of Neurological Disorders and Stroke, the study's researchers sequenced DNA extracted from the blood samples of patients suffering from epileptic disorders. Participating patients included 149 children with infantile spasms, or West syndrome, a type of seizure associated with severe developmental problems that often affects infants between four and eight months old, and 115 patients with Lennox-Gastaut syndrome, characterized by seizures in childhood that do not respond to therapy and also cause severe developmental problems. The study revealed random mutations on nine specific genes, with four mutations being completely new ones never before associated with epilepsy.

"We found that each mutation carries substantial risk for these forms of epilepsy," says Dr. Kuzniecky. "It's clear that rare individual mutations in different genes converge on specific biological pathways, suggesting a clear direction for personalized therapy and drug development."



research & clinical spotlight

## Tattooing Device Gives Research on DNA Vaccines a Shot in the Arm

One spring day in 2011, Yung-Nung Chiu, a research technician in the lab of Xiangpeng Kong, PhD, associate professor of biochemistry and molecular pharmacology at NYU Langone Medical Center, received an unusual assignment: Dr. Kong asked him to investigate tattooing equipment for an upcoming experiment. "Most people don't associate tattooing with science," says Chiu.

Dr. Kong, who has spent nearly a decade researching HIV vaccines, read in the scientific literature that the same tiny needles used in tattooing could also be used to deliver DNA vaccines through the skin, which is rich in immune cells. A DNA vaccine consists of a tiny bit of genetic material—in Dr. Kong's case, taken from the HIV virus—that boosts the immune system and trains it to attack any microbial invaders bearing the same gene. "But the skin is tough," says Dr. Kong, "so you need to irritate the surface to get the vaccine into the cells."

So-called gene guns have been used since the 1980s to deliver the DNA vaccine into skin cells, but a single gun can cost up to \$30,000. Tattooing equipment, Dr. Kong reasoned, could offer a much more affordable alternative, but very little was known about the technique: How many needles did it require? What type of tattooing equipment was required? What was the best technique to avoid injuring the skin?

Chiu's job was to find out. He began by calling several tattoo parlors in the East Village, only to discover that not everyone was as eager to advance science as he was. "People didn't want to talk me," he says. "Maybe they thought I was trying to steal their technique, or they didn't want their business to be associated with HIV. Our conversations didn't last long."



Illustrations by Wes Bedrosian

Dr. Kong decided to write a formal letter explaining the project that Chiu could hand-deliver to any tattoo parlors he could find in Manhattan's East Village. The first two shops he visited turned him down, but his luck changed with the third. The shop owner, whose ink-covered skin suggested he knew his way around tattooing equipment, somewhat reluctantly offered to explain the different devices and even let Chiu practice on a strip of synthetic skin. With the help of his new and unlikely collaborator, Chiu later acquired a compact, light, quiet tattooing system for less than \$400.

Over the next few months, with funding from NYU Langone's Center for AIDS Research, Dr. Kong, Chiu, and Jared Sampson, another research technician in Dr. Kong's laboratory, developed a novel protocol for using the tattooing equipment to deliver DNA vaccine into the skin of mice. Last year, they published their results in *The Journal of Visual Experiments*.

While more research is needed to understand how DNA tattoos work on the molecular level, the technique perfected by Chiu and team has become an invaluable research tool in Dr. Kong's lab. "It works very, very well," says Dr. Kong, who hopes it will eventually lead to an economical alternative for vaccine delivery to humans.

## Tisch Hospital *(continued from page 1)*

senior vice president for real estate development and facilities.

By doubling the number of elevators that serve patient floors from four cabs to eight, the new tower has truly transformed daily life at the hospital for staff and visitors alike. “When people board these sleek elevators, they just look at each other and smile,” says Philip Moskowitz, MD, the Mamdouha S. Bobst Associate Professor of Internal Medicine and faculty director of the Office of Development and Alumni Affairs. “Nothing needs to be said.”

### Putting patients first

Throughout its history, something else about Tisch Hospital has also been clearly evident: patients come first. “Directly or indirectly,” notes Bernard Birnbaum, MD, senior vice president, vice dean, and chief of hospital operations, “all of us are here to take care of patients. They are central to our mission.”

