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This interactive version of the magazine resides at www.einstein.yu.edu/r/einstein/winterspring2012 and adds voices and moving images to the text and pictures you now hold in your hands. You’ll be able to view event coverage, hear interviews with Einstein faculty members, see how Einstein is continuing to add value to its education programs...and more.

If you like the status quo, don’t worry: We are continuing to publish Einstein magazine in print form. But do please give our alternative format a try as well. And let us know what you think about it by sending us a note at letters@einstein.yu.edu.

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On the cover: Martin N. Cohen, M.D., professor of medicine (cardiology), with first-year medical students.

To enjoy our interactive version of Einstein magazine on your smartphone, download a mobile reader. We suggest visiting http://scan.mobi on your mobile device.
A Message from the Dean

Embarking on a career in medicine or in biomedical research requires long and rigorous training and is not for the fainthearted. Yet the rewards are incomparable—which in part explains why the number of highly qualified applicants to Einstein’s medical and graduate programs shows no sign of decreasing.

Awaiting our M.D. and Ph.D. graduates is yet further training. On March 16, our soon-to-graduate medical students learned the outcome of their residency matches. The results were impressive, with most students matching to residency programs at prestigious academic medical centers around the country. For our graduating Ph.D. students, the outcome was comparable, with most going on to postdoctoral fellowships in outstanding places. Both sets of graduates will take with them the superior knowledge and skills they acquired here at Einstein. Changes in our medical and graduate curricula discussed in this issue will help our future graduates be similarly successful.

Another major article in this issue shows how Einstein’s enhanced partnership with Montefiore Medical Center has benefited education, research and clinical care. The appointment of Dr. Roy Chuck as chair of ophthalmology filled a longstanding void. He is an exceptional leader of a now-vibrant department. Significant philanthropic support for eye research at Einstein will fuel further growth in this vital area. Specialties such as ophthalmology have become increasingly popular as residency choices for medical students, and assuring the high quality of their training in such specialties is just one more way that we provide the best possible education for our students.

Imaging science at Einstein is also highlighted in this issue. A major gift from distinguished alumna Evelyn Gruss Lipper, M.D. ’71, has created an integrated imaging program that brings together Einstein’s formidable resources in biophotonics and magnetic resonance imaging. The new program features the recruiting and training of “bridge” postdocs—key players in collaborative research projects involving the Gruss Lipper Biophotonics Center and Gruss Magnetic Resonance Research Center.
AIDS: 30 Years After
Thank you for the great coverage of our work in Einstein magazine (“AIDS + 30: AIDS Arises and Einstein Responds,” Summer/Fall 2011). The story was excellent, and I truly loved the video. I have received a lot of correspondence on the video calling it inspiring! I confess it makes even me cry. Please accept my heartfelt thanks.

Kathryn Anastos, M.D.
Professor of Medicine
and of Epidemiology & Population Health
Co-director, Einstein Global Health Center
Albert Einstein College of Medicine

Please allow me to compliment you on the latest issue of Einstein. I loved the cover graphic integrating Einstein investigators and patients into the ribbon. You did a great job of presenting and illustrating the story of 30 years of AIDS research at Einstein.

Harris Goldstein, M.D.
Director, Einstein-Montefiore Center for AIDS Research
The Charles Michael Chair in Autoimmune Diseases
Albert Einstein College of Medicine

Editor’s Note: Regarding “AIDS + 30: AIDS Arises and Einstein Responds,” the cover story of the Summer/Fall 2011 Einstein magazine: We received mail pointing out that we slighted contributions made by researchers at Montefiore, the University Hospital and academic medical center for Einstein, during the early years of the HIV/AIDS epidemic. Our article focused primarily on current Einstein faculty members and their pivotal roles in combating HIV/AIDS. Others deserving recognition include Gerald Friedland, M.D. (mentioned in our article and now at Yale School of Medicine); Robert Klein, M.D. (mentioned in our article and now at Mount Sinai School of Medicine); and Neal H. Steigbigel, M.D. (now at New York University School of Medicine).

Two New Profs Say Thanks
Thank you very much for providing us with a copy of the Einstein magazine Summer/Fall issue in which we appeared (“Welcome”). We really appreciate the time and effort that goes into publishing this amazing magazine.

Wei-Li Liu, Ph.D.
Assistant Professor
Robert A. Coleman, Ph.D.
Assistant Professor
Department of Anatomy and Structural Biology
Albert Einstein College of Medicine

Mentoring Young Scientists
In an article you recently published, “Einstein Profs Help High School Students” (Einstein magazine, Summer/Fall 2011), you highlighted the contributions your researchers have made to our high school’s small science research program and its students. Thanks to the work of people like Drs. Katalin Susztak, Chandan Guha and Alan Alfieri, our aspiring scientists receive the support and mentoring they need to realize their dreams and pursue their passions. Your scientists gave of their time and went “above and beyond” to give our young researchers an experience they will never forget.

Einstein is not only a cutting-edge medical school and research facility. It is an asset to the local community for services such as these.

Tom Callahan
Coordinator of Science Research
Dobbs Ferry High School
Dobbs Ferry, NY

Virtual Edition, Real Comments
The first page of our online edition offers an easy way to send feedback to Einstein magazine. When asked “What did you like about the magazine?” one reader wrote, “[I liked] the ease of zooming in on the page and turning pages—and I LOVED the videos.”

To see our most recent online editions (including this one) for yourself, visit: www.einstein.yu.edu/publications.

Wanted: Your Opinion
Please e-mail us your comments about Einstein magazine at letters@einstein.yu.edu. We look forward to hearing from you.
Einstein Sponsors Global Diabetes Symposium

Einstein’s Global Health Center joined forces with the International Diabetes Federation (IDF) in September 2011 to present the inaugural Global Diabetes Symposium. “Finding the Way to Global Action” featured a dozen diabetes leaders who gathered to define the epidemic, discuss responses to its causes and detail strategies for prevention and treatment.

Held at Yeshiva University’s Schottenstein Cultural Center in New York City, the event coincided with the opening of the nearby United Nations Summit on Non-Communicable Diseases.

“We have enormous challenges in implementing public health approaches, which will be vital both in the United States and globally,” said Allen M. Spiegel, M.D., Einstein’s Marilyn and Stanley M. Katz Dean and former director of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

“The projections for diabetes are proving to be underestimated,” added presenter K. M. Venkat Narayan, M.D., M.Sc., M.B.A., the Ruth and O. C. Hubert Professor of Global Health & Epidemiology at Emory University’s Rollins School of Public Health. “For example, the figure of 366 million people with diabetes today, which the IDF just released, was projected for 2030.”

Dean Spiegel and Louis M. Weiss, M.D., M.P.H., professor of medicine (infectious diseases) and of pathology, co-director of the Einstein Global Health Center and attending physician in medicine at Montefiore Medical Center, offered introductory remarks.

Experts from Columbia University, Purdue University, the University of North Carolina, the New York Department of Health and Mental Hygiene, PepsiCo’s Global Health and Agriculture Policy group and the NIDDK offered their perspectives as well.

The final speaker—Jean Claude Mbanya, president of the International Diabetes Federation—made clear that diabetes does not just affect people in poor, Third World countries. “Last month I was in Oslo,” Dr. Mbanya recalled. “They said, ‘We don’t have the problem you have in Africa.’ I said, ‘What is the prevalence of diabetes in the Pakistani community in Oslo?’ ‘Very high.’ Ladies and gentlemen, there are disadvantaged communities in every country in the world.”

Meredith A. Hawkins, M.D., professor of medicine (endocrinology), director of Einstein’s Global Diabetes Initiative and attending physician in the department of medicine (endocrinology) at Montefiore, offered insights into the hidden epidemic of malnutrition diabetes. Elizabeth Walker, Ph.D., professor of medicine (endocrinology) and of epidemiology & population health and director of the Prevention and Control Core for the Diabetes Research and Training Center, discussed the challenges and opportunities that arise in teaching people how to manage their diabetes.
Gold Humanism Honor Society Inductions

“Many of us will have the opportunity to treat convicts over the course of our careers,” wrote one of this year’s inductees into the Gold Humanism Honor Society. “This glimpse at the human being, not so different from myself, who found himself in a violent and untenable situation due to illness and circumstance, will help remind me to look beyond society’s labels to see and treat the person within.”

To recognize fourth-year medical students notable for their devotion to patient care, Einstein opened a chapter of the society in 2010 and inducted 18 seniors. In September 2011, 19 more students—nominated by their peers and approved by a faculty committee—were invited to join after submitting essays describing humanism in medicine. Five faculty members also were inducted.

Ad Libitum Presents…

On December 5, 2011, the Einstein Jazz Ensemble provided the musical backdrop as some 90 Einstein writers and visual artists—expressing themselves through ink, photography, paint and even yarn—gathered in the Lubin Dining Hall for the Ad Libitum club’s fifth annual Art Night and Auction. The purpose of the club is to highlight the interplay among art, medicine and science. For the first time, proceeds went to the Bronx River Art Center, which provides a creative outlet for local artists and youth. Their programs cultivate urban leaders and concern for a nearby natural resource—the Bronx River.

An Einstein Student and His Famous Teammate

The “Linsanity” surrounding New York Knicks point guard Jeremy Lin has special meaning to first-year Einstein medical student Amar Miglani. Amar, the lanky six-foot-two MVP of his Einstein intramural champion team, the Superficial Fascia, played high school basketball with Lin in Palo Alto, CA, graduating the year before Mr. Lin led the team to the state championship.

“Even in high school, Jeremy had an incredible capacity to make good decisions under pressure, and he’s demonstrated that in his play with the Knicks,” Amar observes with pride.

When Linsanity was at its height this February, Amar and several former high school teammates had lunch with Mr. Lin in New York City, where they witnessed the frenzy surrounding their friend up close. “As we were leaving the restaurant, a number of people realized it was Jeremy and crowded around him asking for autographs,” he recalls.

Amar has watched with joy as his friend has risen from obscure bench player to nationally known phenomenon. “While there are pressures of being a med student, they’re nothing compared to what Jeremy faces on a day-to-day basis,” he says. “I’d like to excel at medicine the way he does at basketball.”
Alumni Association Extends a Helping Hand

Einstein’s three fall ceremonies remind students that they are not alone as they learn about molecules, pathways, differential diagnoses and—perhaps most important—humanism and compassion.

The White Coat Ceremony
As they receive the white coat of the professional healer, first-year Einstein students embark on their journey toward saving lives and helping people. At the White Coat Ceremony in August 2011, Stephen G. Baum, M.D., senior associate dean for students, commented that in the past, the white coat may have insulated the doctor against compassion and humanism, but today we look “between the buttons” for knowledge, compassion, professionalism and humanism. The keynote address, “Great Expectations,” was delivered by Victor L. Schuster, M.D., professor of medicine (nephrology) and of physiology & biophysics, the Ted and Florence Baumritter Chair in Medicine and chair of the department of medicine at Einstein and Montefiore. He reminded the incoming Class of 2015 of its obligation to repair the world.

“Repair it one patient at a time,” he advised. “After all the learning is done, the head will explain but the heart must lead.”

Each year, the incoming class writes its own oath to read during the ceremony. This year’s unusually poetic and vivid oath included this thought: “My stethoscope connects my ears to my patients’ hearts.”

Top left: After putting on their white coats for the first time, students in the Class of 2015 read an oath they had composed as a group to express their hopes, wishes and aspirations.

Top right: Celebrating after the Stethoscope Ceremony.

Above: Jack Stern, M.D. ’74, Ph.D. ’73, president of the Einstein Alumni Association, with students from the Class of 2015 at the Scrubs Ceremony.

ON THE WEB
www.einstein.yu.edu/r/whitecoat2011
Scrubs Day
“This is a unique event,” said Todd Olson, Ph.D., professor of anatomy and structural biology, at this year’s Scrubs Day on October 5, 2011. “Einstein is the only medical school that has this ceremony.” Conceived six years ago by Harris Goldstein, M.D. ’80, assistant dean for scientific resources and professor of pediatrics (allergy & immunology) and of microbiology & immunology, the ceremony marks the start of the gross anatomy course.

After welcoming remarks by Dr. Olson and Alumni Association President Jack Stern, M.D. ’74, Ph.D. ’73, Dr. Goldstein addressed the students. “You will dissect an intact human body,” said Dr. Goldstein, who is also the Charles Michael Chair in Autoimmune Diseases at Einstein, the director of the Einstein-Montefiore Center for AIDS Research and attending physician in pediatrics at The Children’s Hospital at Montefiore. “This marks your transition from student in medical school to physician in training, and it’s appropriate to note this transforming event with a ceremony sponsored by thousands of Einstein graduates who have preceded you.” Dr. Goldstein then introduced the speaker representing the alumni association, Raja Flores, M.D. ’92, chief of thoracic surgery at Mount Sinai Medical Center, as someone who exemplifies the “we can, we do, we care” approach of Einstein. “To operate on the human body is straightforward,” said Dr. Flores, “but to nurture the spirit in the face of disease is a lot more complex.”

