news&views

MARCH/APRIL 2010 A PUBLICATION FOR THE NYU LANGONE MEDICAL CENTER COMMUNITY

NYU Langone Medical Center

"This Place Is Amazing"

Renewing the Medical Center's Accreditation, The Joint Commission Gives High Marks on All Counts

It's a week before the holiday season, and wall decorations glisten as Janet Kraus, RN, director of accreditation and standards for NYU Langone Medical Center's Tisch Hospital, and two colleagues enter the 16th-floor oncology unit. Kraus gives a warm greeting to nurse manager Roseanne DiRiso, RN, then glances around. "Everyone's wearing their ID tags—that's good," she says. Referring to Christine Charles, RN, a new arrival to the unit whom she'll meet with shortly, she adds: "Notice how Roseanne let me know that Christine is following correct protocol by transferring her patient to another nurse's care before joining me."

The encounter may seem low-key, but it has everything to do with why NYU Langone Medical Center was recently awarded full accreditation by The Joint Commission, a national nonprofit organization responsible for certifying that some 17,000 U.S. healthcare institutions are following the very best practices in terms of patient care and safety. After the commission conducted its inspection last fall, one of its nurse surveyors summed up the team's findings in four words: "This place is amazing."

In fact, NYU Langone's physicians, nurses, and staff prepare for The Joint Commission's arrival on an ongoing basis. Visits like Kraus's are made four times a year to every clinic, inpatient unit, outpatient unit, and registration area of NYU Langone Medical Center. Half spot-check and half educational opportunity, these mock sessions are part of a continual effort to keep caregivers on their toes regarding hospital regulations—in preparation for the day when The Joint Commission makes its unannounced appearance. Accreditation, which must be re-earned every three years, signals to patients and staff alike that NYU Langone is meeting the commission's exacting standards in such key areas as patient rights, quality of treatment, medication safety, and infection control.

To qualify for reaccreditation, NYU Langone must pass The Joint Commission's rigorous, week-long

(continued on page 7)

John Abbott

On Tisch Hospital's 17 East (left to right), housekeepers Sarley Macias and Jairo Pimentel are joined by chief regulatory officer Maxine Simon and nurse manager Acieta Small, RN. When inspectors from The Joint Commission quizzed Macias and Pimentel on procedures they follow to maintain a safe patient environment, they were highly impressed by their answers.

They Set Their HEART on Haiti

In the Aftermath of a Cataclysmic Earthquake, a Team from NYU Langone Journeys to Its Epicenter

Assisted by his HJD colleague, Dr. Kenneth Mroczek (left), Dr. David Feldman applies a fixator to a patient's injured leg.

When Dr. Fritz Francois walked into the dimly lit critical care unit of Haiti's largest hospital on the morning of January 24, he instantly grasped the grim arithmetic of disaster: 60 desperately ill patients, two nurses, no monitoring equipment, and one doctor: himself. Among the patients was a mother with postpartum heart failure, straining for air while glancing at her two-month-old baby.

"Imagine breathing through a straw—that's what it was like for her," recalls Dr. Francois, assistant professor of medicine and assistant dean for academic affairs and diversity. "I had no intravenous diuretics to help clear the fluid that was building up in her lungs, and only one of just four oxygen tanks for the entire hospital at my disposal. Nothing can prepare you for that sort of situation."

Twelve days earlier, when Dr. Francois heard, along with the rest of the world, that a devastating earthquake had struck Haiti's capital, Port au Prince, the news hit home—literally. Haiti is his birthplace, and though he moved to the U.S. as a child, he still has extended family there. After checking on his relatives (fortunately, they were unharmed), he turned to the task of assembling a team of physicians and nurses from NYU Langone Medical Center to help the victims. The initiative—dubbed the Haitian Effort and Relief Team, or HEART—had to be launched swiftly but carefully.

(continued on page 6)

A Bronx Tale

When the Chips Are Down, Our Orthopaedists Step Up to the Plate

A small, inner-city high school in the nation's poorest neighborhood trails its undefeated crosstown rival by several runs when its injured star comes to bat at a pivotal moment. Because the local hero has four screws and a metal plate anchored to his ankle, two orthopaedic physicians are on hand to help prevent further injury.

Whenever and wherever some of the 40,000 athletes from New York City's 185 public schools gather to compete, the Partners for Youth program is involved. A collaborative venture between NYU Langone Medical Center's Department of Orthopaedic Surgery and Bellevue Hospital, the program serves students who are injured while participating in Public School Athletic League (PSAL) games, providing them with 24/7 access to orthopaedic care. In addition, uninsured students are eligible for affordable, reduced-fee healthcare. However, it has always been Bellevue's motto—and policy—that "no one is turned away."

The Bellevue Hospital–centered program is the brainchild of Noel Testa, MD, chief of the Orthopaedic Service at Bellevue and clinical professor of orthopaedic surgery. "I thought it would be something if we could partner with two major city agencies—New York City's Health and Hospitals Corporation and the Department of Education—to give student-athletes access to

(continued on page 5)

From the Dean & CEO

In our quest to become a world-class academic medical center, nothing is more important than passion. You can't achieve excellence in anything without putting your heart into it. I'm reminded of this every day as I meet or hear about the fiercely dedicated people who make up NYU Langone Medical Center. Just to the right, you'll read about our fourth annual Heart Health Fair, sponsored by the Cardiac and Vascular Institute. This has become a truly collaborative venture, bringing together dozens of faculty and staff to educate those within our community and beyond about the risks of heart disease, America's number one killer. Indeed, February was American Heart Month, but a deep sense of caring can be found here every day and in every corner. In the wee hours of morning, for example, a special squad from our Building Services Department carries out a vital behind-the-scenes mission: decontaminating and disinfecting our 71 ORs. When a cataclysmic earthquake devastated Haiti in January, a team of seven caregivers from NYU Langone journeyed to the epicenter to provide medical assistance. The acronym they chose for their humanitarian mission couldn't have been more apt: HEART.

Lynn Saville

Joyce Hodge and her granddaughter, Laila, receive some tips from Ana Mola, RN, program director of the Joan and Joel Smilow Cardiac Rehabilitation and Prevention Center.

CVI Sponsors Fourth Annual Heart Health Fair

To Alfred Hellreich and his wife, the pedometers given away at NYU Langone Medical Center's fourth annual Heart Health Fair, held on February 18, provided just the kind of motivation they were looking for. "We're going to use them to measure how much we walk," he said. "We both need to exercise more, and these will help."

The event, sponsored by NYU Langone's Cardiac and Vascular Institute (CVI), was held in Alumni Hall as part of American Heart Month. First established by congressional order in 1963, this designation sets aside the month of February to raise awareness about cardiovascular disease, which kills more 600,000 Americans every year, making it the nation's leading cause of death.