In fact, Tisch Hospital practiced patient-centered care right from the start. After visiting a family member, the renowned drama critic Brooks Atkinson wrote in *The New York Times*: “If the personality of a hospital is callous, the patient’s misery is compounded by many intangibles. If the hospital retains its original endowment

*“Directly or indirectly,” notes Bernard Birnbaum, MD, senior vice president, vice dean, and chief of hospital operations, “all of us are here to take care of patients. They are central to our mission.”*

of mercy, the patient retains his membership in the human race. That’s the situation at University Hospital.”

The focus on patients is as strong today as ever. The Patient Experience Department partners with patients to help them navigate the healthcare system and supports faculty and staff so that they can do their best work with patients. In 1979, Tisch Hospital implemented one of the first electronic medical records systems in the country. Over the last three years, that system was replaced by Epic, the first fully integrated hospital information system in the New York metropolitan area, and one of only a few nationwide that links hospitals, physicians, and patients on a single platform. Increasingly, diagnostic and clinical services are available at Tisch Hospital during off-peak hours and on weekends. “People fall sick at all hours, any day of the week,” notes Robert I. Grossman, MD,



Rene Perez

Tisch Hospital’s Critical Care Center.

dean and CEO of NYU Langone. “If we want to be responsive to that reality—if we want to be truly patient centered—we have to be there, all systems go, every hour of the day, every day of the week.”

As NYU Langone’s flagship facility, Tisch Hospital serves as the institution’s clinical hub and a primary training ground for medical students, residents, and fellows. Historically, Tisch Hospital was utilized for the admission of patients cared for by clinical faculty, whose primary teaching activities were based at Bellevue Hospital Center, NYU Langone’s longtime public affiliate. Under Dean Grossman’s administration, however, Tisch has become an even more important site for teaching. Medical students are introduced to patients on their very first day of class, rather than in their third year of medical school, and they continue to interact with patients throughout their medical training.

### High-tech, high-touch learning

The hospital has become a dynamic learning environment, where medical education is personalized through the innovative use of technology. Medical students are provided with iPads, for example, enabling them to follow the course of a patient’s illness at the bedside and providing immediate access to information related to the patient’s condition. “More and more in hospitals around the country, ‘patient rounds’ are being conducted in conference rooms, where cases are reviewed and discussed,” explains Anthony Grieco, MD, professor of medicine and associate dean for alumni relations and academic events. “But at Tisch Hospital, we still do a great deal of our teaching at the bedside. It’s as high-touch as it is high-tech, and this is one of the reasons so many young physicians want to train here.” Indeed, each year NYU School

of Medicine receives some 5,000 applications for 65 residency spots in medicine.

### Pioneering surgical procedures

Long a tertiary care hospital treating the most complex cases, Tisch Hospital now qualifies as a quaternary care institution, where clinical trials are offered and highly specialized procedures are performed. Over the years, for example, numerous surgical procedures have been pioneered at Tisch Hospital, including cardiac open surgery, microvascular surgery, colorectal surgery, carotid artery surgery, and stereotactic brain surgery.

Under Dean Grossman’s leadership, Tisch Hospital has become the nucleus of a truly integrated academic medical center that embraces virtually all major medical specialties and numerous emerging subspecialties. As NYU Langone’s full-time faculty continues to grow in number and expand in expertise, Tisch Hospital has acquired new consultation services in such areas as cardiology, hepatology, immunology, endocrinology, and oncology, ensuring the highest quality of care for inpatients. Some 60% of the hospital’s patients are cared for 24/7 by a team of hospitalists, attending physicians who tend to inpatients exclusively.

### Excellence in patient safety and quality

As a measure of Tisch Hospital’s excellence in patient care, last year NYU Langone scored number one for

*Today, a new generation of Tisches is carrying on the family’s philanthropic tradition, and their commitment extends far beyond Tisch Hospital.*



John Abbott

Tisch Hospital’s hybrid OR.

overall patient safety and quality among leading academic medical centers nationwide that participated in the University HealthSystem Consortium Quality and Accountability Study. The Medical Center also received the UHC Quality Leadership Award for demonstrated excellence in the delivery of high-quality care, achieved five stars for its overall performance, and ranked number one in the domains of safety, effectiveness, and equity. The UHC scorecard is a unique analysis of academic medical centers that takes into account all six quality domains of efficiency, effectiveness, equity, patient-centeredness, safety, and timeliness.