The students then received their scrubs—a light blue-green this year.

Stethoscope Ceremony
On September 20, 2011, the Classes of 2014 and 2015 gathered in Robbins Auditorium for the Stethoscope Ceremony, an event held this year for Einstein’s first- and second-year students as they were introduced to the physical diagnosis portion of their clinical training. During this period, students experience hands-on interactions with patients and actors portraying patients. Janina Galler, M.D. ’72, a member of the Alumni Association board of governors, addressed the students along with Martin Cohen, M.D. ’72, a member of the Alumni Association board of governors, who shared the history of the stethoscope and the various ways it helps physicians diagnose ailments.
Are you ready to take your career to a new level? Earn an Albert Einstein College of Medicine Master of Public Health degree while working.

Einstein’s 42-credit program has a unique focus on community-based research grounded in the social and behavioral sciences. The innovative curriculum, administered by the Albert Einstein College of Medicine Center for Public Health Sciences of Yeshiva University, emphasizes interdisciplinary approaches to addressing local and global public health challenges. The goal is to train professionals in partnering with communities to improve population health and promote community well-being and health equity.

Take classes on a full-time or part-time basis with professionals from a variety of fields and work with community organizations on applied research projects.

Or earn an 11-credit Public Health Certificate that can be completed over the summer and fall.

Classes begin in late June

To learn more, visit our website: http://www.einstein.yu.edu/centers/public-health-sciences

Public Health Education Programs
Center for Public Health Sciences
E-mail: cphs@einstein.yu.edu

All classes are held on the Jack and Pearl Resnick campus in the northeast Bronx, NY
Alumni Office Reaches Out to Newly Accepted Applicants

Earlier this year, Einstein’s alumni relations office joined with the admissions office to host two events for newly accepted students and their parents. Guests met faculty members and alumni as well as current Einstein students to learn more about the College of Medicine’s educational programs and academic community.

On January 22, Faranak and Farshad Nosratian, M.D. ’83, graciously hosted a brunch at their Los Angeles home. More than 75 guests attended, including 12 accepted students. Robert W. Marion, M.D. ’79, the Ruth L. Gottesman Chair in Developmental Pediatrics, director of the Children’s Rehabilitation and Education Center and chair of the committee on admissions, offered his unique perspective on Einstein as an exceptional place to pursue a medical career.

A January 26 reception at the Harmonie Club in New York City drew a crowd of more than 220, including more than 75 accepted students. The featured speakers were Jack Stern, M.D. ’74, Ph.D. ’73, president of the alumni association, and Nadine T. Katz, M.D. ’87, senior associate dean for student academic affairs. Members of the admissions committee also attended.

“We were delighted to meet so many prospective students,” notes Dr. Stern. “It was an honor for me, and for all the alumni present, to share our Einstein pride and encourage the students to enroll!”

Welcome!

Eleni Andreopoulou, M.D.

Einstein welcomes Eleni Andreopoulou, M.D., assistant professor in the department of medicine (oncology) at Einstein and attending physician in oncology at Montefiore. She was previously a faculty member in the department of breast medical oncology at the University of Texas M.D. Anderson Cancer Center.

Her academic interests include metastatic and locally advanced breast cancer, neoadjuvant drugs (tumor-shrinking drugs given prior to surgery) and assessing the genes expressed in tumors to help in selecting the best drugs for individual patients.

Dr. Andreopoulou’s research focuses on bringing more-effective drugs into the clinic and developing innovative designs for breast cancer clinical trials.

Evripidis Gavathiotis, Ph.D.

When a heart attack or stroke deprives cells of oxygen, a protein molecule called BAX plays a role in killing those cells by draining them of energy. Dr. Gavathiotis has found that BAX is activated at several “trigger points” that present attractive targets for potentially lifesaving drugs. “For patients who have suffered a heart attack, you’d like a drug that would inactivate BAX and prevent cell death,” he notes.

Dr. Gavathiotis, assistant professor of biochemistry and of medicine, was recruited to Einstein from the Dana Farber Cancer Institute in 2011. The cancer/BAX connection?

“Cancer cells are able to repress BAX so that it can’t trigger their death,” Dr. Gavathiotis explains. “So for cancer, you’d like to develop a drug that would activate BAX to encourage cell death so that the tumor would shrink.”
Student on the Lam!

Ask second-year medical student Nick Swerdlow what he did last summer and you won’t get the standard travelogue. He and childhood buddy Jake Tuber traveled to the wilds of northern Ontario—but it was no vacation.

It all began in early 2011, when the two Hastings-on-Hudson, NY, natives decided to try out for the reality TV show *Mantracker*—which features two people taking off into the bush with a map, a compass and a head start, chased by a professional mantracker and his guide on horseback. The “prey” have 36 hours to reach a finish line 25 miles away without getting caught. Nick and Jake were chosen. And on a warm day last August, the two friends were dropped by helicopter into the middle of the Canadian woods.

How did it turn out? The *Mantracker* producers have sworn the young men to secrecy until the show airs sometime this spring on cable’s Science and HD Theater channels. Nick says only that the two days of the chase were extremely stressful. “The fact that the mantracker could be anywhere at any time made it impossible to relax,” he says. “My heart wouldn’t stop racing.” But it was fun in a way too. “The crew is a very small group of people who are extremely talented and really fun to be around,” he says. “It was amazing to watch them work to get great shots while we were freaking out trying to escape two men on horses.”

Back safely in the Bronx, Nick can focus on medicine again. “I’m most interested in orthopedics at the moment, but that could change,” he says. As for being an outback-style doctor—like the female scientist at the South Pole who biopsied her own breast tumor—Nick plans to keep his wilderness adventures and career separate.

Social Media: Online at Einstein

Social media allow for almost instantaneous contact and information exchange. “It’s all about building community,” says Paul Moniz, Einstein’s director of communications and marketing. Here’s how and where at Einstein:

**Facebook:** Einstein shares news and images in its Timeline and engages with nearly 700 followers via comments and polls. Like us at http://facebook.com/EinsteinCollegeofMedicine.

**Twitter:** Einstein sends out messages multiple times daily (to 3,200+ followers—and counting)! To follow Einstein’s Twitter feed, visit http://twitter.com/EinsteinMed.

**Blog:** *The Doctor’s Tablet* offers a close-up look at the human realities of today’s sophisticated—and complicated—medicine. Visit http://blogs.einstein.yu.edu/.

**YouTube:** Einstein’s YouTube videos have been viewed 52,000 times! Check out www.youtube.com/user/EinsteinCollegeofMed.

**Einstein Multimedia Page:** See all of Einstein’s audiovisual content in one place on Einstein’s dynamic multimedia page, which receives nearly 10,000 visits per month. Visit www.einstein.yu.edu/video.

**LinkedIn:** Einstein maintains a corporate profile on LinkedIn. Visit www.linkedin.com/companies/556031.

**RSS:** “Really Simple Syndication” delivers Web content directly to your desktop or browser. To get started, visit http://feeds.feedburner.com/einstein-news and http://feeds.feedburner.com/einstein-features.

**Google+:** Einstein keeps users of this social network abreast of the latest developments at Einstein. Visit at http://ein.st/xBNUnc.

**Website:** Updated daily, our easy-to-use website is www.einstein.yu.edu.
Aviv Bergman, Ph.D., stands out on campus for his philosophical proclivities and distinctive eyewear. As an evolutionary biologist, he studies the biology underlying the evolution of complex traits using theoretical mathematical and computational tools guided by experimental evidence. Dr. Bergman is founding professor and university chair of the department of systems & computational biology and professor in the department of pathology and in the Dominick P. Purpura Department of Neuroscience.

You have the funkiest glasses on campus. How many pairs do you have, and where do you get them? I get them one at a time from Traction Lunettes in Paris, 6 rue du Dragon.

Your work sounds complex. Can you describe it in one sentence? To make complicated things simple.

You were born and educated in Israel. Were you good at science in school? I was good at math and physics, but biology was not on my radar screen.

How did you get started in evolutionary biology? I was recruited as a physicist to the United States by the Stanford Research Institute, where I met the man who would become my mentor. Our collaboration got me interested in evolutionary biology, which is the closest a biologist/scientist can get to philosophy. Next I moved to Interval Research, where I founded the group on evolutionary biology, and back to Stanford University, where I founded two centers. Then Einstein made me an attractive offer, and I’ve been here for about seven years.

In a previous Einstein publication you said, “Systems biology, like music, is complicated and beautiful, and like music cannot remain silent.” Does music play a big role in your life? I listen to music constantly, play jazz guitar and recently started to play cello, but it’s hard. I don’t like people to listen to me.

Have you solved a work-related problem through music? I used to work in the field of chaotic dynamical systems. One of its aims is to look at time series that come out of chaotic systems and to find patterns. One day I converted such a time series to “music.” In this domain, our ears can perceive patterns far better than our eyes. I didn’t arrive at a solution, but listening convinced me there is one.

Are you reading a philosophy book now? There are a few that I repeatedly read. One is Philosophy and the Mirror of Nature by Richard Rorty; he was my philosophy mentor who passed away in 2007. Another is Making It Explicit by Robert Brandom.

Other favorite authors? Sartre, Hegel, Wittgenstein, Pierce, C. P. Snow, Kuhn.

Do multidisciplinary collaborations resemble a symphony orchestra? A key difference is that there is no conductor. Whoever claims to be the conductor doesn’t contribute much.
Kids’ Abnormal Breathing During Sleep Linked to Increased Risk for Behavioral Problems

A study of more than 11,000 children followed for over six years has found that young children with sleep-disordered breathing are prone to developing behavioral difficulties such as hyperactivity and aggressiveness, as well as emotional symptoms and difficulty with peer relationships.

“Parents and pediatricians alike should be paying closer attention to sleep-disordered breathing in young children, perhaps as early as the first year of life,” said study leader Karen Bonuck, Ph.D., professor of family and social medicine and of obstetrics & gynecology and women’s health at Einstein. The study was published in Pediatrics.

Sleep-disordered breathing (SDB) is a general term for breathing difficulties that occur during sleep. Its hallmarks are snoring (which is usually accompanied by mouth breathing) and sleep apnea. SDB reportedly peaks from 2 to 6 years of age but also occurs in younger children. Common causes of SDB are enlarged tonsils or adenoids.

The study analyzed the combined effects of snoring, apnea and mouth-breathing patterns on the behavior of children enrolled in the Avon Longitudinal Study of Parents and Children, based in the United Kingdom.

Parents filled out questionnaires about their children’s SDB symptoms at various intervals, from 6 to 69 months of age. When their children were approximately 4 and 7 years old, parents completed the Strengths and Difficulties Questionnaire, which is widely used to assess behavior. “We found that children with sleep-disordered breathing were from 40 to 100 percent more likely to develop neurobehavioral problems by age 7, compared with children without breathing problems,” said Dr. Bonuck. “The biggest increase was in hyperactivity, but we saw significant increases across all five behavioral measures.”

Researchers believe that SDB could cause behavioral problems by affecting the brain in several ways: decreasing oxygen levels and increasing carbon dioxide levels in the prefrontal cortex; interrupting the restorative processes of sleep; and disrupting various cellular and chemical balances.

According to the American Academy of Otolaryngology–Head and Neck Surgery, surgery is the first-line treatment for severe pediatric SDB in cases where the tonsils and adenoids are enlarged. Another option is weight loss for overweight or obese children.

In Memoriam

Maurice Rapport, Ph.D., passed away on August 18, 2011, at the age of 91. A member of Einstein’s biochemistry department from 1958 to 1968, Dr. Rapport was renowned worldwide for isolating and naming serotonin, an important neurotransmitter. Dr. Rapport received his doctoral degree in organic chemistry in 1946 from the California Institute of Technology. Prior to his appointment at Einstein in 1958, he was a member of the research staff at the Cleveland Clinic Foundation, a research associate in the department of biochemistry at the Columbia University College of Physicians and Surgeons and an associate research scientist in immunology for the New York State Department of Health at the Sloan-Kettering Institute for Cancer Research.

At Einstein, Dr. Rapport had multiple teaching commitments. During his stay at Einstein, he was selected as an American Cancer Society Professor of Biochemistry.
Soccer “Heading” Can Lead to Brain Injury

Einstein researchers using advanced imaging techniques and cognitive tests have shown that repeatedly heading a soccer ball increases the risk of brain injury and cognitive impairment. The imaging portion of the findings was presented in November 2011 at the annual meeting of the Radiological Society of North America in Chicago.