The most common heart disease in the United States is coronary heart disease, which often appears as a heart attack. In 2009, an estimated 785,000 Americans had a new coronary attack, and about 470,000 will have a recurrent attack, according to the Centers for Disease Control and Prevention. The good news is that recent advances in therapies have reduced death rates for many forms of heart disease. "More powerful cholesterol-lowering drugs and antiplatelet drugs have been shown to reduce the risk of heart attacks, and combination drug therapy for heart failure has decreased the expected annual death risk from 15 to 20% to about 5%," explained Stuart Katz, MD, the Helen L. and Martin S. Kimmel Professor of Advanced Cardiac Therapeutics, in his presentation, "Simple Steps to a Healthier Heart."

This year's fair, which drew a steady stream of visitors from the Medical Center and its surrounding community, featured tables staffed by our cardiovascular services and other departments, as well as outside health organizations. Disease prevention was front and center, with exhibits on advice for quitting smoking, reducing salt and fat, and other topics. Other tables offered free reflexology sessions, "biodots" that change color to signal the wearer's stress level, and tips on spotting cardiovascular problems in women, whose symptoms of a heart attack are easy to overlook because they're different from those of men. Visitors could also have their blood pressure checked, measure their body fat percentage, and learn how to use an automatic external defibrillator.

For those seeking more in-depth knowledge, a series of lectures inside Farkas Auditorium delved into the details of atrial fibrillation, heart failure, a heart-healthy lifestyle, and the risk factors for heart disease. Presenters fielded questions about statins, fish-oil supplements, C-reactive protein, and many other topics, satisfying a hearty appetite for heart-healthy information.

Lecture Honors Dr. Michael Freedman, Pioneer in Geriatrics

Honoring a pioneer of geriatric medicine, the late Michael Freedman, MD, professor emeritus of medicine, an Alzheimer's Disease Lecture was held on January 15. Dr. Freedman, founder of the Department of Medicine's Division of Geriatrics, died in February. He was the author of nearly 200 scientific papers investigating the biology of aging, dementia, and Alzheimer's disease. His wife, Cora, and children, Lawrence and Deborah, joined faculty members and other distinguished guests in Farkas Auditorium to hear the presentation, given by Lisa Mosconi, PhD, research assistant professor of psychiatry.

Dr. Mosconi discussed several of her ongoing studies on the use of positron emission tomography (PET)—a safe and painless brain-imaging technique—to better understand the cause and course of Alzheimer's. A progressive and fatal brain disease causing severe memory loss, Alzheimer's affects 5.3 million Americans. The early-onset form, affecting 1 to 2% of all cases, stems from mutations in three specific genes. It's the more common late-onset variety, in which symptoms appear after age 65, that intrigues Dr. Mosconi. For many years, this type was associated mostly with aging and environmental influences such as diet and education, but the researchers have identified a familial component to late-onset Alzheimer's.

Dr. Mosconi has identified distinctive markers of the disease that are discernible in PET scans long before the patient notices any symptoms. In 2007, they discovered that healthy participants whose mothers have Alzheimer's show a marked decrease in glucose metabolism in the same brain regions that people with the disease do. This characteristic PET signature did not appear in participants with a paternal history or no family history of Alzheimer's. Last year, the researchers further showed that in people with maternal history, this specific metabolic abnormality worsens over time.

Now, with the support of grants from the National Institutes of Health and the Alzheimer's Association, the team is homing in on a second kind of marker. Postmortem studies of people with Alzheimer's show that it causes a build up of a protein called amyloid-beta in the brain. Using a PET tracer that binds to the amyloid-beta plaques, Dr. Mosconi is looking for differences in amyloid accumulation over time among people with maternal, paternal, and no family history of disease. Down the line, she says, these markers could be used together to assess an individual's risk and perhaps—with smart interventions—to prevent disease.

John Abbott

Dr. Lisa Mosconi

CDC Grant Funds Prevention Research Center Supported by School of Medicine and Others at New York University

February 12 marked the beginning of a new chapter in NYU Langone Medical Center's long history of public health leadership, as the deans of the University's various health-related schools gathered at the Torch Club to celebrate the official launch of the NYU Health Promotion and Prevention Research Center. Robert I. Grossman, MD, dean and CEO, addressed the audience of academic and community partners.

The center, one of 35 such programs nationwide, is funded by a five-year, $4.1 million grant from the Centers for Disease Control and Prevention. It is spearheaded by a multidisciplinary team of investigators, including Chau Trinh-Shevrin, DrPH, and Nadia Islam, PhD, from NYU School of Medicine; Sally Guttmacher, PhD, and Yumary Ruiz, PhD, from the Steinhardt School of Culture, Education, and Human Development; Nancy Van Devanter, DrPH, RN, from the College of Nursing; and Brian Elbel, PhD, from the Robert F. Wagner Graduate School of Public Service and NYU School of Medicine.

Under the leadership of Mariano Rey, MD, senior associate dean for community health and director of the Institute of Community Health and Research, the center's mission is to build and enhance leadership at the community level to reduce cardiovascular disease. Its primary research project, directed by Dr. Islam, will develop, implement, and test a health worker program designed to promote diabetes prevention in diverse communities of New York City. The initiative, dubbed RICE (Reaching Immigrants through Community Empowerment), will employ a method known as community-based participatory research, in which community health workers partner with local organizations to design and carry out diabetes education and connect participants with caregivers. Participating organizations include the Charles B. Wang Community Health Center, the Community Health Worker Network of NYC, Korean Community Services, The New York Taxi Workers Alliance, United Sikhs, and the Generation+/Northern Manhattan Health Network.

Conquering Cancer—the Disease with One Name and Countless Causes

Q&A with Dr. Owen O'Connor, Deputy Director for Clinical Research and Cancer Treatment, and Dr. Mark Philips, Associate Director for Basic Research, at NYU Langone Medical Center's Cancer Institute

Dr. Owen O'Connor

Joshua Bright

Dr. Mark Philips

It's been 40 years since the National Cancer Act made "the conquest of cancer" a national crusade. Yet today, cancer is poised to surpass cardiovascular disease as America's leading killer. What happened?

O'Connor: We didn't appreciate the extraordinary complexity of cancer. It's not one disease. It's at least hundreds. Deciphering the differences is the key, and trying to understand that biology has proven to be a long process. Understanding the causes of cancer at its most fundamental molecular level requires talented scientists, sophisticated laboratory techniques, and time.

Philips: People ask why there haven't been the same kinds of strides that we've had with, for example, pneumococcal pneumonia and penicillin. But that belittles the strides we've made. If you had breast cancer in 1972, you stood a far worse chance of surviving than you do today. Even if we can't cure a cancer, the patient's length of survival and quality of life have dramatically improved.

Most cancers can be prevented with early screening and a healthy lifestyle. True or false?