Since 2006, the Department of Surgery has doubled in size under the leadership of H. Leon Pachter, MD, the George David Stewart Professor of Surgery and chair of the Department of Surgery, with 79 full-time attendings who perform some 8,500 operative procedures annually in Tisch Hospital. Among its 31 operating rooms is a state-of-the-art “hybrid OR.” Part standard operating room and part ultra-high-tech radiology suite, it provides the three-dimensional view and down-to-the-millimeter precision needed to perform intricate, minimally invasive cardiac, vascular, and neurovascular surgery. Tisch Hospital is also

*(continued on page 11)*

Nancy Silver, RN, and Anne Sansevero, RN, GNP, both nurses at NYU Langone, had never met before Monday, October 14, 2013, the day they collaborated to save a woman's life.

soon as she was out, we took over. Whatever we did—with the compressions and the breaths—it worked.”

Campus security officers began to arrive, along with officers from the Boston Police Department and paramedics from the Boston Fire Department. The woman was whisked to a nearby hospital. Silver and Sansevero learned that the woman was from Atlanta and that she was a breast cancer survivor with a history of hypothyroidism. But they never learned her name, just as she never learned theirs, and they never saw her again. By all accounts, the woman recovered, though the nurses never found out what sort of attack she had suffered. They strongly suspect a pulseless electrical activity (PEA), a potentially fatal cardiac event that results in unconsciousness and spontaneous cessation of breathing. To have a shot at surviving a PEA, the victim must immediately receive CPR—exactly what Silver and Sansevero provided.

As the ambulance moved into traffic, Silver turned to Sansevero and said: “You look so familiar. Do I know you from somewhere? Where are you from?”

“New York,” Sansevero replied.

“I live in New York, too,” said Silver. “What hospital do you work at?”

“NYU Langone—in the postanesthesia care unit on the sixth floor of Tisch Hospital.”

“Me, too! In acute care neurology on the 12th floor of Tisch—for 15 years.”

That wasn't the only coincidence. Both nurses, it turns out, live in Murray Hill, near the Medical Center, and their children played in the same neighborhood softball league. “I felt a real sense of fate,” says Sansevero, “that Nancy and I were meant to be there—on that tour, on that day, at that time.”

“We worked together seamlessly,” Silver adds. “It was as if, after all our years at the hospital, we'd been waiting for that moment to happen out in the field.”

The survivor's husband and daughter, both crying, hugged Silver and Sansevero over and over. The associate vice president for enrollment offered her thanks, too, inviting the two nurses and their families on a private tour of the campus. Off they all went, the nurses' adrenaline still pumping, into the autumn afternoon.



Joshua Bright

## A Fateful Afternoon

### *The Lives of Two Nurses from NYU Langone Intersect with the Life of a Woman They Seemed Destined to Save*

It was 2:30 p.m. on Monday, October 14, 2013—Columbus Day. As the associate vice president for enrollment at Northeastern University in Boston stood on stage to give the university's big pitch to an audience of some 250 high school seniors and their parents, a woman in her mid-50s moved into the aisle and staggered toward the rear of the hall. Tall, thin, and blond, she was pale as a sheet and dripping with sweat.

“Are you OK?” asked Nancy Silver, RN, who was sitting on the aisle next to her daughter and husband, as the woman passed by. Silver, a senior nurse clinician in the cardiac critical care unit of NYU Langone Medical Center, has been caring for patients at Tisch Hospital for more than a quarter of a century.

Are you diabetic?” she called out to the woman. “No,” the woman replied. “I feel nauseated. I just need to go to the bathroom.” Silver followed.

Just as the woman reached the back of the hall, her knees buckled, and she fell to the floor. Suddenly, the woman's eyes rolled back in her head, and she stopped breathing. “Call 911!” yelled Silver, who immediately started CPR—30 chest compressions per set, in rapid sequence. Another woman appeared at Silver's side and identified herself as a nurse. Anne Sansevero, RN, GNP,

a geriatric nurse practitioner, was attending the event with her son. Silver thought Sansevero looked familiar but didn't have time to think about why.

As the two nurses tended to the woman, who was turning blue, an ear-shattering bleating horn sounded nonstop. Someone had pulled the fire alarm, making verbal communication between the two first-responders almost impossible. So they worked by instinct, relying on eye contact and their training. “I do this in the hospital,” Silver thought to herself, “but there I have state-of-the-art equipment to help me.”