The researchers used diffusion tensor imaging, an advanced MRI-based imaging technique, on 38 amateur soccer players (average age: 30.8 years) who had all played the sport since childhood. They were asked to recall the number of times they had headed the ball in the previous year. (Heading is when players deliberately hit or field the soccer ball with their heads.) Researchers ranked the players based on heading frequency and then compared the brain images of the most-frequent headers with those of the remaining players. They found that frequent headers showed brain injury similar to that seen in patients with concussion, also known as mild traumatic brain injury.

The findings are especially significant since soccer is the world’s most-played sport, with popularity growing in the United States, especially among children. Of the 18 million Americans who play soccer, 78 percent are under age 18. Soccer balls travel at speeds as high as 34 miles per hour during recreational play and more than twice that during professional play.

After establishing that frequent heading can be harmful, the researchers looked for a threshold level of heading frequency above which detectable brain injury could be expected. They found that significant injury occurred after more than about 1,000 to 1,500 head-ings per year.

Lead author of the study was Michael L. Lipton, M.D., Ph.D., associate professor in the departments of radiology and of psychiatry and behavioral sciences and in the Dominick P. Purpura Department of Neuroscience; associate director of Einstein’s Gruss Magnetic Resonance Research Center; and medical director of MRI services at Montefiore.

Blood Sugar Linked to Colorectal Cancer

Elevated blood sugar levels are associated with an increased risk of colorectal cancer in older women, according to a study led by Einstein researchers. The findings appeared in November 2011 in the British Journal of Cancer.

Colorectal cancer is the third most commonly diagnosed cancer and third leading cause of cancer death in both men and women in the United States.

The Einstein study involved nearly 5,000 postmenopausal women enrolled in the National Institutes of Health’s landmark Women’s Health Initiative study. Their fasting blood sugar and insulin levels had been measured at baseline (the start of the study) and then several more times over the next 12 years.

By the end of the 12-year period, 81 of the women had developed colorectal cancer. The researchers found that elevated baseline glucose levels were associated with increased colorectal cancer risk—and that women in the highest third of baseline glucose levels were nearly twice as likely to have developed colorectal cancer as women in the lowest third of blood glucose levels. No association was found between insulin levels and colorectal cancer risk.

Obesity—usually accompanied by elevated blood levels of insulin and glucose—is a known risk factor for colorectal cancer. Researchers have long suspected that obesity’s influence on colorectal cancer risk stems from the elevated insulin levels it causes. But the Einstein study suggests that obesity’s impact on this cancer may be due to elevated glucose levels, or to some factor associated with elevated glucose levels.

The paper’s lead author was Geoffrey Kabat, Ph.D., a senior epidemiologist in Einstein’s department of epidemiology & population health.
Senator Klein Launches Cognitive Neurophysiology Lab

On November 15, 2011, New York State Senator Jeffrey D. Klein joined Einstein administrators and faculty members to officially open the new Cognitive Neurophysiology Laboratory. Several pieces of high-tech diagnostic and monitoring equipment, including advanced electroencephalogram systems, stimulus delivery equipment and specialized video recording devices, were purchased with a $1 million capital grant that Senator Klein secured for Einstein in the 2009–10 budget cycle.

The mission of the lab is to understand how the brain function of individuals with disorders such as autism, attention deficit disorder and childhood schizophrenia differs from that of their typically developing peers.

The facility includes a new 5,000-square-foot lab housing specially designed rooms that allow researchers to control sound and other stimuli and the latest tools to monitor the responses of study participants and patients. The information collected will be used to develop targeted intervention programs.

Postdocs Receive Dennis Shields Prizes

The Belfer Institute for Advanced Biomedical Studies honored three Einstein postdoctoral researchers with Dennis Shields Awards for Outstanding Postdoctoral Research during a ceremony in Robbins Auditorium on November 9, 2011. The honorees each received a check for $5,000 and an award from Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean.

The honorees then presented research that they had published in major, peer-reviewed journals. Posters featuring work by Einstein’s postdoctoral fellows were on display. The annual awards are given in memory of the institute’s first director, Dennis Shields, Ph.D., a beloved professor in the department of developmental and molecular biology who died in December 2008.

This year’s awardees were Timothée Lionnet, Ph.D. (anatomy and structural biology), for his work on visualizing gene transcription in live cells; Sudarshana Purkayastha, Ph.D. (molecular pharmacology), for her investigations of the connections between the brain and obesity-related hypertension; and Andres Chavez, Ph.D. (neuroscience), for his studies of the pain receptor TRPV1 and its emerging role in regulating synaptic transmission in the brain.

Before the awards ceremony, more than two dozen postdocs presented their research during an informal luncheon and poster session. Five of them were chosen by the Belfer Institute Advisory Committee to receive $500 travel awards for a future scientific conference.
In today's emotionally charged, technologically advanced environment, issues at the crossroads of medicine, law and public policy are commonplace among physicians, lawyers, clergy, healthcare workers and others.

The Einstein-Cardozo Master of Science in Bioethics is a collaboration among Yeshiva University’s Albert Einstein College of Medicine and Cardozo Law, and Montefiore Medical Center, the University Hospital for Einstein. The program brings together a broad range of expertise to address bioethics issues and provides students with the knowledge to make potentially life-changing decisions with confidence.

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- Bring critical skills to your current job and position yourself for advancement by specializing in this exciting, emerging field

An abbreviated program, the six-credit Montefiore-Einstein Certificate Program in Bioethics and Medical Humanities, is also offered independently or as the key introductory course for the Master of Science in Bioethics. Classes are held at Cardozo Law School in Manhattan and Einstein's Jack and Pearl Resnick campus in the northeast Bronx, NY.

Contact us to see if space is available for entry in fall 2012

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Tia Powell, M.D., Director | Phone: 718.920.4630 | E-mail: bioethics@montefiore.org
Einstein researchers have discovered the first known mechanism by which cells control the survival of messenger RNA (mRNA)—arguably biology’s most important molecule. The findings, published in December 2011 in *Cell*, pertain to mRNAs that help regulate cell division and could therefore have implications for reversing cancer’s uncontrolled cell growth.

“The fate of the mRNA molecules we studied resembles a Greek tragedy,” says the study’s senior author, Robert H. Singer, Ph.D., professor and co-chair of anatomy and structural biology and co-director of the Gruss Lipper Biophotonics Center at Einstein. “Their lifespans are determined at the moment of their birth.”

The study was carried out in yeast cells using advanced microscope technology developed previously by Dr. Singer that has allowed scientists, for the first time, to observe single molecules in single cells in real time.

Directions for making proteins are encoded in the DNA sequences of genes, which reside on chromosomes in the nucleus of each cell. But for proteins to be made, a gene’s DNA code must be copied, or transcribed, onto mRNA molecules, which migrate from the nucleus and into the cytoplasm where the cell’s protein-making machinery is located.

For as long as it exists, an mRNA molecule can act as a template for making copies of a protein. So scientists have long suspected that cells must have ways of degrading mRNAs when, for example, a protein accumulates to harmful levels.

“The cell somehow decides to destroy its mRNA on cue, but nobody knew how this happens,” says Dr. Singer, also professor in the Dominick P. Purpura Department of Neuroscience and the department of cell biology.

In their search for such a mechanism, Dr. Singer and his colleagues focused on two genes, *SWI5* and *CLB2*, which code for proteins that regulate the cell cycle—the complex series of steps during which a cell divides, first duplicating its genetic material and then distributing it evenly to two daughter cells. To properly choreograph the cell cycle, the levels of the proteins encoded by the *SWI5* and *CLB2* genes must be exquisitely controlled—suggesting that the mRNAs made from these genes would be prime candidates for purposeful degradation. Remarkably, the researchers found that these mRNAs are, in effect, born with molecular “self-destruct timers” that ultimately trigger their decay.

When genes are transcribed, a part of the gene called the promoter region has the job of switching on the gene so that DNA will be copied into mRNA. The Einstein scientists found that the promoter regions of the *SWI5* and *CLB2* genes do something else as well: they recruit a protein called Dbf2p, which jumps onto mRNA molecules as they’re being synthesized.

These mRNAs—transcribed from the *SWI5* and *CLB2* genes and bearing the Dbf2p protein—make their journey from the nucleus into the cytoplasm. Here a protein called Dbf20p joins Dbf2p aboard the mRNA molecules—and the two proteins together call for the molecules’ precipitous decay.

The paper’s lead author was Tatjana Trcek, Ph.D., who did this work at Einstein as part of her thesis and is now a postdoctoral student at New York University.

Dr. Singer’s research is described more fully in “Powering Up,” pages 30-35.
Novel Drug Starves Deadliest Malaria Parasite

An antimalarial agent developed by Einstein researchers has proved effective at clearing infections caused by the malaria parasite most lethal to humans—by starving the parasites to death. The novel research, carried out in nonhuman primates, could bolster efforts to develop more-potent therapies against one of the world’s leading killers. The study, published in November 2011 in *PLoS ONE*, was led by senior author Vern L. Schramm, Ph.D., professor and chair of biochemistry and Ruth Merns Chair in Biochemistry at Einstein.

Malaria is a mosquito-borne disease caused by single-celled parasites belonging to the *Plasmodium* genus. The U.S. Centers for Disease Control and Prevention estimated that in 2008 (the latest year for which figures are available), between 190 million and 311 million cases of malaria occurred worldwide and between 708,000 and 1.003 million people died, most of them young children in sub-Saharan Africa. *Plasmodium falciparum*, the malaria species most likely to cause severe infections and death, is very common in many countries in Africa south of the Sahara desert.

The Einstein researchers exploited what is perhaps *P. falciparum*’s Achilles’ heel: it can’t synthesize purines, vital building blocks for making DNA. Instead, the parasite must make purines indirectly, by using an enzyme called purine nucleoside phosphorylase (PNP) to make a purine precursor called hypoxanthine. By inhibiting PNP, the drug BCX4945 kills the parasites by starving them of the purines they need to survive.

After BCX4945 showed potency against laboratory cultures of *P. falciparum*, owl monkeys were chosen as the nonhuman primate model for further testing of the drug. Three animals were infected with a strain of *P. falciparum* that is consistently lethal without antimalarial therapy. Orally administering BCX4945 twice a day for seven days cleared the infections from all the animals between the fourth and seventh day of treatment. The monkeys remained parasite-negative for up to nine days post-treatment.

BCX4945 belongs to a class of drugs known as transition state analogs, which Dr. Schramm has been developing since 1994. Transition states form in every chemical change and whenever an enzyme does its job of converting one chemical (the substrate) into another (the product). The fleeting transition-state molecule is neither substrate nor product, but something in between.

After figuring out the short-lived transition-state structure for a particular enzyme, Dr. Schramm designs transition-state analogs to knock that enzyme out of action. The analogs closely resemble the actual transition-state structures but with one big difference: they powerfully inhibit the enzyme by binding to it and not letting go.

The transition-state analog BCX4945 was chosen for this study because of its high affinity for both *P. falciparum* PNP and human PNP (which the parasite obtains from the red blood cells it infects).

“Inhibiting PNP differs from all other current approaches for treating malaria,” says Dr. Schramm. “For that reason, BCX4945 fits well with the current World Health Organization protocols for malaria treatment, which call for using combination-therapy approaches against the disease.”
Novel Technique Reveals Sugars in Living Animals

The use of green fluorescent protein (GFP) has revolutionized optical (light) microscopy—an advance that has been compared to van Leeuwenhoek’s invention of the microscope itself. Living organisms possess tens of thousands of different proteins, and fluorescent probes allow scientists to tag and view those proteins as they migrate through a living cell or interact with other proteins. But until now, tagging and imaging nonprotein molecules has been virtually impossible.

In a breakthrough described in the April 1 online issue of *Nature Methods*, Hannes E. Bülow, Ph.D., assistant professor in the department of genetics and in the Dominick P. Purpura Department of Neuroscience at Einstein, and graduate student Matthew Attreed have developed a method for tagging and imaging sugar molecules called heparan sulfates that are attached to proteins on the surface of cells. These sugars have different sulfation patterns—that is, sulfate groups are added at various positions on the sugar molecule.

The sugars and their specific sulfation patterns are thought to influence how cell-surface receptor proteins interact with the hormones and other extracellular proteins that latch onto them. In this way, heparan sulfates regulate key functions such as communication between cells and cell-to-cell attachment.

Using the roundworm *C. elegans* as a model, the researchers genetically modified the animal to manufacture antibodies against heparan sulfates with different sulfation patterns. The antibodies were fused to GFP, allowing the researchers to visualize different heparan sulfation patterns in living animals.

“Most of the heparan sulfate we tagged was associated with nerve cells,” says Dr. Bülow. “Individual nerve cells seem to have a ‘coat’ of sugars modified by a pattern of sulfates unique for that cell, presumably influencing the cell’s function or development.” Dr. Bülow notes that his technique could potentially be used for imaging other important molecules such as lipids or proteins with specific modifications.