O'Connor: It's very clear that some lifestyle factors increase our risk of cancer. The number one preventable cause of cancer is smoking, and smoking and alcohol synergize to produce cancers such as esophageal and head and neck cancers. But while you may be able to prevent most lung cancers by not smoking, you can get others. The harsh reality is that every cell in our body is programmed to survive for a finite time and is vulnerable to the molecular events that can lead to cancer. There are limited examples where we can say, "This is the cause." Smoking, alcohol, some dietary factors, and infections like *H. pylori* and HPV, or human papillomavirus, are the ones we know the most about.

Philips: While lifestyle factors can be very important in reducing your risk for some cancers, their effect is limited. There is a billion-dollar industry selling antioxidants. But no epidemiological study has shown that oral ingestion of antioxidants is beneficial against any human disease, including cancer.

The benefits of early-stage screening tools like mammograms and PSA testing are sharply debated. How do you strike the right balance between minimizing unnecessary invasive tests and ensuring that aggressive cancers don't go undetected?

O'Connor: It's important to understand that no test or assay is ever 100% predictive. Some forms of screening, like colonoscopy for colon cancer, are undeniably effective. Today, few people should die of colon cancer because a colonoscopy can prevent that. Understanding the molecular events that transform a polyp to cancer has informed guidelines for screening. It's the same with Pap smears, mammography, and PSA testing.

Philips: What's good for public health and what's good for the individual may not be the same thing. There may not be a reason, from a cost-benefit point of view, for every woman to begin mammograms at age 40, but I would not advise my wife against mammograms before the age of 50. We all know of women in their 30s and 40s who had early lesions, detected by mammograms, excised and were never afflicted again.

What are the key steps NYU Langone must take to become designated by the NCI as a comprehensive cancer center?

O'Connor: We have to be able to afford patients the full range of opportunities in terms of treatment, basic science, and prevention. We need to build world-class programs in cancer prevention and epidemiology. Dr. William Carroll, director of The Cancer Institute, has recruited international talent like Dr. Richard Hayes, who will lead our efforts in this area. Also important is our outreach to hospitals like Bellevue and Woodhull to increase our work with minority communities. We have to think harder about how diagnosis and treatment might vary among different populations.

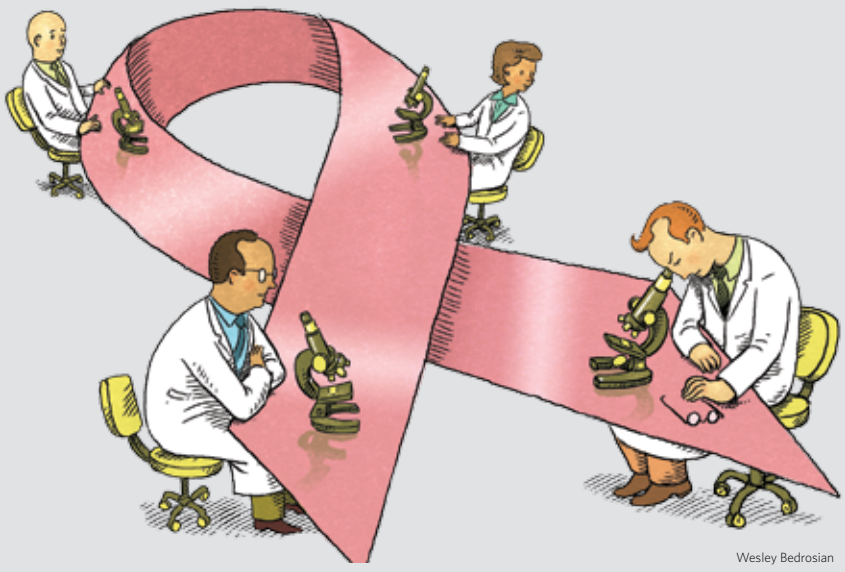
What is the most promising therapy on the horizon? What is the most exciting diagnostic tool under investigation?

O'Connor: For me, the most exciting advance of any kind is our detailed understanding of the molecular basis of rare blood cancers like mantle cell lymphoma and diffuse large B-cell lymphoma. When I entered the field, the median survival for mantle cell lymphoma was two to three years. Now, I'm following patients for seven to nine years and more in some cases. We now understand much better how to manipulate some of these lesions at the molecular level, and that's going to lead to new therapies. Thinking about these possibilities is what wakes me up in the morning.

Philips: I think we're only at the beginning of targeted therapies. The molecular revolution has given us the tools to understand disease with unprecedented depth and is beginning to reveal ways to design therapies that target underlying molecular lesions. The development of Gleevec to treat chronic myelogenous leukemia is a good example. I work on Ras—arguably the most famous cancer gene. It's been 30 years since we first came to understand its importance in cancer and its function as a binary molecular switch that gets stuck in the "on" position in cancer. A lot of brilliant people have worked on Ras in those 30 years, and no one has yet found a way of unsticking the switch—but I haven't given up hope. That's why I come to work each morning.

Cancer Institute Launches Ad Campaign

NYU Langone Medical Center's advertising campaign, launched last October, has entered its next phase, as new ads highlight more specialties, including cancer. The Cancer Institute is featuring its own "Any Given Moment" campaign, begun in mid-March and continuing through the end of May, with ads similar to those that appeared in the fall—stories about real people sharing their remarkable experiences. The ads will focus on our expertise in melanoma, breast, lung, and prostate cancers, our extraordinary nursing care at the Clinical Cancer Center, and our overall excellence in cancer treatment and research. They will appear on the front page of the science section of *The New York Times,* and will also have a strong online presence.



Wesley Bedrosian

Drug Under Study at NYU Langone May Help Prevent Breast Cancer for Those at High Risk

For Julia Smith, MD, PhD, director of the Breast Cancer Screening and Prevention Program at NYU Langone Medical Center's Cancer Institute, helping high-risk women avoid the disease is a calling. "Our overarching goal is to determine the level of risk and then to intervene," she says. Since estrogen is intrinsically important in the biology of breast cancer, intervention for women with worrisome tissue changes or a family history of disease has often involved treatment with tamoxifen, a drug that attaches to and blocks estrogen receptors. But its side effects include all the symptoms of menopause, as well as deep vein thrombosis, endometrial cancer, and even stroke.

Now comes another possible means of chemoprevention: SOM230, a somatostatin analog currently under study in a clinical trial at NYU Langone. Similar to drugs used to treat children with growth hormone abnormalities, SOM230 has been of interest to cancer specialists ever since scientists noticed, serendipitously, that it prevented and even reversed the cell changes of breast cancer in lab animals. Researchers found that the compound worked by blocking insulin-like growth factor-I (IGF-I), a molecule involved in many cellular processes, including modulation of insulin. "IGF-I is higher up in the pathway of cell proliferation than estrogen," says Dr. Smith, who also directs the Lynne Cohen Foundation and Caring Together Project for Women with Increased Risk for Cancer at NYU Langone Medical Center and Bellevue Hospital Center. "Blocking it inhibits the cell proliferation otherwise caused by estrogen and increases cell death."