After each set of chest compressions completed by Silver, Sansevero would start mouth-to-mouth resuscitation—two breaths per set. Crucial minutes passed. Without an automated external defibrillator available to shock the heart, the nurses gave it their all, knowing that the woman's chances of survival were poor.

Suddenly, the woman came to and began to stir. “How do you feel?” Sansevero asked. “Still nauseated,” the woman said. Sansevero reassured her: “It's all right. We're nurses. We're with you.”

“With most recoveries, the person survives because you're able to shock them back,” Sansevero explained to news & views later. “But we were on her right away. As

## Tisch Hospital *(continued from page 10)*

home to the Gamma Knife®, which revolutionized minimally invasive brain surgery. Suitable for tumors up to three or four centimeters in diameter, the device is used to treat complex tumors in the brain, head, and neck.

### **Caring for the sickest of the sick**

At an institution that specializes in caring for the sickest of the sick, a vital component of that acuity is critical care. Tisch Hospital's Critical Care Center, a 27-bed unit that opened in 2009 after being totally renovated, cares for some 4,000 gravely ill patients annually. Tisch is the only hospital in Manhattan with two 24/7 intensivists—one for the medical intensive care unit and another for the surgical intensive care unit. When Hurricane Irene assaulted New York City on August 26, 2011, a multidisciplinary team of caregivers volunteered to remain on duty in the medical intensive care unit, tending to six patients who were too fragile to be evacuated. Together, they rode out the storm without any harm or loss of life.

The more acutely ill the patient, the more likely he or she is to be on numerous medications. Tisch Hospital now has a team of pharmacotherapists—experts in the therapeutic use of medicines, particularly antibiotics—who round with physicians and play a key role in patient care. Seriously ill patients also require the most vigilant nursing, and at Tisch Hospital, they are cared for by some of the profession's best. Since 2005, Tisch has been recognized

for its nursing excellence by being awarded Magnet recognition, a distinction earned by just 7% of hospitals and medical centers nationwide. The designation signifies that an institution's nurses have a high percentage of baccalaureate and advanced education, earn specialty certification, adhere to the highest standards of professionalism, and provide outstanding patient care.

*“At Tisch Hospital, we still do a great deal of our teaching at the bedside,” explains Anthony Grieco, MD, professor of medicine and associate dean for alumni relations and academic events. “It's as high-touch as it is high-tech, and this is one of the reasons so many young physicians want to train here.”*

### **Triumph over disaster**

The quality of Tisch Hospital's nursing staff was highlighted on Monday, October 29, 2012. As Hurricane Sandy bore down on New York City, nurses in the KiDS of NYU Langone Neonatal Intensive Care Unit

took the lead in orchestrating the evacuation of 20 premature infants and, with the help of many of their medical and administrative colleagues, transferring their fragile patients to other hospitals. In all, 322 inpatients at NYU Langone were taken to 14 other hospitals within 13 hours.

In the aftermath of the historic storm, Tisch Hospital was closed for 59 days. It reopened on December 27, with about 75% of its services up and running. The silver lining behind the catastrophe was that the closure of the hospital's Emergency Department (ED) actually facilitated and accelerated the construction of its replacement, the Ronald O. Perelman Center for Emergency Services, which opens this spring. The 22,000-square-foot Perelman Center—more than triple the size of the former ED—is expected to treat well over 50,000 patients annually.

When Tisch Hospital was renamed for the Tisch family in 1989 in gratitude for a generous gift, John Brademas, PhD, then president of New York University, noted that “this extraordinary commitment links the name of a distinguished American family to one of the finest hospitals in the nation.” Today, a new generation is carrying on the family's philanthropic tradition, and their commitment extends far beyond Tisch Hospital.

As Dean Grossman puts it: “There is hardly a corner of our Medical Center that the Tisch family has not touched in some way with their generosity.”