Have Data, Will Analyze

The first section of a readily expandable supercomputer has arrived on campus. Nicknamed “Leo” (after Leo Szilard, a close friend and colleague of Albert Einstein), the supercomputer will provide the department of genetics with 4 terabytes (4 trillion bytes) of shareable random-access memory for computation plus the ability to process information graphically.

John Greally, M.B., B.Ch., Ph.D., serves as chief of the department’s division of computational genetics and directs the Einstein Center for Epigenomics, which will both make good use of Leo. The center uses high-throughput techniques to study the thousands of epigenetic (chemical) “marks” in a person’s genome that regulate gene expression by turning genes on or off. Such studies produce voluminous quantities of data that can be analyzed only by a supercomputer.

“We’re using the supercomputer to take disparate types of measurements—clinical, genetic, epigenetic—and pull them together to find patterns linking data generated in the laboratory to the patient,” says Dr. Greally, the Ruth L. and David S. Gottesman Faculty Scholar for Epigenomics and attending physician in pediatrics at The Children’s Hospital at Montefiore.
Cancer’s Sweet Tooth May Be Its Weak Link

Cancer cells tap into a natural recycling system to obtain the energy they need to keep dividing, Einstein researchers have discovered. In a study with potential implications for cancer treatments, the scientists found that turning off this recycling system within cells stops both tumor growth and metastasis (cancer spread). The findings were published in the November 16, 2011, online edition of *Science Translational Medicine*.

Scientists have known that cancer cells require a large amount of energy in the form of glucose (sugar) to support their abnormally rapid growth. But it wasn’t clear how cancer cells met those energy needs.

The study shows that cancer cells fuel their growth by revving up autophagy, a recycling process that occurs in cell compartments called lysosomes. During autophagy, which literally means “self-eating,” Pac-Man–like lysosomes digest worn-out proteins and other damaged cellular components.

“Cancer cells seem to have learned how to optimize this system to obtain the energy they need,” says senior author Ana Maria Cuervo, M.D., Ph.D., professor of developmental and molecular biology, of anatomy and structural biology and of medicine (gastroenterology & liver diseases), and inaugural holder of the Robert and Renée Belfer Chair for the Study of Neurodegenerative Diseases (see page 53).

Dr. Cuervo and her colleagues detected unusually high levels of one type of autophagy, chaperone-mediated autophagy, in cells from more than 40 types of human tumors—but not in healthy tissue surrounding the tumors. “When we used genetic manipulation to block the activity of this recycling process, the cancer cells stopped dividing and most of them died, because they were no longer able to use sugar as fuel,” Dr. Cuervo says. “We also applied this procedure to tumors in mice, resulting in dramatic tumor shrinkage and almost complete blockage of metastasis.”

The researchers believe that selectively blocking this type of autophagy in cancer cells could be a useful strategy for shrinking tumors and halting metastasis. “In future research, we hope to develop drugs that can mimic what we have done using genetic manipulation,” says Dr. Cuervo.

Renowned Stem Cell Researcher Delivers 2011 Lasker Lecture

Shinya Yamanaka, M.D., Ph.D., the scientist renowned for his pioneering work generating the first induced pluripotent stem cells, delivered the 2011 Lasker Lecture at Einstein on October 24, 2011. Dr. Yamanaka is recognized for being the first to reprogram adult cells to behave as pluripotent stem cells, an advance he accomplished in mice and then with fibroblasts from human skin. Induced pluripotent stem cells derived from people behave very much as human embryonic stem cells do.
New Major Grants at Einstein
Research at the College of Medicine is being fueled by an impressive number of recent grants.

**Neuroscience Clinical Trials for Rare Diseases**

In a development that could help people with rare neurological diseases and reveal clues to more-common ones, physician-scientists at Einstein and at Montefiore have obtained National Institutes of Health (NIH) funds to establish a clinical site for the Network for Excellence in Neuroscience Clinical Trials.

One of only 25 such federally funded centers in the country, the Einstein-Montefiore site was created in partnership with Einstein affiliates Beth Israel Medical Center in Manhattan and the North Shore–Long Island Jewish Health System.

“While common diseases like Alzheimer’s and Parkinson’s have been slow to give up their secrets, real progress has been made in discovering the origins of— and therapies for— rare neurological diseases, including Rett syndrome and lysosomal storage diseases such as Tay-Sachs,” says Mark Mehler, M.D., professor and chair of the Saul R. Korey Department of Neurology at Einstein and chair of neurology at Montefiore. “This initiative offers us an opportunity to dramatically change the lives of patients with these rare diseases, and the findings are likely to provide insight into more-common neurological disorders, like migraine and stroke, which affect millions of people.” Dr. Mehler is also professor in the Dominick P. Purpura Department of Neuroscience and the department of psychiatry and behavioral sciences and holds the Alpern Family Foundation Chair in Cerebral Palsy Research at Einstein.

**Studying How Cancer Spreads**

The National Cancer Institute has awarded the College of Medicine two grants totaling $8 million to study the microenvironments that drive the spread of cancer from a primary tumor to other parts of the body in the process known as metastasis.

“Although metastasis is responsible for the vast majority of cancer-related deaths, our understanding of this complex process is extremely limited, and so are the opportunities for preventing metastatic disease,” says John Condeelis, Ph.D., professor and co-chair of anatomy and structural biology, holder of the Judith and Burton P. Resnick Chair in Translational Research, co-director of the Gruss Lipper Biophotonics Center and director of the program in microenvironment and metastasis in the Albert Einstein Cancer Center. Dr. Condeelis is a principal investigator on both grants.

**The Genetics of Congenital Heart Defects**

The NIH has awarded Einstein researchers and collaborators at the Children’s Hospital of Philadelphia a five-year, $6.7 million grant to study the genetics of both rare and common congenital heart abnormalities known as conotruncal defects (CTDs).

CTDs account for more than one-third of all heart defects. They can involve a faulty connection between the heart’s chambers or an abnormality affecting a major blood vessel leaving the heart. Some of the more common CTDs include ventricular septal defects and tetralogy of Fallot.

“We hope that this project will greatly expand our understanding of the genetic basis of CTDs and lead to novel therapies and preventive strategies for these defects,” says principal investigator Bernice Morrow, Ph.D.,
professor of genetics, of obstetrics & gynecology and women’s health and of pediatrics (cardiology), the Sidney L. and Miriam K. Olson Chair in Cardiology and the director of translational genetics.

Intellectual and Developmental Disabilities

The Eunice Kennedy Shriver National Institute for Child Health and Human Development, part of the NIH, has awarded Einstein researchers $5.7 million to fund the Rose F. Kennedy Intellectual and Developmental Disabilities Research Center (IDDRC). The grant, announced in September 2011, supports Einstein’s ongoing efforts to improve the lives of children with intellectual and developmental disabilities through combined basic science research and clinical practice.

These disabilities affect an estimated 10 percent of the population and constitute some of the most significant health conditions in children. They represent a diverse group of chronic conditions, including autism spectrum disorders and Down syndrome.

“While tremendous strides have been made over the past four decades to identify and treat these disorders, it is critical to leverage the most recent advances in research and technologies to better understand what causes them and provide more-targeted and effective therapies,” says Steven U. Walkley, D.V.M., Ph.D., director of Einstein’s IDDRC and professor in the Dominick P. Purpura Department of Neuroscience, the department of pathology and the Saul R. Korey Department of Neurology.

Analyzing HIV/AIDS in Central Africa

Thanks to concerted action by the global community, millions of Africans are now receiving the same advanced antiretroviral therapy (ART) that has long been available in the developed world. But while AIDS death rates in Africa have stabilized, little is known about the actual deployment and circumstances of treatment.

In September 2011, an Einstein-led consortium received a $4 million grant from the National Institute of Allergy and Infectious Diseases, part of the NIH, to spearhead the Central Africa International Epidemiologic Databases to Evaluate AIDS (CA-IeDEA). CA-IeDEA researchers will work directly with the governments of Burundi and Cameroon, as well as with nongovernmental organizations in Rwanda, to collect and analyze the data on nearly 40,000 patients taking ART.

“Central Africa is a unique region that presents its own set of challenges for effective HIV/AIDS treatment and positive patient outcomes,” says Kathryn Anastos, M.D., co-director of Einstein’s Global Health Center and co–principal investigator of the grant. “By working with government health leaders in Burundi and Cameroon, our teams hope to contribute to the global understanding of HIV/AIDS treatment, while also helping to improve the care—and lives—of their residents,” adds Dr. Anastos, professor of medicine (general internal medicine) and of epidemiology & population health at Einstein, and attending physician in the department of medicine at Montefiore.
Eduction at Albert Einstein College of Medicine is undergoing some big changes. To prepare medical students for the world of electronic medical records, for example, the med-school curriculum has gone paperless: out with spiral notebooks and in with laptops, PCs, Macs or tablets, all with wireless Internet capability and loaded with software allowing students to take notes and highlight course materials electronically. The entire syllabus for each course is now available online for easy download to computers. Moreover, the online system allows students to integrate learning materials from different courses and clerkships—a major emphasis in medical education today.
Other important changes are less obvious. Medical students, for example, are now exposed to actual patients in their first year—earlier than ever before. A 25-year effort to help med students communicate better with the Bronx community’s large Spanish-speaking population has evolved into Medical Spanish, the highly popular elective course offered to first- and second-year students. And Einstein’s Ph.D. students, as part of their course work, now learn how to write grant proposals for funding.

Such changes are influencing not only the curriculum but the quality of Einstein’s students. “By enhancing the education that Einstein offers, these innovations make it easier for us to continue attracting top-notch applicants to the College of Medicine,” says Noreen Kerrigan, associate dean of admissions.

Many factors are driving educational reform at Einstein, from technological advances in teaching to today’s emphasis on collaborative research. One major influence was a report issued in 2010 by the Carnegie Foundation for the Advancement of Teaching—Educating Physicians: A Call for Reform of Medical School and Residency.

This report was the successor to the famous Flexner Report, Medical Education in the United States and Canada, which the Carnegie Foundation issued exactly 100 years earlier. That report provided the foundation for medical education that still prevails in North America: a university-based education consisting of two years of scientific study and two years of practical experience in clinical settings. The 2010 follow-up report, written by professors at the University of California at San Francisco School of Medicine, may also have a significant impact.

“We have looked at those recommendations very carefully and thought about what we need to do at Einstein,” says Martha S. Grayson, M.D. ’79, senior associate dean for medical education. “It will probably change some of our approaches and our structures. We already have a very strong educational program, and we have made revisions as needed over time. But we need to make sure we meet standards that the accrediting bodies have established, and that our students will continue to do well on the certifying exams.”

One of the report’s key recommendations is to shift medical education from its traditional emphasis on required courses to mastering competencies. Such competencies can be thought of as learned abilities that students acquire over time through education, experience and reasoning skills to benefit their patients and the communities they’ll serve. One example: being able to apply the principles

“These innovations make it easier for us to continue attracting top-notch applicants to the College of Medicine.”
of pharmacology when weighing options for prescribing safe and effective drug therapy for patients.

“We’re creating a new set of educational competencies here at Einstein to specifically address what we think the physician of the future needs to know,” says Dr. Grayson, who is also professor of clinical medicine at Einstein and attending physician in internal medicine at Montefiore, the University Hospital and academic medical center for Einstein. “Physicians will still need to have a certain knowledge base—the ability to do a physical exam, for example—but they must also demonstrate that they can interact with patients by successfully communicating with them and by showing empathy for people from different backgrounds.”

A faculty committee is now defining which competencies Einstein medical students must master and how to assess them. The committee’s findings will then be submitted to the administration and the students for approval—a process that should be completed by the end of 2012. The final revisions will be incorporated into the medical-school curriculum.

Einstein is already out in front of another of the Carnegie study’s recommendations: medical education that better integrates formal knowledge with clinical experience. Such connections are firmly woven into Einstein’s two-year Introduction to Clinical Medicine (ICM) course.

“The ICM course now teaches part of the physical exam in year one, instead of waiting until year two,” Dr. Grayson adds. “That way we can coordinate, for example, instruction on the heart and respiratory system with first-year cadaver dissection, so that what students see in the cadaver can deepen their understanding when using a stethoscope to listen to the heart and lungs.”

Paul R. Marantz, M.D., M.P.H., professor of clinical epidemiology & population health, is part of the education-reform effort at Einstein. He has been leading an ongoing National Institutes of Health–funded effort, now in its seventh year, to incorporate the behavioral and social sciences into medical-school curricula. Dr. Marantz and his colleagues first worked on communication skills, professionalism and ethics—an effort that culminated in the innovative third-year course Patients, Doctors and Communities (PDC), which Einstein began offering in 2006.