But would women at high risk for breast cancer benefit from SOM230? To find out, Dr. Smith and her colleagues recruited 12 women diagnosed with atypical hyperplasia and lobular carcinoma in situ—lesions known to increase the relative risk of breast cancer. First, they removed some of this precancerous tissue through a core biopsy. Then, each woman was treated with SOM230 for 10 days, after which the rest of this high-risk tissue was surgically removed by the lead surgeon on the study, Deborah Axelrod, MD, associate professor of surgery.

Comparing the first and second samples across the study group, the investigators found that SOM230 increased cell death and decreased cell proliferation, just as in animal models. For the drug to truly prevent cancer, though, it might need to be taken for a more extended period, and that's where questions remain. The women showed a decrease in insulin and increase in blood glucose, raising concern about insulin sensitivity and the risk of diabetes. Despite this concern, Dr. Smith is optimistic. Insulin levels were monitored closely throughout the study, she explains, and the imbalance resolved once the drug was stopped.

The next step is a trial of SOM230 patients with stage 0 breast cancer, or DCIS (ductal carcinoma in situ), and at varying doses. "We want to intervene with more efficacy and fewer side effects than in the past," says Dr. Smith.

When Fractured Friendships Don't Mend

Women are told from the time they're little girls that best friends are for life, and that one friend—just one—will become their closest confidante, their bosom buddy. But it's not necessarily so, and when a friendship fails, the wound can be deep and slow to heal. "A broken friendship is a taboo subject that women don't usually talk about," explains Irene Levine, PhD, clinical professor of psychiatry. "It's embarrassing and associated with stigma. We don't even have a vocabulary for why friendships fall apart or a roadmap for what happens when they do."

With few coping strategies available, Dr. Levine did her own research in the hope of finding valuable insights. She conducted an online qualitative survey, posing open-ended questions to more than 1,500 females, ages 7 to 70. The results astounded her. "Once I guaranteed anonymity," she says, "women really poured out their hearts. Older women described friendships that fell apart 20 years ago, and the pain they still felt was intensely strong."

The book spawned by her research, *Best Friends Forever: Surviving a Breakup with Your Best Friend* (Overlook Press, 2009), offers advice on a host of topics, including how to recognize signs of trouble, how to detach from a "toxic friend," when to sever ties, and how to face facts and move on. These lessons hit home. "I wish that I had let go of toxic friendships and focused on those that are mutually rewarding earlier in my own life," confides Dr. Levine.

Most people assume that the end comes in a blaze of drama, but Dr. Levine found that over 80% of the time, old friends simply fade away, often because two people aren't on each other's radar anymore. "As women evolve," she notes, "we graduate, we move, we marry, we mother, we get divorced, we become widowed, we change careers."

Wesley Bedrosian

By exploring the complexities of fractured friendships, Dr. Levine debunks some common myths, including one notion that she herself swallowed. "From the time they are very young," she explains, "women want to have a best friend and be a best friend. But over time, the realization hits that they need different best friends for different reasons. It's unrealistic to expect any one person to meet all your needs."

The average friendship, Dr. Levine found, lasts about seven years—reminiscent of the proverbial "seven-year itch" in marriage. But Internet-based social networks, she adds, can be "a wonderful tool" because they enable people to renew friendships broken apart only because of circumstance, and they bring people together based on common interests.

Ties That Bind—Even When It Hurts

Wesley Bedrosian

Why do abused children form strong bonds with the caretakers who abuse them? The question has puzzled child psychologists for decades. Regina Sullivan, PhD, research professor of child and adolescent psychiatry, has published a new study that suggests that this bizarre behavior may be a byproduct of chemical changes in the brain that allow children to form attachments to their mothers.

"One has to be very cautious in directly extrapolating animal research to humans," notes Dr. Sullivan. "But I think this work does tell us something about why trauma in young children produces such unique effects." Her work bolsters other research on animals and humans that suggests that a tight maternal bond—even one involving pain—is crucial for any infant's survival.

As a graduate student in the mid-1980s, Dr. Sullivan's laboratory experiments revealed that newborn rats, like humans, form attachments to stimuli, even when they are painful. For the first week after birth, the rat pups, unable to see or hear, typically avoid new scents. But they will approach an alien odor if it's paired with an arresting stimulus, such as their mother's saliva or even a painful tail pinch. Remarkably, the pups don't learn to avoid scents associated with pain until they're about 10 days old.

For the last decade, Dr. Sullivan, a developmental behavioral neurobiologist affiliated with the Nathan S. Kline Institute for Psychiatric Research, has been trying to figure out the brain mechanisms responsible for this seemingly paradoxical behavior. Her newest study, recently published in *Nature Neuroscience,* suggests that in order to form strong bonds with their offspring, mothers give off complex hormonal signals to suppress their pups' natural fear response.

Dr. Sullivan first described the transition to aversion learning in a 2000 study published in *Nature,* which showed that emergence of fear behavior is associated with emergence of neural activity in the amygdala, the almond-shaped brain region known to regulate emotion. In 2006, she added another piece to the puzzle. Her team found that when rat pups produce a fear response, a stress hormone—corticosterone—sets off a chain of molecular interactions in the brain that leads to amygdala activity and plasticity. She also discovered that mothers can dampen this response, even in older rats. "The older animal reverts to the behavior of a younger one when it's with its mother, so that fear learning is prevented and the infants learn to prefer an odor paired with pain," she says. "I'm still amazed by that."

In a new study, Dr. Sullivan and her co-investigator, Gordon Barr, PhD, the James Battaglia Chair in Pediatric Pain Medicine at the Children's Hospital of Philadelphia, performed a comprehensive screen of genes expressed in the amygdala of pups before and after the age they learn to avoid pain. The researchers found that this learning causes a burst of expressed genes related to dopamine, a chemical messenger in the brain. This marks the first time that researchers have identified reduced levels of amygdala dopamine as an important player in preventing fear learning to support the attachment process. "The big message here is that the infant brain processes pain and trauma differently than the adult," Sullivan notes. What's more, "the presence of a social cue, such as the mother, can actually change the way pain is processed by the brain."

Bud Glick

Martha Sarno, director of speech-language pathology at the Rusk Institute of Rehabilitation Medicine.

Words to Live By

A Pioneer in Speech Pathology Marks Her 60th Year at the Rusk Institute of Rehabilitation Medicine

Many years ago, a young woman working as a cigarette girl at the old New York nightclub El Morocco stepped into a cab to go home late one night when she was suddenly struck speechless by a brain aneurysm. The driver, thinking her mentally ill, took her to a psychiatric hospital, where she remained for three months, speaking only gibberish. Finally, someone thought of contacting Martha Sarno, MA, MD (honorary), director of speech-language pathology at NYU Langone Medical Center's Rusk Institute of Rehabilitation Medicine.