## Inside This Issue



**At Tisch Hospital, A Half Century of Patient-Centered Care** In 1963, University Hospital opened its doors. Twenty-five years later, it was renamed Tisch Hospital in honor of the Tisch family, longtime benefactors of NYU Langone Medical Center. Today, a new generation is carrying on the family's philanthropic tradition, and their commitment extends far beyond the hospital that bears their name. [page 1](#)



**Left Brain, Right Brain** Faced with a lifetime of relentless seizures for their daughter, Emily, Pete and Annemarie Driscoll agreed to an unthinkable cure: removing most of the left hemisphere of her brain. The seizures stopped immediately, never to return. [page 1](#)



**A Fateful Afternoon** On Monday, October 14, 2013, Nancy Silver, RN, and Anne Sansevero, RN, GNP, both nurses at Tisch Hospital, sat in different corners of an auditorium at Northeastern University in Boston with their college-bound children. Though they'd never met each other, soon they would share the deepest of bonds. Together, they saved a woman's life. [page 11](#)



**The Liquid of Life** On average, nearly 150 blood transfusions are performed every day at NYU Langone Medical Center. In a wide-ranging Q&A, Timothy Hilbert, MD, PhD, JD, medical director of NYU Langone's Blood Bank and Blood Donor Center, discusses the remarkable properties of blood, which, as he puts it, "does what it does better than anything we could ever invent." [page 12](#)

news & views is published bimonthly for NYU Langone Medical Center by the Office of Communications and Marketing. Readers are invited to submit letters to the editor, comments, and story ideas to [thomas.ranieri@nyumc.org](mailto:thomas.ranieri@nyumc.org).

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## The Liquid of Life

### Q&A with Dr. Timothy Hilbert, Director of NYU Langone's Blood Bank

On average, nearly 150 blood transfusions are performed every day at NYU Langone Medical Center. news & views recently met with Timothy Hilbert, MD, PhD, JD, medical director of NYU Langone Medical Center's Blood Bank and Blood Donor Center, to discuss the remarkable properties of blood.

#### Where would medicine be without blood transfusions?

Millions of people would die each year without blood transfusions. The classic saying is that one unit of blood—roughly a pint—can save three lives. This is because a unit of blood is typically separated into three products: red blood cells, platelets, and plasma.

#### From donation to delivery, what's the journey of a pint of blood?

It depends on the donor. If a donation is made at our Donor Center for community use, the blood is collected and then sent to an outside facility, where it's separated into its components. A sample from each donation is also sent to a commercial laboratory in Arizona that tests the sample for infectious diseases, such as HIV and hepatitis. The blood components and test results are usually sent back to us within a few days. However, if a patient donates blood for their own surgery—what we call an autologous donation—we process the blood here at the Medical Center because self-donations require fewer tests and less manipulation.

#### How safe is America's blood supply?

Blood transfusions have never been safer. Today, we use 13 different tests to screen every donation for infectious disease. Three decades ago, before such extensive testing, the risk of contracting HIV from a blood transfusion, for example, may have been as high as 1 in 15. Today, it's approximately 1 in 2 million.

#### How do you determine someone's blood type?

We type blood by testing for different molecules, or antigens, that stud the surface of red blood cells. The most common groups are A, B, AB, O, and Rh positive or Rh negative. Proper matching between a patient and a blood donor can be critical, because some patients can have a life-threatening immune response if they receive blood with antigens that do not match their own.

#### Do some people make better blood donors than others?

We welcome all blood donors. However, I generally recommend that donors who think they may be ineligible to donate call the Donor Center at 212-263-5440 to ask about donor criteria or schedule a donation before coming in to donate. We are very grateful to our repeat donors. For example, we have a surprising number of platelet donors who give up to 24 times a year, the maximum amount permitted. Each platelet donation takes up to an hour, so regular donation represents a big time commitment. And there's always demand for specific blood types. Group O donors, for example, possess "universal" red blood cells, meaning their blood can be given to virtually anyone, while group A and AB donors possess universal plasma and platelets.

#### What's the best time to give blood?

The blood supply tends to run low during bad weather or the flu season. All blood donor centers, including ours, try to collect platelets, which perish within five days, right before holidays or long weekends so that they don't return to empty shelves. For other products, the day of the week is not as important. Donated red cells last 42 days, and plasma can be frozen, so it's easier to manage inventory. We recommend that people eat and drink before they donate. Hydration is important. We also ask people to avoid donating blood when they feel ill.

#### To people who believe they are candidates for donating blood but never have, what would you say?

Almost every donor who comes to our Donor Center has a positive experience. After donating, they feel better about themselves. I think that's why 80% of our donors are repeat donors. I give blood several times a year, and I've never had a bad experience.

#### Of all the things that make blood a wonder of the human body, what do you marvel at the most?

Blood does what it does better than anything we could ever invent. There is simply no substitute for blood.