“In the project’s current phase,” says Dr. Marantz, “Dr. Grayson and other Einstein faculty members are collaborating with Brown University’s Warren Alpert Medical School on bringing issues involving population health into the curriculum of medical schools nationwide. This would include
A Tale of Two Technologies

The big techno-educational news for Einstein medical students is spelled eMED, for Einstein Medical Education Database. This curriculum-management system was adapted from the Tufts University Sciences Knowledgebase multimedia knowledge-management system, and replaces the My Albert system used at Einstein since 1996.

The eMED system was rolled out in August 2011, when first- and second-year medical students and their professors began using it. Content for all required third- and fourth-year clerkships is now being loaded into eMED so that the entire curriculum will be online by June 2012. Ideally, eMED will eventually be used to administer and grade student tests online.

The eMED software integrates course lecture videos, professors’ PowerPoint presentations, class schedules, e-journal articles, discussion boards and more. Einstein medical students can listen to a lecture or view its PowerPoint highlights on their computers, tablets or smartphones from their dorm rooms or from anywhere else in the world. eMED also allows students’ calendars to be automatically updated on their personal devices, helping students keep up with changes in their packed learning schedules.

eMED’s search function can come in very handy. Say you’re a second-year medical student studying for your boards. You recall learning about polycystic kidney disease in several courses and want to bone up. So you type the disease name into the search bar, and the search returns six documents on polycystic kidney disease that faculty members have uploaded as part of their course material: two from the Medicine clerkship, three from the first-year Renal Disease course and one from the first-year Clinical and Developmental Anatomy course. It’s everything you need for a thorough review.

Another useful technological tool is “the clicker” (also known as an audience-response device), a TV-remote-sized keypad used in many lecture courses at Einstein.

“It’s handy for eliciting responses from students, to see what they understand in real time,” explains Steven L. Roderick, Ph.D., professor of biochemistry. He teaches one of the foundation courses for graduate science students, on the biochemistry of metabolic regulation. Several times during class, after making an important point to students, he’ll break away from his lecture to display a PowerPoint image with a question and five possible answers from A to E. Students use their clickers to select the correct answer, and results are tabulated on Dr. Roderick’s computer screen—instantly telling him whether the class has grasped the material.

“Merely asking the classic question ‘Does anyone know the answer to this?’ might elicit responses from one or two students—often the same ones every time,” says Dr. Roderick. “Clickers give us true feedback on whether students understand key concepts along the way. And comments from students at the end of the course show they really like the clickers, too.”
teaching students about the importance of practicing evidence-based medicine and familiarizing them with healthcare policy.”

Einstein’s collaboration with Brown University supported Dr. Grayson’s vision of creating a “scholarly concentrations program” for Einstein—an increasingly popular medical-school option that Brown has pioneered. Beginning in the fall of 2012, Einstein will introduce SOAR—Student Opportunities for Academic Research—as a pilot program to 20 entering first-year students.

“SOAR will allow students to engage in rigorous independent scholarship in an area of health or medicine that they’re passionate about,” says Dr. Grayson. The program will be led by Ellie Schoenbaum, M.D., professor of epidemiology & population health, of medicine and of obstetrics & gynecology and women’s health.

Over their four years of medical school and with the help of a faculty mentor, students in SOAR will pursue a course of study above and beyond the standard curriculum. Focus areas initially open to Einstein students will be bioethics, public health, urban healthcare, care of the elderly, global health and translational and clinical research. Participants will complete a “capstone” project that could range from writing a traditional research paper to creating a script or video. Plans call for adding more scholarly concentration areas in future years and for giving all entering first-year students the option of participating in SOAR.

“We hope that this scholarly concentrations program will enrich students’ medical-school experience; produce future leaders in medicine and research; and promote scholarly excellence at Einstein,” says Dr. Grayson.

Med students are also having a say in Einstein education. In 2011, a group of first-year students asked the administration to add medical finance and health-care policy to the curriculum through a lecture series they would organize.

“Dr. Grayson was remarkably supportive,” recalls Michael Shusterman, one of the lectures’ organizers and now a second-year M.D. student. “She gave us the funding for four lectures, which proved extremely popular. We filled up the lecture hall—even during exam period. The faculty was really impressed by that.” Einstein has now introduced healthcare policy material into its M.D. program by augmenting coverage in bioethics and in its PDC and ICM courses.

While change has become the norm, some of the key qualities of an Einstein education will persist. “From its opening day in 1955, this school has stressed the two key qualities of its namesake, Albert Einstein: devotion to science and to humanity,” says Einstein Executive Dean Edward R. Burns, M.D. ’76. “In this world of rapidly changing science and challenges to ethical standards, those values remain immutable. We remain with their Einstein educations, newly minted doctors go into the world well prepared to diagnose and treat the most pressing health problems. Here, Dan Kelly, M.D. ’08, examines a young child in Africa.
committed to graduating compassionate physicians dedicated to applying the latest scientific advances to improving the human condition.”

**Ph.D. Education**

Einstein’s graduate division is going through its own transformations. “We’re conducting a major curriculum review,” says Victoria Freedman, Ph.D., associate dean for graduate programs in the biomedical sciences. “In the next two or three years there are likely to be some very big changes, such as introducing short, intensive courses to quickly bring students up to date on the changing scientific landscape in their fields.”

Unprompted by any external report, an Einstein graduate faculty committee is reconsidering the Ph.D. curriculum in light of developments in science and scientific opportunities.

“The education we provide must respond to the needs of our students, who are going to be scientists in a very challenging world,” Dr. Freedman says. “There are lots of ideas being discussed about what courses students should be taking. The committee is rethinking the entire curriculum and the entire academic calendar.”

The need to prepare students for their post-Einstein careers is guiding the curriculum-reform effort. “We’re hoping to provide an array of opportunities for our students to learn the substance of science and what they can become with their Ph.D.s, so that they can move forward wherever their imaginations take them,” says Dr. Freedman.

One innovation beginning to make its mark on Einstein graduate education is team-based learning, a new approach to instruction that mirrors the collaborative nature of research.

“One way of teaching is important because 21st-century science is team science,” Dr. Freedman explains. “Our graduate students need to learn to work together in teams to find the answers to problems.”

Some faculty members are now developing TBL for their graduate courses. It’s a big job, since course materials must be revised to work within the TBL structure. Fittingly, Einstein is making the changeover to TBL through collaborations with other educational institutions.

Dr. Freedman, for example, is the leader for Einstein’s course on responsible conduct of research, required for all first-year graduate and postdoctoral students. She is working with colleagues at Penn State Hershey Medical School and the University of Florida School of Medicine to develop a TBL syllabus for the course.

TBL is just part of Einstein’s effort to prepare Ph.D. students and postdocs for the world they’ll face after grad school. “First and foremost on every graduate student and faculty member’s mind is ‘How am I going to fund my research?’” Dr. Freedman notes. “That’s why we try to give our students the necessary skills to compete for the all-important research grants that their careers—particularly
A Prescription for Good Advice

Just because you want to become a doctor doesn’t mean you know what medical field to pursue. But fortunately—from the minute students set foot on the Einstein campus until they graduate—Einstein’s office of student affairs (OSA) helps them find the areas best suited to their interests and abilities.

“Students confront several forks in the road during medical school,” says Stephen G. Baum, M.D., senior associate dean for students. “In the third year, students need to choose a future as an internist, pediatrician, surgeon, psychiatrist, obstetrician/gynecologist or family physician. The fourth year brings another decision point as they decide on subspecialties such as dermatology, neurosurgery, urology, orthopedics, radiology and ophthalmology, to name a few.”

Dr. Baum notes that more than half of students struggle with these major decisions. To ease those struggles, the OSA—led by Dr. Baum and Nadine T. Katz, M.D. ‘87, senior associate dean for student academic affairs—offers medical students a number of resources, including:

- **Myers-Briggs testing.** Beginning last fall, incoming students were given the option of taking this test to inform them about their learning and leadership styles, and even which specialties and subspecialties align with their psychological types.

- **Career programs.** The OSA holds a large number of events to inform students about career options and help them plot their futures and win their preferred residency placements. These include “career advisement nights” and the “In the Doctor’s Studio” series of specialty close-ups. New this year: “Behind the Doctor’s Studio,” a look at the mechanics (and lifestyle) of running a practice. In addition, senior med students can schedule one-on-one career advisory meetings with OSA staffers—as many meetings as they want.

- **Career Speed Networking.** Now in its sixth year, this popular fall event hosted by the alumni association and the OSA allows Einstein students to speak with alumni about a wide range of specialties. Alumni and students sit at tables, and the alums answer student questions for about 15 minutes. At the sound of a gong, the students move to the next table.

- **Mentor matching.** In a program expected to launch during the 2012–13 school year, first-year students will use a computer program that will match them with potential mentors. (The program will later be offered to all students.) “We hope to connect students with faculty and alumni they’ll be able to relate to from day one, both medically and personally,” says Dr. Katz. In designing the mentoring effort, the OSA received substantial input from current Einstein students.
if they go into academic research—will depend on.”

So in several Einstein graduate courses, students write a grant proposal rather than take a final exam. Even the qualifying exam for becoming a candidate for the doctoral degree now involves writing a thesis proposal in the form of a fellowship grant application. Students then take a formal oral exam—good practice for a thesis defense.

Getting doctoral students ready for the “real world” also means improving presentation skills. Graduate students are periodically expected to discuss their research at departmental work-in-progress seminars. The students use PowerPoint displays and answer questions from other students and faculty.

Several initiatives for preparing students for life after grad school were spawned by a formal career and professional development program in the Graduate Division of Biomedical Sciences. In 2010, for example, the program helped establish a chapter of Toastmasters International at Einstein, with meetings held twice a month in the Forchheimer building.

“We wanted to provide a program to help Einstein doctoral students, post-docs, faculty and staff overcome fear of public speaking,” says Joerg Schlatterer, Ph.D., instructor in biochemistry and founding club president. “Participation is particularly valuable for graduating Ph.D.s and postdocs applying for positions and competing against candidates from other institutions. Search committees are impressed when applicants can explain their research in a clear and interesting way, so knowing how to do that can significantly improve your chances.”

The career and professional development program also sponsors regular clinics in which students receive individual help in developing their CVs and resumes. In addition, the program holds two to three seminars and panel discussions every month—often featuring outside speakers as well as Einstein alumni—on topics with titles such as “Becoming a Medical Writer,” “Choosing the Right Postdoctoral Position,” “From Ph.D. to Technology Transfer” and “Applying for K99-R00 Grants.”

“All these changes to our education program are being done with a single goal in mind,” says Dr. Freedman. “We want a Ph.D. curriculum that energizes our students, stimulates their curiosity and prepares them for their professional careers.”

Cara Chrisman, Ph.D. ’10, returned to Einstein in April for a Ph.D. Career Chat, “From Ph.D. (or M.D.) to Science Policy Fellow.” Dr. Chrisman is an AAAS Science and Technology Policy Fellow currently placed at the U.S. Agency for International Development.
Powering Up  Gruss Lipper Gift Takes Imaging at Einstein to the Next Level
Few American medical schools can equal Einstein's strength in imaging. Thanks to a new commitment to the College of Medicine from the EGL Charitable Foundation, Einstein's position as a leading imaging center will soon be enhanced by an important new initiative: the EGL Charitable Foundation Integrated Imaging Program (IIP).

Images obtained through the IIP will reveal—with an astonishing level of detail—how complex diseases get started and progress in the body. This information will help scientists target the molecular glitches responsible for cancer, diabetes, Alzheimer's and other major health problems.

The new program, one of the first of its kind in the country, represents a major advance in the evolution of Einstein's two state-of-the-art imaging facilities—the Gruss Magnetic Resonance Research Center (MRRC) and the Gruss Lipper Biophotonics Center (GLBC). The facilities were established in 2000 and 2006, respectively, through the foresight and generosity of Einstein alumnna Evelyn Gruss Lipper, M.D. '71. Both are located on the College of Medicine's Jack and Pearl Resnick campus.

The IIP will be co-directed by a distinguished trio of Einstein senior scientists: John Condeelis, Ph.D., professor and co-chair of anatomy and structural biology and the Judith and Burton P. Resnick Chair in Translational Research; Robert Singer, Ph.D., professor and co-chair of anatomy and structural biology and professor of neuroscience and of cell biology; and Craig Branch, Ph.D., associate professor of radiology and of physiology & biophysics and director of the Gruss MRRC.

Multimodal Imaging: Speeding Results from Bench to Bedside

When Einstein's updated Strategic Research Plan was released in 2010, an integrated imaging program was high on its list of top-priority initiatives. The IIP will allow Einstein research teams to conduct their work with much more scientific precision than in the past by using multimodal imaging, a cutting-edge methodology.

Multimodal imaging will essentially combine the attributes offered by Einstein's several different imaging technologies to illuminate tissue pathology.
“Integrated imaging research is collaborative work by nature, and Einstein’s highly collaborative research environment makes it an ideal setting for such a program.”

across a tremendously wide imaging spectrum—from nanometers (billionths of meters) all the way to millimeters. It will allow Einstein scientists to use their existing equipment in new and innovative ways.