"It turned out she had aphasia," explains Dr. Sarno, "meaning that her damaged brain had lost its ability to access words. It shows how essential language is for relating to the world. To lose the ability to communicate with other human beings is incredibly isolating."

Typically caused by a stroke or head trauma, aphasia affects 1.5 million Americans. Yet Dr. Sarno, who is celebrating her 60th year as head of the program she founded, remembers a time when this devastating condition was virtually ignored. "When Dr. Howard Rusk hired me," she recalls, "the word 'stroke' was taboo, and there was virtually no treatment for aphasia."

One of Dr. Sarno's first steps was to devise techniques that helped patients retrieve words, practice conversation, develop compensatory skills, and acquire peer support. She created the first tool of its kind to assess how people with aphasia use everyday language. This helped to shape the theory and practice of aphasia rehabilitation worldwide. Dr. Sarno's contributions range from researching recovery and rehabilitation in aphasia to helping patients' families cope with daily challenges.

To supplement coverage for those without adequate insurance, Dr. Sarno established programs staffed by volunteers so that patients can practice conversing free of charge.

"The therapeutic process can't be rushed," says Dr. Sarno, "because the brain needs time to heal." Over months or years, patients often regain some of their former vocabulary. Still, even the most successful patients may never communicate with the same facility. "You don't recover from aphasia," she adds, "you recover with it."

Bernard Aptekar, a retired art professor who received speech therapy at Rusk after suffering a stroke 10 years ago, exemplifies both the possibilities and limitations of aphasia treatment. Today, he speaks fluently, if a bit slowly. A listener would never guess that he had once been reduced to grunts and gestures. "I knew what I was trying to say," he recalls, "but nothing would come out."

Frustrated and angry, Aptekar resisted treatment—until his young granddaughter hopped off his lap one day, bored by his inability to respond to her chatter. Determined to do whatever it took to speak again, he began to visit Rusk five days a week, signing up for every aphasia program available. After three years, he spoke well enough to return to teaching. A near-complete recovery like Aptekar's is rare, though.

One evening during the mid-1980s, after delivering a speech on the social plight of aphasics, Dr. Sarno was seized by the need to do something concrete to back up her words. Accordingly, she founded the National Aphasia Association, devoted to sharing information and linking patients to local support groups. "The association's website had 400,000 hits last year," she says proudly. That speaks volumes about what Dr. Sarno and the Rusk Institute have done for a condition that, like its victims, has finally emerged from behind closed doors.

Bronx *(continued from page 1)*

the finest healthcare," says Dr. Tesla. "We also wanted to establish an education program for students and coaches to help in preventing injuries."

For Lynda D. Curtis, Bellevue Hospital's executive director, the program "blends the best traditions of Bellevue's mission by focusing on public health and education, targeting underserved populations, and creating innovative partnerships."

NYU Langone physicians are on the sidelines at PSAL games and typically cover major tournaments and playoffs for some 30 sports. For boys, injuries are most common in football and wrestling; for girls, basketball and soccer. Physicians are also available by phone for consultations with athletes and their parents and coaches.

The program took off when Dennis Cardone, DO, associate professor of orthopaedic surgery, came aboard in 2008. "He brought vision and energy," Dr. Testa says of his co-director. "At least once a month, Dr. Cardone goes out and speaks to athletes, coaches, and athletic directors about everything from injury prevention to steroid abuse. He has a particular rapport with the kids."

Right now, at the behest of Lou Schlanger, South Bronx High School's longtime athletic director, Dr. Cardone is paying special attention to junior Ramon Ferreras as he sets himself in the batter's box and tries to tune out the scraping and screeching of the number 5 train snaking along the elevated tracks. His team is already down 4–0, though there are men on first and second, no outs.

Ramon digs in with his right foot—the good one—to help keep his weight back, and slightly raises his left leg—the one with the four screws and metal plate, which he received on September 12. "I'll never forget that date," says Ramon. "I was tackled by a 230-pound defensive lineman who rolled onto my ankle, and then they took me off on a stretcher." The subsequent diagnosis was a displaced fracture of the tibia.

"Strike one!" the umpire calls.

"Inner-city kids are behind the eight ball in so many ways," says Schlanger. "Partners for Youth gives them a more level playing field."

"Strike two!"

"As far as I know," says Dr. Cardone, "there is not one New York City public high school with its own athletic trainer. We fill that role for every school. We're available to see a kid within 24 hours, much sooner if it's an emergency."

Ramon makes contact with the ball and, as it slowly dribbles toward third, takes off for first. Running full out, he beats the throw by at least a step. Afterward, Dr. Cardone examines his ankle. "It's a little swollen and stiff. Range of motion is slightly limited. There's some weakness, but he's healing pretty well. Physical therapy could really help complete the process."

Ramon seems tentative. He's not sure he wants to travel downtown, and of course, there's the cost. Dr. Cardone writes out a prescription for physical therapy and hands his card to the soft-spoken youngster. "Have your mother call me," says Dr. Cardone. "If you feel more comfortable in your neighborhood, we can find you a facility up here. And don't worry about the money. If your insurance doesn't cover it, we'll find a way to make it affordable."

The home team doesn't always win, but "we can compete with anyone," says Schlanger, "and the kids really get a confidence boost knowing that one of the finest hospitals of its kind in the world has their back."

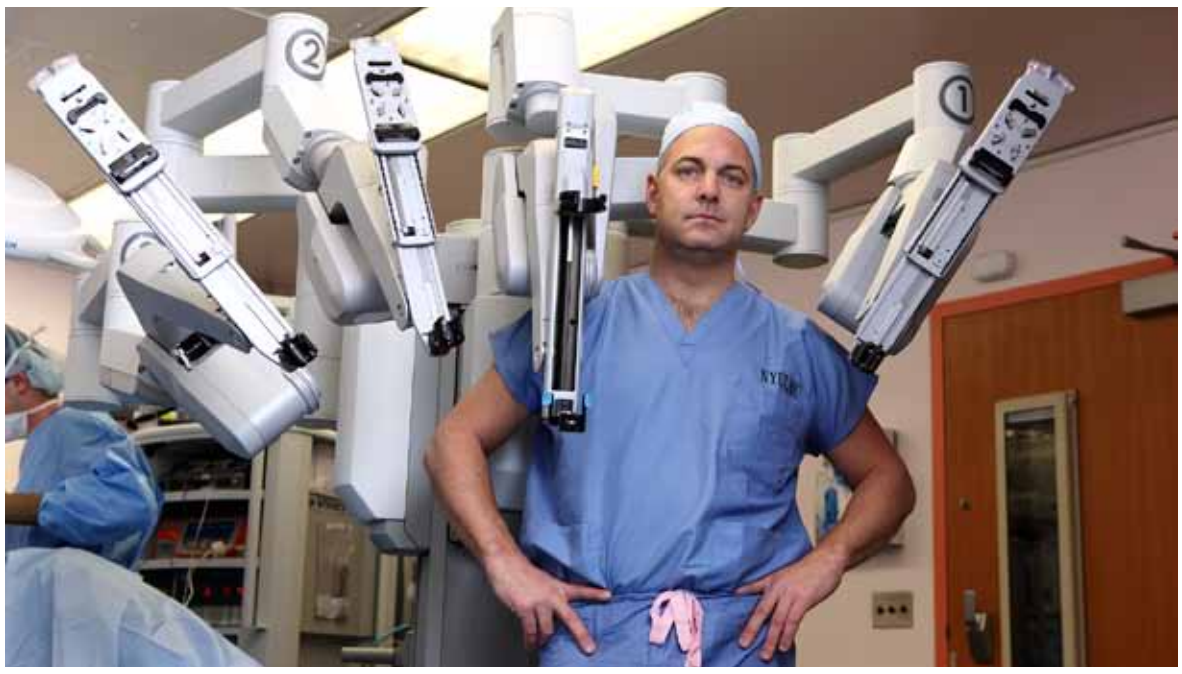
For more information on Partners for Youth, call 212-562-5378.

Jon Simon

Dennis Cardone, DO, associate professor of orthopaedic surgery, examines Ramon Ferreras, a student-athlete at South Bronx High School.

The Four-Armed Surgeon

With Help From a Robot Named DaVinci, Experts in Urological and Gynecological Surgery Have Become Virtuosos



John Abbott

Dr. Michael Stifelman, director of robotic surgery and minimally invasive urological surgery.

"We're on the clock now," says one of the OR nurses. Michael Stifelman, MD, director of robotic surgery and minimally invasive urological surgery at NYU Langone Medical Center and assistant professor of urology, is removing a kidney tumor. Instead of standing over the patient, however, he sits 10 feet away, peering into an eyepiece as he manipulates the world's most advanced surgical robot, the DaVinci SI.

The robot looms above the operating table, its four mechanical arms inserted into the patient's abdomen through cylindrical ports. One arm holds a camera, giving Dr. Stifelman a magnified, high-definition 3-D view. The other three arms hold miniature surgical instruments that precisely replicate the surgeon's actions, but with a greater range of motion.

This is the most delicate phase: the kidney's artery has been clamped off while the tumor is excised, and the team must move quickly to avoid kidney damage from lack of blood. As the team watches on an overhead screen, Dr. Stifelman maneuvers tiny scissors to swiftly cut out the tumor while his other hand operates a cauterizing instrument. "Sutures," he calls. The assisting surgeon slides a needle and thread through a port, and Dr. Stifelman guides the mechanical hands, deftly sewing up the gap where the tumor had been.

The DaVinci is just one example of how NYU Langone is breaking ground in minimally invasive surgery. Unlike open surgery, performed through a large incision, minimally invasive procedures use one or more small incisions, sparing the patient wear and tear and shortening recovery time significantly. Gynecological and urological surgeons pioneered this approach, and that trend continues at NYU Langone.

"Gynecologists were the first to do laparoscopy 30 years ago," explains David Keefe, MD, professor and chairman of the Department of Obstetrics and Gynecology. Today, he estimates, gynecologists at the Medical Center employ the technique—in which the surgeon manipulates camera-guided surgical tools through ports—for 60% of routine procedures, including most operations to remove the uterus, ovaries, fibroid tumors, and polyps, as well as repairs of problems related to incontinence and infertility.

Robotic surgery is also being used for hysterectomies and other basic procedures, but it has proven particularly valuable in the field of gynecological oncology. "In my practice, it has completely replaced laparoscopy for most cases," says Bhavana Pothuri, MD, assistant professor of obstetrics and gynecology, who specializes in cancer-related procedures. "I use it to operate on ovarian, endometrial, and cervical cancer."

The Department of Urology is using robotic surgery even more extensively. "Procedures that were being done only as open surgery because they were too difficult to do laparoscopically are now also being done robotically, including prostatectomy and complex urinary tract reconstruction," reports Dr. Stifelman. Overall, three urological and four gynecological surgeons are now employing robotic surgery. Their goal is to develop and define the role of robotics in the surgical arena, as well as to create standardized teaching techniques. "The technology will only get better," notes Dr. Stifelman. "This represents the future of surgery."

Haiti *(continued from page 1)*

"We didn't want to go there and be ineffective," says Dr. Francois. He met with Mekbib Gemeda, assistant dean for diversity affairs and community health, and Patricia Poitevien, MD, and Mona Rigaud, MD, both clinical assistant professors of pediatrics and also Haitian born. After considering several options, they contacted Partners in Health (PIH), one of the groups coordinating medical aid in the quake zone, and asked what skills were most needed.

"They told us surgical support," Dr. Francois explains. "So we weighted our team in that area." From numerous volunteers across the Medical Center, five caregivers were selected to join Dr. Francois and Dr. Poitevien on a week-long humanitarian mission. The team included three surgeons and an anesthesiologist—David Feldman, MD, associate professor of orthopaedic surgery and pediatrics; Mary Ann Hopkins, MD, MPhil, associate professor of surgery; Kenneth Mroczek, MD, assistant professor of orthopaedic surgery; and Daiana (Lucia) Voiculescu, MD, assistant professor of anesthesiology. Rounding out the team was Prisca Bernard-Joseph, RN, a labor and delivery nurse and a native of Haiti. "All but one of our team spoke French, and three of us spoke Creole," notes Dr. Francois. "This was crucial, because it facilitated our communication with people who had been physically and emotionally traumatized. For example, many patients were afraid that the foreign doctors were only going to amputate. We assured them that this wasn't the case."

On January 22, the team members arrived with as much medication and equipment as they could carry, and were taken to their sleeping quarters, a tent city near the airport. At 5:30 a.m. the next morning, after the first of many near-sleepless nights—courtesy of the cargo planes thundering overhead every few minutes—they headed to the hospital. There, they found scores of patients in tents and open-air beds, having refused to enter a building they feared might collapse in an aftershock. Many suffered from severe fractures, infections that had gone untreated for over a week, and post-traumatic stress.

Working with physicians, nurses, and support staff from other medical centers in the U.S. and elsewhere, NYU Langone's surgical team began to set up four makeshift operating rooms. Using ketamine and spinal blocks for anesthesia, they managed to perform dozens of operations each day. Whenever possible, to avoid cutting into patients and risking infection, Dr. Feldman and Dr. Mroczek relied on external fixators—metal frames that hold fractured bones in place. The most serious cases—those for whom it was not possible to provide an essential medical or surgical service—were airlifted to the USNS *Comfort*, the navy hospital ship anchored offshore.

Meanwhile, Dr. Poitevien had established herself as the "go to" person in the pediatric ward, where at times, handheld air bags served in place of mechanical ventilators for children in respiratory distress. Nurse Bernard-Joseph helped deliver numerous babies, while Dr. Francois divided his time between patients and recruiting others to create a more functional critical care unit.