“By cross-registering the data and integrating the information from these individual imaging technologies, the multimodal approach bridges the physical scale imaged by each of them, yielding diverse images of living tissues,” says Dr. Singer, a pioneering cell biologist and co-director (with Dr. Condeelis) of the GLBC. This new approach to imaging, he says, offers researchers a much more informative picture of disease processes and can help speed laboratory findings into promising diagnostic techniques and therapies for cancer and other serious medical conditions.

“The MRRC and the GLBC: Einstein’s Imaging Arsenals

The MRRC is led by Dr. Branch, its director, and associate director Michael Lipton, M.D., Ph.D., a physician and neuroscientist. Since arriving at the MRRC in 2009, Drs. Branch and Lipton have expanded the scope of MRI and magnetic resonance spectroscopy studies on campus by installing the most-advanced noninvasive imaging technologies available.

For example, the MRRC houses two different MRI devices: a 9.4 Tesla machine that provides high-resolution imaging of small animals, and a 3.0 Tesla for whole-body imaging of humans. (Teslas are units reflecting the intensity of the magnetic field produced in MRI; the stronger the intensity, the greater the resolution obtainable.)

Research at the MRRC encompasses a wide variety of areas including cancer, neurological and psychiatric disorders, diabetes, cardiology, hematology and cognition.

The center also supports the creation of new imaging technologies. In a recent highly publicized study, Dr. Branch and...
colleagues used an advanced MRI-based technique called diffusion tensor imaging to examine the brains of amateur soccer players. The researchers found that repeatedly heading a soccer ball increases the risk for brain injury and cognitive impairment (see related story in Lab Dish, page 13).

A recent study by Dr. Branch and colleagues in Einstein’s Gruss Magnetic Resonance Research Center revealed that repeatedly heading a soccer ball increases risk for brain injury. This image shows white matter fibers (in blue) that were affected by heading.

Soon the MRRC will extend its MRI work into treatment with the addition of a new MRI-guided high-frequency focused ultrasound system that heats and destroys cancers.

Soon the MRRC will extend its MRI work into treatment with the addition of a new MRI-guided high-frequency focused ultrasound system that heats and destroys cancers and other diseased tissue. This will be a collaborative effort between the MRRC and Chandan Guha, M.B.B.S., Ph.D., professor and vice chair of radiation oncology and professor of pathology at Montefiore, the University Hospital and academic medical center for Einstein.

Dr. Lipper with Dr. Branch, right, director of the Gruss Magnetic Resonance Research Center, and Michael Lipton, M.D., Ph.D., associate director.
recently he has done pioneering research on messenger RNA (mRNA). Dr. Singer and his colleagues recently invented a new type of microscopy, called super registration microscopy, which achieves resolution never before possible in living cells. In research described in a paper published in Nature in 2010, this new microscope illuminated something never before seen: individual mRNA molecules passing through the nuclear envelope on their way to the cytoplasm.

Meanwhile, researchers at the GLBC, directed by Drs. Condeelis and Singer, analyze living tissue to gain new insights into how cells function in health and disease at the molecular level. The GLBC is housed in the Michael F. Price Center for Genetic and Translational Medicine/Harold and Muriel Block Research Pavilion and has three components: individual research groups led by primary investigators; the Innovation Laboratory, staffed by engineers and physicists who design software and instruments to address the individual investigators’ research needs; and the Analytical Imaging Facility, whose trained staff offers technical support to Einstein’s research community.

Dr. Singer has made many important discoveries regarding the inner workings of cells. Thirty years ago, he was one of the first to develop fluorescence in situ hybridization, or FISH, now a widely used research tool for visualizing molecules of DNA and RNA in cells. More recently, researchers at the GLBC, directed by Drs. Condeelis and Singer, analyze living tissue to gain new insights into how cells function in health and disease at the molecular level. The GLBC is housed in the Michael F. Price Center for Genetic and Translational Medicine/Harold and Muriel Block Research Pavilion and has three components: individual research groups led by primary investigators; the Innovation Laboratory, staffed by engineers and physicists who design software and instruments to address the individual investigators’ research needs; and the Analytical Imaging Facility, whose trained staff offers technical support to Einstein’s research community.

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Dr. Condeelis has developed several microscope technologies for use in intravital imaging, in which researchers observe the behavior of individual cells in living animals. Most notably, he has pioneered the use of combined multiphoton imaging for observing the tumor microenvironment, where tumor cells interact with surrounding tissues,

Robert H. Singer, Ph.D., co-director of the new EGL Charitable Foundation Integrated Imaging Program at Einstein.
cells and chemicals in ways that often cause cancer to spread, or metastasize. Dr. Condeelis directs the program in microenvironment and metastasis at the Albert Einstein Cancer Center. Last year, he and his colleagues published a paper in *Current Biology* identifying two molecules that cause tumor cells to become motile—enabling them to penetrate blood vessels and seed themselves in other parts of the body.

**Einstein’s Integrated Imaging Program**

As IIP co-directors, Drs. Condeelis, Singer and Branch will oversee imaging projects in collaboration with the Einstein research community. “Scientists will come to the IIP with well-conceived and supported research ideas that could be fast-tracked by the resources of the IIP,” explains Dr. Branch. “The IIP will provide the expertise to guide these novel approaches.”

A test project already underway, led by Drs. Branch and Condeelis, joins multiphoton imaging with MRI. “Current diagnostic methods do not allow sensitive and specific identification of women with breast cancer who require more-aggressive chemotherapy because they are at risk for metastasis or later recurrence,” explains Dr. Condeelis. “Our goal is to develop a series of interpretation algorithms that will allow MRI to detect anatomical structures that cannot otherwise be seen.”

“Consider a woman who presents with a breast tumor,” says Dr. Condeelis. “Right now, using MRI in the conventional way, you can see a tumor but you don’t know whether it’s aggressive or nonaggressive and therefore unlikely to metastasize. So with this new methodology you’ll be able to know whether a tumor is potentially metastatic or not.” For patients, the benefit is clear: the ability to target aggressive therapy only to those women whose breast tumors require it.

For patients, the benefit is clear: the ability to target aggressive therapy only to those women whose breast tumors require it, while sparing other women from such therapies and their harsh side effects.

Another exciting possibility is for oncologists to use integrated imaging methodology to determine whether patients’ tumors will be responsive or resistant to chemotherapy before starting therapy. This will allow for potentially life-saving changes in treatment strategies.

The success of the IIP will heavily depend on postdoctoral students who can “bridge” Einstein’s micro and macro technologies—to coordinate the use of combined multiphoton imaging and MRI in studying a particular disease, for example. Allison Harney, Ph.D., a recent graduate of Northwestern University, is the first of a projected six “bridge postdocs” who will be recruited to the IIP over the next decade. Drs. Branch and Condeelis will co-mentor her as she works on their joint study of breast cancer.

There is every reason to expect that integrated imaging will thrive at Einstein and lead to major discoveries. “A major push is underway in both the United States and Europe to develop integrated imaging programs,” says Dr. Condeelis. In this country, he notes, “a few sites are already using integrated imaging but with more limited scope than what is possible at Einstein, where we have all of the imaging modalities in place.”

“We are extremely grateful to the EGL Charitable Foundation for helping us to create this vital resource at the College of Medicine,” says Allen M. Spiegel, M.D., Einstein’s Marilyn and Stanley M. Katz Dean. “The Gruss Lipper family’s past support has enabled Einstein to emerge as a leader in imaging research, and this latest investment places us among a select group of institutions that offer research scientists and clinicians the tools to bring about significant medical advances that will have an impact far into the future.”
The Eyes Have It

Einstein addresses vision loss, one of our biggest and most debilitating health problems

BY GARY GOLDENBERG
We have five senses, but we’re first and foremost visual beings. We use our eyes to sense danger, interpret emotions, enjoy art and literature, navigate the environment and gaze into the night sky. It’s no wonder that more of our brain circuitry is devoted to vision than to any other sense.

Unfortunately, our view of the world dims with age. Mainly because of four age-related diseases—cataracts, macular degeneration, glaucoma and diabetic retinopathy—more than 21 million adult Americans are blind or have trouble seeing even with corrective lenses. The Centers for Disease Control and Prevention put the current yearly economic impact of vision loss in the United States at about $51 billion in direct medical costs and lost productivity. Those costs are certain to soar: as baby boomers age, the number of adults with impaired vision is expected to double by 2030.

“What cannot be calculated is the impact of vision loss on our safety, mobility and independence, even our mental health,” says Roy S. Chuck, M.D., Ph.D., professor and chair of ophthalmology and visual sciences at Einstein and at Montefiore, the University Hospital and academic medical center for Einstein. “Almost every aspect of a person’s life suffers when eyesight is affected.”

The department of ophthalmology and visual sciences has historically been strong in basic research—a place where scientists are now studying the fundamental biology of the lens and the retina, how light is translated into information and how that information is processed by the brain. More recently, it has also received recognition for its clinical care, training and research. Over the past few years, the department’s outpatient service has become one of the nation’s busiest, with 125,000 annual patient visits to six Montefiore sites in the Bronx and Westchester County.

On the education front, the department’s residency program—now considered one of the finest in the country—recently added three slots, bringing the total to 15; and a new fellowship was created in pediatric ophthalmology—the only one in the New York metropolitan area. The residency program is headed by Assumpta Madu, M.D., an Einstein graduate (class of 1993) and assistant professor in the department of ophthalmology and visual sciences. Dr. Madu was recently chosen as the American Academy of Ophthalmology’s representative to the Accreditation Council for Graduate Medical Education’s National Residency Review Committee—a high honor.

**Dr. Roy S. Chuck: Engineering Ophthalmology’s Revival**

The beginning of the department’s renaissance coincided with Dr. Chuck’s appointment as chair in 2009. He brings to Einstein an unusual mix of experience and expertise.

A native of Berkeley, CA, Dr. Chuck started his career in engineering. In his brief stint as a combustion chemist and bioengineer at U.C. Berkeley’s Lawrence Berkeley National Laboratory, he worked with the original excimer and ultrafast femtosecond lasers that formed the technological basis for LASIK, now the most popular form of laser refractive surgery for correcting near- and farsightedness.

Dr. Chuck ultimately found a home in medicine, but he didn’t leave engineering far behind. He enrolled in 1986 in the combined M.D./Ph.D. program at Columbia University, with a research focus on cell and molecular biology. After completing his ophthalmology residency, he played a significant role in evaluating
and improving LASIK, earning a reputation as a top practitioner in the field, most recently at the famed Wilmer Eye Institute at Johns Hopkins University.

Dr. Chuck has focused his clinical and engineering skills on a novel therapy—transplantation of limbal epithelial stem cells—to repair damaged corneas. (“Limbal” refers to the stem cells’ location at the border of the cornea and sclera, the white of the eye.) In the healthy eye, he explains, the cornea’s outer or epithelial layer is constantly sloughed off, and old epithelial cells are replaced by new ones generated by the limbal stem cells, which are sometimes destroyed by illness or injury.

When people lacking limbal epithelial stem cells suffer corneal damage, the traditional treatment—a corneal transplant—is rarely successful. For them, Dr. Chuck has devised a promising new treatment option that involves replenishing their pool of limbal stem cells. “The stem cells can be taken from a living donor or a cadaver donor,” explains Dr. Chuck, who invented a device for identifying and harvesting the stem cells and performs the stem-cell transplants at Montefiore. “But if possible, we prefer to harvest the cells from the patient’s healthy eye, since this reduces or even eliminates the need for immunosuppressant drugs.”

Limbal epithelial stem cell transplants may be done alone or (if deeper corneal cell layers are also damaged) followed by a standard corneal transplant. The success rate is about 50 percent—an impressive figure considering that most stem cell therapies to date have proven ineffective or even dangerous. “When we can harvest stem cells from the patient’s healthy eye, our rate of success is even higher,” he says.

Dr. Chuck is also trying to improve treatment for dry eye, one of the most common eye diseases worldwide. His first step was to build a better mouse model of the condition. Using botulinum toxin, the potent nerve inhibitor in Botox, he was able to block neurotransmitters in the tear-producing glands of mice, creating conditions on the eye’s surface that closely mimic dry eye in humans. Dr. Chuck published his animal model in 2007, providing researchers with a new way to test their preclinical therapies for dry eye.

In work with tremendous therapeutic potential, Dr. Chuck has developed a nonsurgical alternative to LASIK, which reshapes the cornea to correct nearsightedness or farsightedness. “LASIK can lead to complications, including halos and dry eye,” he says. “Such problems are rare, but they frighten many patients away from the surgery.” Dr. Chuck’s nonsurgical therapy for reshaping the cornea involves wearing special contact lenses at night, much the way a dental retainer aligns crooked teeth.