Most important, says Dr. Francois, the group was increasingly able to turn patients over to Haitian caregivers as regular hospital staff began to return from caring for their own families. "Our main goal was to transition quickly to a self-sustaining team of Haitian physicians and nurses," he says. "The NYU Langone team was integral to making that happen."

At week's end, the team—exhausted and dehydrated—was able to report that it had successfully treated many adults and children who might otherwise have had poor outcomes. As intended, the operations performed by HEART focused on repairing broken bones and treating wounds in order to save limbs. In a mountainous country where quality of life depends on sound limbs, this was a major achievement.

As the team members awaited their flight home, there were pangs of regret that they couldn't stay longer. "Still, we knew that we'd completed our mission and it was time to go," says Dr. Francois. "It was tough—the more we got to know these patients, the more we realized that behind the mind-numbing statistics, this disaster is about real people just like us. In the grand scheme of things, we did the best we could with what we had, but we also know that the country has miles to go and mountains to climb."

Web Extra: for an article about NYU Langone's efforts to treat post-traumatic stress disorder (PTSD)among victims and caregivers, see "Healing Haiti's Hidden Wounds" at http://newsandviews.med.nyu.edu/.

At the end of their week in Haiti (left to right), Dr. Daiana Voiculescu, Dr. Mary Ann Hopkins, Prisca Bernard-Joseph, RN, Dr. Patricia Poitevien, and Dr. Fritz Francois wait for their plane home.

Germbusters

At Night, the OR Hosts a Different Team of Lifesaving Experts

All photos by Joshua Bright

The operation lasted 18 hours, and its messy aftermath reflects every minute of surgical drama. The floor is splattered with dried blood. Nine bags of garbage jostle for space. The room is littered with discarded sutures, bandages, linens, gloves, tubes, and vials. But by the first case of the day at 7:00 a.m. the next morning, the OR on the sixth floor of NYU Langone Medical Center's Tisch Hospital will return to its pristine state.

Every night, the Medical Center's 71 operating rooms must be decontaminated and disinfected. The 25-person crew assigned to this high-stakes mission represents "the best of the best," says Peter Aguilar, senior administrative director of Building Services. Like a SWAT team that swoops in under cover of darkness, this elite squad of microbe hunters is specially trained to flush out and kill the enemy: germs. Outfitted in scrubs, gowns, masks, gloves, bonnets, and booties, and armed with an array of germicidal fluids and wipes, three members of the team set to work soon after the patient has been transported to the PACU. They scrub away the blood and cart away the trash. Three others—dubbed "terminal cleaners" to convey the import of their mission—sanitize the room from ceiling to floor, wiping down every single surface and piece of equipment.

On this particular night, the team consists of Jones Amoah, Innel Exume, Ajare Nimako, Chad Sam, Tommy Franklin, and Nelson Vasquez. They bundle blood-soaked dressings and surgical drapes into red biohazard bags. They pour enzymatic foam cleaner on the bloodstained floor to dissolve the proteins and prevent caking. They raise and fold the operating table in on itself to expose all of its surfaces, then dismantle it piece by piece, cleaning every nook and cranny. Using Clorox Clean-Up (an all-purpose cleanser containing bleach), they meticulously wash the handles of the overhead lamps, IV poles, computer cables, microscopes, and many other items on their checklist, including the fire extinguisher, the door frame, and the wheels on the trash buckets. Gregory Ross, operations manager of Building Services, recently introduced Power Clean, a mildly alkaline solution that removes iodine and adhesives from surfaces, as well as vent cleaning, to ensure that no dust (a magnet for bacteria) enters the OR.

The night shift begins at 11:30 p.m. and ends at 7:45 a.m. At about 6:00 a.m., supervisor Nicholas Duso inspects their work using a newly introduced digital device called Clean Trace, which measures bacteria levels by detecting the energy-storage molecule adenosine triphosphate (ATP). Duso swabs selected surfaces and inserts the swab into the device, which fluoresces in the presence of ATP. The higher the bacterial count, the greater the glow.

"It's a precise measure and it's reproducible, so we can use it to tell whether surfaces are truly clean," explains Steven Bock, RN, infection prevention and control practitioner. "We want the rate of postoperative infections to be zero," he adds, "and if it means being more methodical—more maniacal—about cleaning, we will do that. We can have the best doctors, the best lasers, the best drugs. But if the environment isn't clean, they're worthless. Whenever you see a housekeeper doing their work, say 'Thank you,' because what they do is absolutely critical to the operation of the hospital."

Amazing Place *(continued from page 1)*

onsite accreditation survey. In addition to quarterly tours of patient-related facilities, the Medical Center prepares for this all-important survey by holding periodic seminars on new and existing standards and sending out weekly reminders about various safety procedures to all patient units. Throughout the year, work groups review the requirements, refine policies and procedures, and measure performance. As a gentle reminder, The Joint Commission's national safety guidelines are printed on "badge buddies" placed behind staff ID tags.

When the commission's inspectors showed up last November, the Medical Center was more than ready. For the first time, Tisch Hospital, together with NYU Langone's Rusk Institute of Rehabilitation Medicine and Hospital for Joint Diseases, were assessed as a single institution. The stakes were high, and the scrutiny, as expected, was intense. "A physician and four nurses spent five days checking every corner of the hospital—reviewing records, observing interactions between caregivers and patients, and interviewing doctors, nurses, and support staff," explains Maxine Simon, NYU Langone's chief regulatory officer. "They looked at all of our processes." Using a method known as a "tracer," which tracks individual patient cases through each step of care, from admission through discharge, personnel were evaluated according to hundreds of criteria. An environmental surveyor also spent two days inspecting the Medical Center's physical plant for potential safety concerns.

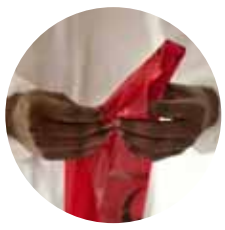
By week's end, the inspectors had issued only five direct findings (instances where they felt improvement was needed). Based on evidence submitted by the hospital after the survey, the number was reduced to four—an outstanding result. "The Joint Commission was impressed by the sophistication of our medical care and the collaboration and communication between our doctors, nurses, and staff," says Simon. "Every team member knew the status of every patient. Ultimately, that benefits our patients because communication is the key to safe and effective care."

The Joint Commission's praise, she adds, reflects NYU Langone's deep commitment to high-quality medical care and the resources devoted to ensuring that care—even when an inspection isn't around the corner. "It's not just about preparing for the survey," she explains. "We're constantly reviewing our performance against The Joint Commission's standards, always looking for ways to do even better."

news & views

NON-PROFIT ORG.
U.S. POSTAGE
PAID
NEW YORK, NY
PERMIT NO. 8167

Inside This Issue



news & views is published bimonthly for NYU Langone Medical Center by the Office of Communications and Public Affairs. Readers are invited to submit letters to the editor, comments, and story ideas to **thomas.ranieri@nyumc.org.**

NEW YORK UNIVERSITY

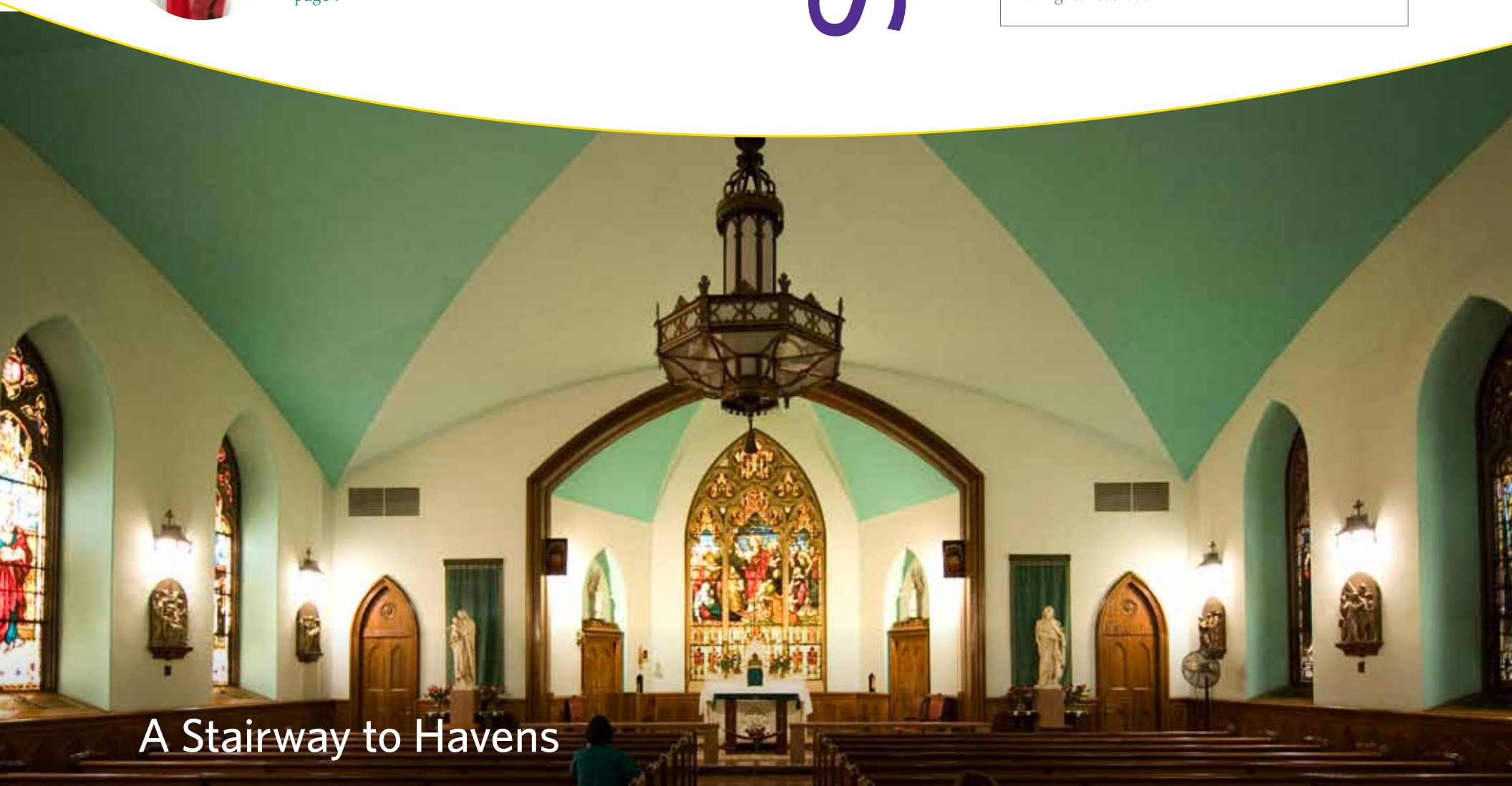
Martin Lipton, Esq., *Chairman, Board of Trustees*
John Sexton, *President*
Robert Berne, PhD, *Senior Vice President for Health*

NYU LANGONE MEDICAL CENTER

Kenneth G. Langone, *Chairman, Board of Trustees*
Robert I. Grossman, MD, *Dean and CEO*
Deborah Loeb Bohren, *Vice President, Communications and Public Affairs*
Frank W. Lopez, *Director of Publications*

news & views

Thomas A. Ranieri, *Editor*
Marjorie Shaffer, *Science Editor*
i2i Graphics, *Design*



A Stairway to Havens

Amid the swirl of humanity to be found where Old Bellevue and New Bellevue intersect, the bottom steps of a staircase jut out into the ground-floor corridor, as if beckoning passersby to some quieter, loftier place. Those curious—or enlightened—enough to follow this marble path soon leave behind the medical world and enter another realm of healing.

At the top of the stairs, a pair of closed doors leads to four more pairs of closed doors, behind which are four unique inner sanctums. This is Chapel Hall, home to a Catholic chapel, a Protestant chapel, a Jewish synagogue, and a Muslim prayer room.

Bellevue, the oldest public hospital in America, has been staffed by chaplains since 1816, when Rev. John Stanford of the Church of England arrived. In 1893, Countess Annie Leary donated $1 million for a Catholic chapel, complete with stained-glass windows, built in the courtyard of Old Bellevue. (Leary was not married to a count; hers was a papal title granted in recognition of her charitable gifts, among them the statue of Christopher Columbus in Columbus Circle.)

Chapel Hall opened in the newly built administration building in 1940. In its coverage of the consecration of the Catholic chapel, *The New York Times* reported that "the ceremony brought to Bellevue the distinction of being the first hospital in the world to have separate houses of worship for each of three major faiths." (The Muslim prayer room was added in recent years.)

The new Catholic chapel, resplendent with stained-glass windows salvaged from the demolished one, was placed in the center of the hall. The Protestant chapel and the synagogue are much simpler than their Catholic counterpart but just as serene. Each one seats about 300 worshippers.

These sanctuaries have witnessed many kinds of solemn occasions over the years. In 1949, Dan O'Brien, "King of the Hobos," died at the age of 90. Thanks to two affluent friends, he was honored with an impressive funeral in the Protestant chapel, "graced by all the pretensions he had spurned during his life as a simple man," as *The New York Times* noted. In 1951, a young couple was married in the synagogue because the bride's father was in Bellevue recovering from a heart attack. As Rabbi Henry Schorr described the event, "The bride's father is a fireman. The bride is a court clerk. The bridegroom works for the post office. The city owns the hospital and provides the synagogue. A civil service wedding in every respect!"

Jon Simon