This approach to correcting vision, known as orthokeratology, is not new. But it’s been plagued by the fact that the cornea’s new shape lasts just a day or two at best, so patients must wear the
Like Mother, Like Son
Two generations of cataract sufferers linked by one doctor

Raven Velez, 21, was thrilled that her newborn son looked strong and healthy. But her joy was short-lived. While performing a routine newborn screening exam, her pediatrician noticed that the boy, Jason, had dull retinal reflexes—a sign that too little light was reaching the back of his eyes. Raven and her baby, who was born in early January, were referred to the eye clinic at Montefiore Medical Center for a more thorough workup. The boy turned out to have bilateral cataracts (clouding of both lenses of the eye), most likely the result of a genetic disorder. His vision would be limited to dark shapes and shadows unless he received expert care—and soon.

The news hit Raven especially hard. She’d received the same diagnosis shortly after her own birth 20 years earlier. Raven underwent several operations over the following decade—first to remove the cataracts, then to correct complications. “I was very emotional about my son’s diagnosis, knowing everything I had to go through when I was a kid,” she says.

Then, in a scene resembling a made-for-television movie, Raven learned that her son’s surgical team would include Norman B. Medow, M.D.—the very same pediatric ophthalmologist who had operated on her 20 years ago (at the Manhattan Eye, Ear and Throat Hospital) and managed her eye care for years. “It was reassuring to hear his name,” she says.

Starting in late February, Jason underwent two rounds of surgery to correct one eye at a time. With some 1,500 pediatric cataract repairs under his belt, Dr. Medow—professor of clinical ophthalmology and visual sciences and of clinical pediatrics at Einstein and director of pediatric ophthalmology and the strabismus division at Montefiore—knew that the staging of these delicate procedures was critical.

“It’s important to allow time for the baby’s eyes to grow a bit larger and for any inflammation to subside,” explains Dr. Medow. “On the other hand, you can’t delay for long. The visual pathways must be stimulated within the first six months of life for proper vision.”

To Raven’s great relief, Jason’s surgeries went well. “We could tell right away that his eyes were in good shape after the procedure,” says Ilana Friedman, M.D., Jason’s lead surgeon and an assistant professor of ophthalmology and visual sciences and of pediatrics at Einstein and attending physician at Montefiore. “We’ll need another few months before we can fully evaluate his vision.” In the weeks ahead, the young boy will be fitted with glasses or contacts and possibly with plastic intraocular lenses later on.

Raven is optimistic about her son’s future. Her own eyesight is relatively good, considering her complicated medical history. “I can see well enough to read and go outside unaided,” she says.

Techniques for carrying out the surgery and managing complications have improved since Raven was treated. So if all goes well, Jason can look forward to an even clearer view of the world.
lenses night after night, which can be uncomfortable or even damaging to the eyes. Dr. Chuck has designed a revolutionary new lens system that works with photoactivatable eye drops to potentially reshape the eye for many months at a time after just a few nights of use.

“When the eye drop, a riboflavin-based chemical, is exposed to light, it forms protein crosslinks that lock the reshaped corneal tissue in place,” says the researcher. Some 90 million people in the United States could potentially benefit from the new lens system—one of about 15 inventions for which he holds patents or has patents pending.

**New Emphasis on Clinical Trials**
When Dr. Chuck arrived at Einstein, the College of Medicine had no ongoing clinical trials in ophthalmology. Nurturing clinical research became a top priority. “It wasn’t that our clinicians didn’t want to conduct research,” he says. “The problem was that they weren’t receiving the appropriate support.”

His solution was to recruit Barrett Katz, M.D., M.B.A., a renowned neuro-ophthalmologist with decades of experience running clinical trials for government, academia and industry. Dr. Katz took charge of the department’s new clinical trials initiative and then became executive director of the office of clinical trials, a joint Einstein-Montefiore effort supporting clinical research across all disciplines. He developed an infrastructure for clinical research, offering faculty members help with preparing institutional review board submissions, building and negotiating budgets, enrolling patients, managing trials and handling other time-consuming tasks.

“It is not reasonable to expect physicians with busy clinical practices to activate and orchestrate clinical trials on their own,” says Dr. Katz, who is

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Barrett Katz, M.D., M.B.A., with a patient.
professor of ophthalmology, of neurology and of neurological surgery, and the Frances DeJur Chair in Ophthalmology.

Today, clinical trials in ophthalmology are flourishing, with about 10 of them in progress at any given time. Dr. Katz himself is collaborating on a multicenter trial investigating whether erectile-dysfunction drugs cause ocular strokes, as anecdotal reports have suggested. “It is not uncommon to see these strokes in older men who may also have been on erectile dysfunction therapy,” he says. “So we need to know if these drugs are actors or simply bystanders.”

In another multicenter trial, Umar Mian, M.D., M.B.B.S., assistant professor of ophthalmology and visual sciences at Einstein and director of the retina division at Montefiore, is studying the safety and effectiveness of an experimental drug for treating a common cause of vision loss in people over 40. The condition—macular edema, or swelling of the central retina—is caused by blockages in the small veins that drain blood from the retina.

A pediatric ophthalmologist, Ilana Friedman, M.D., assistant professor of ophthalmology and visual sciences and of pediatrics at Einstein and attending physician and director of the pediatric ophthalmology fellowship at Montefiore, is participating in a national trial looking at whether eye patching (occlusion therapy) is better than no treatment for children with intermittent exotropia, in which one eye turns outward. Some kids with this condition recover on their own, while others eventually require eye-muscle surgery. Patches are often used, but it’s not clear whether they can delay or prevent the need for surgery, says Dr. Friedman.

The following pages describe the work of basic researchers who are studying vision at Einstein.
For their cataract research, Dr. Cvekl and his colleagues are taking skin cells from patients with early-onset cataracts and transforming those cells into induced pluripotent stem cells, which behave much like human embryonic stem cells. After inducing those stem cells to form lens cells, the researchers hope to gain insights into how cataracts develop.

“The abnormal functioning of genes causes human congenital eye diseases that affect the cornea, lens, iris and retina,” says Dr. Cvekl. “Understanding how these defects in gene function cause these diseases should help us to develop treatments for them or even ways to prevent them.” These diseases include aniridia (the absence of irises), early-onset cataracts (clouding of the lens of the eye), glaucoma (optic-nerve damage due to elevated fluid pressure in the eye) and foveal hypoplasia (underdevelopment of the fovea, the part of the retina responsible for central, high-resolution vision).

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Cell differentiation is the process by which less-specialized cells develop into more-specialized ones. Dr. Baker studies this fundamental process in fruit flies, and his research may eventually lead to new therapies for diseases of the retina.

In one study, he is analyzing how neighboring cells vie with each other for the privilege of populating specific tissues. Thus far, researchers have identified 16 genes that play a role in this survival-of-the-fittest competition among cells.

What Dr. Baker learns could help scientists make transplanted stem cells or other cells more viable by endowing them with genes or other factors that turn them into “supercompetitors.” For example, this strategy could bolster the survival of transplanted photoreceptor cells (the rods and cones) used for regenerating retinas damaged by macular degeneration, a therapy that has already shown some preclinical success.

In another study, Dr. Baker is examining the flies’ photoreceptor retinal neurons—nerve cells that in humans receive visual information from the rods and cones. Neurons normally don’t divide, but he has found that certain mutated photoreceptor neurons do divide—causing them to self-destruct. Understanding how and why this occurs could help in treating retinoblastoma, a tumor that arises in retinal neurons.

“It’s conceivable that we could develop a way to induce retinoblastoma neurons to follow this deadly cell cycle that we’ve detected in fruit-fly retinal cells,” says the researcher.

The retina, the thin (0.5 mm), nerve-laden tissue at the back of the eye, receives and processes light from the anterior part of the eye and sends the resulting images via the optic nerve to the visual centers of the brain. Dr. Nawy studies the electrical and molecular processes in the retina that transform light into visual information.

He is especially interested in the synapses, or junctions, between retinal photoreceptors (chiefly the rod cells that provide black-and-white vision and the cone cells that provide color) and neurons called bipolar cells. These synapses are critically important because all visual information passes through them en route to the optic nerve.

Results from these studies may help combat night blindness. One major type of night blindness involves the failure of bipolar cells that synapse with rod cells to encode information about light. In this condition, known as congenital stationary night blindness type 2, or CSNB2, the rod cells that receive incoming light information are apparently normal. But the ion channel that electrically transmits this information across the synapse to the bipolar cell—and from there to the rest of the visual system—may not be.

Researchers don’t know what molecular family this ion channel belongs to, or why it may be damaged in this type of night blindness. Dr. Nawy wants to characterize the channel’s physiological properties and discover how it talks to the rod cells that initially receive light information.

“The knowledge that we gain from this study will be important for understanding how the retina functions under normal conditions, and what might go wrong in patients with inherited disorders such as CSNB2,” says Dr. Nawy.

When we think about vision, we usually think of the eye. But “seeing” really happens in the brain, where millions upon millions of visual signals are assembled into coherent images of the world around us.

Dr. Kohn’s laboratory studies the initial steps in this process—in particular, how small groups of neurons in the primary visual cortex (located at the back of the brain in the occipital lobe) work together to encode and organize raw visual information for further processing by higher brain regions.

Dr. Kohn also studies how these cortical neurons are able to respond to rapid changes in visual stimuli, such as the sudden increase in light intensity when we walk from a darkened theater into the midday sun. This fundamental process, known as adaptation, allows us to learn from changes in our environment and react quickly to them.

“If we can understand how cortical neurons encode information and adapt to rapid changes in the sensory environment,” says Dr. Kohn, “we could use that knowledge to improve the design of brain-machine interface devices, such as those that would help the blind to see or amputees to move artificial limbs. Such knowledge could also help in developing better facial-recognition programs for security systems.”

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The American Technological Challenge: Stagnation and Decline in the 21st Century

by Jan Vijg, Ph.D.
Professor and Chair, Department of Genetics
Professor of Ophthalmology and Visual Sciences
The Lola and Saul Kramer Chair in Molecular Genetics

Broken Promises,” the first part of this thoughtful and thoroughly researched book, sets forth the main causes of America’s technological decline: Innovation has stalled in key areas, including energy, transportation, medical technology and information technology, and today’s inventors have more trouble seeing their inventions adopted by society. Explanations range from public resistance to technological progress to overly complex regulations to the old-fashioned profit motive.

Dr. Vijg takes up his personal research interest in aging in the chapter “Modern Medicine: Stuck in a Rut?” Here he notes that aging, disease and death are all amenable to scientific understanding and intervention, yet blockbuster advances are few. The physicians with the necessary knowledge and skills to innovate in these areas are too busy seeing patients and negotiating the intricacies of reimbursement to do research; those who do find the time often can’t get financial support.

“Parallel Worlds,” the second part of the book, looks back at societies that were known for their technologies, with special attention to the rise of the Chinese and Roman Empires. The factors responsible for declines in their technological supremacy, Dr. Vijg notes, are remarkably similar to those plaguing our own society.

Despite being in technological decline, we may yet avoid the fates that befell our historical counterparts—provided we’re not confronted with external threats. “Successful societies did well before us for centuries in the absence of further technological progress until they succumbed to foreign encroachment,” Dr. Vijg explains.
Each year more than 200,000 American men are diagnosed with prostate cancer. Current treatment cures 90 percent of patients, so it’s no surprise that prostate cancer survivors constitute a large group, estimated at 2.2 million men. Although the methods of detecting and treating prostate cancer have greatly improved in recent years, support offered to patients and their families hasn’t kept up. After Prostate Cancer: A What-Comes-Next Guide to a Safe and Informed Recovery by Arnold Melman, M.D., and Rosemary E. Newnham not only discusses the latest data on the disease, but also addresses the psychological aspects for the patient and those who are closest to him.

The book, written for lay readers, reviews the basics of prostate cancer—what the disease is, how it’s diagnosed, the importance of PSA and the issues surrounding it and the various surgical, radiation and other treatment options.

But the main purpose of the book is to help men and their families cope with erectile dysfunction and urinary incontinence, the two most common complications of prostate cancer therapy. It describes in detail the many options for dealing with these two problems and offers two chapters on the psychological issues surrounding post–prostate cancer problems.

“The more you know, the more empowered you will feel to make good decisions in your current and future healthcare,” writes Dr. Melman, a urologist with more than 40 years of experience guiding patients through prostate cancer treatment and its aftermath.

Among the book’s strengths are its many brief but instructive anecdotes that describe actual patients and touch on subjects ranging from artificial urinary sphincters to mutual lack of libido.

Published by Oxford University Press, 2011

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Ever wonder why adolescents dress so strangely? Are men inherently polygamous? Can the brain regenerate? Using language a cut above that of today’s on-air pop psychology but mercifully free of jargon, The Handy Psychology Answer Book uses knowledge gained from psychological research to answer these and nearly a thousand other questions.

Dr. Cohen begins by outlining for the reader the fundamentals of psychology: its history (including Sigmund Freud and other pioneers of the field); its science; theoretical movements; the brain and behavior; and development. She then offers psychological explanations for those things that make the world go round: love, marriage, family, sexuality, money, group behavior. Among the many issues she addresses are the psychological challenges of pregnancy, what makes for a hostile and acrimonious divorce, and the limits of our analytic ability. Dr. Cohen concludes by addressing questions about abnormal psychology, clinical psychology and trauma.

Published by Visible Ink Press, 2011
At Einstein’s 2011 Academic Convocation and Investiture in September, 17 faculty members were formally invested as the new holders of professorial chairs, faculty scholar positions, chairmanships or program directorships, and 8 received academic tenure. Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean, hosted the event, which honored two critical constituencies. “Our faculty are the heart and soul of Einstein,” he said, “and the generosity and support of our donors ensure that our faculty are able to do their important work.”

Dean Spiegel and Richard M. Joel, president of Yeshiva University, presided over the event, held in the Mary and Karl Robbins Auditorium. Dean Spiegel presented the faculty members with their new appointments and was joined by many of the donors who funded the positions.

The convocation’s high point was the dean’s surprise announcement of a major bequest from the late George J. Fruhman, Ph.D., a member of Einstein’s founding faculty who died in July 2011 at age 86, after a 50-year distinguished career at the College of Medicine. Before his passing, Dr. Fruhman stipulated that the funds be used to establish an endowment providing full four-year scholarships for Einstein’s brightest applicants. “Dr. Fruhman was a beloved teacher and mentor to generations of Einstein students. He had no close living relatives. His students and colleagues were family to him, and this was his parting gift. I’m pleased to have had the opportunity to use this occasion to celebrate his remarkable life and legacy,” said Dean Spiegel.

Donors recognized for their philanthropic vision and generosity included Ruth L. Gottesman, Ed.D., professor emerita and chair of Einstein’s Board of Overseers; Judith Frost Levine, daughter of the late Charles Frost; the Lowe family; Max and Jean Berger; Muriel and Harold Block; Louis and Gertrude Feil; the Safra family (represented by Heather Nesle of the Edmond J. Safra/Republic National Bank of New York); the Blume family; the DeJur family; the Levitt family; Yolaine G. Randall; and Charles Michael. The Atran Foundation, a philanthropic organization supporting Jewish causes, was also acknowledged.

Faculty members recognized at the convocation represented a wide range of medical disciplines and scientific areas: James Scheuer, M.D., professor and University Chairman Emeritus of the department of medicine at Einstein and at Montefiore, the University Hospital and academic medical center for Einstein, was formally invested as Distinguished Professor of Medicine Emeritus. Dr. Scheuer’s laboratory was the first to demonstrate the benefits of regular exercise on heart muscle function and one of the earliest to show the harmful effects of diabetes, renal insufficiency and aging on the heart.
Ales Cvekl, Ph.D., professor and vice chair for research in the department of ophthalmology & visual sciences, and professor of genetics, was invested as the Max Berger Chair in Ophthalmology. He studies genetic and epigenetic regulatory mechanisms in eye development and disease.

Nikolaos G. Frangogiannis, M.D., professor of medicine, was invested as the Edmond J. Safra/Republic National Bank of New York Chair in Cardiovascular Medicine. His laboratory focuses on the mechanisms of cardiac healing after injury, with the goal of preventing heart failure.

Paul S. Frenette, M.D., professor of medicine and of cell biology, was invested as the Ruth L. and David S. Gottesman Institute for Stem Cell and Regenerative Medicine Research. His laboratory focuses on stem cell biology, vascular biology and inflammation. His groundbreaking work in blood stem cell trafficking revealed a connection between the brain and bone marrow.

Mario J. Garcia, M.D., professor of medicine and of radiology, was invested as the Pauline A. Levitt Chair in Medicine. He uses noninvasive imaging methods to diagnose complex cardiac conditions, including diastolic heart failure, cardiomyopathies, and coronary and valvular heart disease. Dr. Garcia is chief of the department of medicine’s division of cardiology at Einstein and Montefiore, and co-director of the Montefiore Einstein Center for Heart and Vascular Care.

Harris Goldstein, M.D., ’80, director of the Einstein-Montefiore Center for AIDS Research, was invested as the Charles Michael Chair in Autoimmune Diseases. His lab uses genetic engineering to bolster the immune system’s ability to ward off HIV, the virus that causes AIDS. Dr. Goldstein is also assistant dean for scientific resources and professor of pediatrics (allergy and immunology) and of microbiology & immunology, and attending physician in the department of pediatrics at The Children’s Hospital at Montefiore.

Barrett Katz, M.D., M.B.A., professor of ophthalmology & visual sciences, was invested as the Frances DeJur Chair in Ophthalmology. He is a neuro-ophthalmologist and researcher with experience in industry, most recently in the biotech area and in drug development. Dr. Katz is also professor in Einstein’s Saul R. Korey Department of Neurology and in the Leo M. Davidoff Department of Neurological Surgery and executive director of the office of clinical trials at Einstein and Montefiore.

Richard B. Lipton, M.D., professor and vice chair of the Saul R. Korey Department of Neurology at Einstein and at Montefiore, was invested as the Edwin S. Lowe Chair in Neurology. His research focuses on population studies of the aging brain and Alzheimer’s disease, as well as headache and pain disorders. Dr. Lipton is also professor of psychiatry and behavioral sciences and of epidemiology & population health, and director of the Montefiore Headache Center.

Solomon L. Moshé, M.D., professor, vice chair and director of child
neurology and clinical neurophysiology in the Saul R. Korey Department of Neurology at Einstein and Montefiore, was invested as the Charles Frost Chair in Neurosurgery and Neurology. He investigates the mechanisms underlying age- and sex-related differences in epilepsy. Dr. Moshé is also professor in the Dominick P. Purpura Department of Neuroscience, and professor and director of the division of neurology in the department of pediatrics.

Thomas E. Rohan, M.D., Ph.D., professor and chair of epidemiology & population health at Einstein and Montefiore, was invested as the Atran Foundation Chair in Social Medicine. He studies the molecular, nutritional and hormonal factors that cause cancer, with the goal of identifying opportunities for intervention.

Carol A. Derby, Ph.D., associate professor in the Saul R. Korey Department of Neurology and in the department of epidemiology & population health, was invested as the Louis and Gertrude Feil Faculty Scholar in Neurology. She studies how to prevent cardiovascular disease, heart disease in women and the connection between cardiovascular disease and cognitive decline and dementia.

Sophie Molholm, Ph.D., associate professor in the department of pediatrics and in the Dominick P. Purpura Department of Neuroscience, was invested as the Muriel and Harold Block Faculty Scholar in Mental Illness. She studies brain function abnormalities underlying developmental disorders, including autism spectrum disorders and...
attention deficit hyperactivity disorder.

Deepa Rastogi, M.B.B.S., assistant professor of pediatrics, was invested as the Joseph S. Blume Faculty Scholar in Pediatric Development. She investigates why urban minority children develop asthma. Dr. Rastogi directs the pediatric asthma center of The Children’s Hospital at Montefiore.

Joe Verghese, M.B.B.S., professor in the Saul R. Korey Department of Neurology, was invested as the first Murray D. Gross Memorial Faculty Scholar in Gerontology. He researches aging and its effects on the brain, from the ravages of Alzheimer’s disease to the falls and forgetfulness that can affect normally aging adults. Dr. Verghese is also an attending physician in neurology at Montefiore.

Nir Barzilai, M.D., professor of medicine and of genetics, was installed as director of the Nathan Shock Center of Excellence in the Basic Biology of Aging. Founding director of Einstein’s Institute for Aging Research, Dr. Barzilai is principal investigator in a pioneering clinical study to identify genetic links to exceptional aging. Dr. Barzilai is also the Ingeborg and Ira Leon Rennert Professor of Aging Research at Einstein and an attending physician in the department of medicine (endocrinology) at Montefiore.

Felise B. Milan, M.D., ’88, professor of clinical medicine at Einstein and a faculty attending physician in medicine at Montefiore, was installed as director of the Ruth L. Gottesman Clinical Skills Center. She specializes in teaching and assessing clinical skills.

Ellise S. Delphin, M.D., M.P.H., professor of anesthesiology, was invested as Unified Chair of the department of anesthesiology at Einstein and Montefiore. She is assembling a high-caliber team of anesthesiology specialists in pediatrics, cardiology, cancer and pain, as well as developing residency and research programs.

President Joel then conferred tenure on eight Einstein professors: Julia H. Arnsten, M.D., M.P.H. Pablo E. Castillo, M.D., Ph.D. Ana Maria Cuervo, M.D., Ph.D. Ales Cvekl, Ph.D. Paul S. Frenette, M.D. Meredith A. Hawkins, M.D. Charles C. Query, M.D., Ph.D. Howard D. Strickler, M.D.
Linda Altman and Arnold Penner Receive Lifetime Leadership Awards

Einstein friends and supporters gathered at the Plaza Hotel last November 16 to honor Overseers Linda Altman and Arnold S. Penner. They received the first-ever Einstein Lifetime Leadership Awards, in recognition of their philanthropic leadership and extraordinary service to the College of Medicine.

The awards were presented at “Celebrate Einstein,” a dinner hosted jointly by Einstein’s National Women’s Division and its Men’s Division. The event benefited the Men’s Division Research Scholars Program, which helps fund the training of Einstein physician-scientists in translational research, and the Women’s Division’s initiative to support research on women’s cancers at the Albert Einstein Cancer Center.

Linda Altman has been a leading member of the National Women’s Division for nearly 30 years. As national president from 2002 to 2006, she spearheaded the division’s successful initiative to fund a floor of laboratories in Einstein’s Price Center/Block Research Pavilion. Prior to that, she served as president of the division’s Westchester/Fairfield chapter. Elected to the Einstein Board of Overseers in 2006, she now serves on its executive committee and chairs the communications committee. Mrs. Altman and her husband, Earle, are Einstein Benefactors and major supporters of cancer research at the College of Medicine.

Arnold Penner’s involvement with the College of Medicine spans more than three decades. He is a longtime executive board member of the Men’s Division, which honored him with the Einstein Humanitarian Award in 1992. He was elected to the Einstein Board of Overseers in 1998.

As Einstein Benefactors, Mr. Penner and his wife, Madaleine Berley, most recently made a generous commitment toward the consolidation of Einstein’s Children’s Evaluation and Rehabilitation Center.

Mrs. Altman and Mr. Penner were previously recognized for their dedicated service to Einstein with honorary doctoral degrees in humane letters awarded to them by Yeshiva University, in 2005 and 2006 respectively.

Guests at “Celebrate Einstein” enjoyed an intimate musical set by rock ‘n’ roll legend Neil Sedaka and the wit of sportscaster Bruce Beck, who served as emcee.

National Women’s Division President

Kathy Weinberg and Men’s Division Chair Ray Cohen joined with event co-chairs Arlene Farkas, Janet Hershaft, Jody Leavitt, David Klein, Jeffrey Fiedler and Robert Patent in making the evening a memorable tribute to two inspirational leaders for Einstein and a successful effort to support vital medical research at the College of Medicine.
Einstein Emerging Leaders Gather to Support Einstein

The Einstein Emerging Leaders (EEL) are accomplished professionals in their 20s and 30s who have taken a philanthropic interest in Einstein. The group was established by Lawrence S. Elbaum, Adam Friedman, M.D. ’06, Joanna Steinberg and some of their closest friends and held its first Einstein event on January 19 at the Soho House in the meatpacking district of Manhattan. A capacity crowd of 150 guests attended.

“It was a great evening. Everyone was so energetic and so genuinely interested in Einstein,” says Ruth L. Gottesman, Ed.D., chair of Einstein’s Board of Overseers, who spoke at the event.

Mr. Elbaum, an associate at Proskauer Rose LLP, and Dr. Friedman, a 2006 Einstein alumnus and a current faculty member, were already lifelong friends interested in finding new ways to support Einstein when they met Ms. Steinberg, a vice president at BlackRock, Inc., last year. They quickly began brainstorming about involving others, and a committee of about 15 took shape, with each member offering to engage others in turn.

“It is all very organic and social, which is typical for our generation,” says Ms. Steinberg. “We share an interest in making the world a better place—and it’s logical for us to associate ourselves with Einstein, where we can have a real impact on the health of people in the Bronx and around the world.”

The fledgling group has decided that the first Einstein program to benefit from its generosity will be CERC—Einstein’s Children’s Evaluation and Rehabilitation Center. CERC staff members Robert Marion, M.D. ’79, John Foxe, Ph.D. ’99, and Sophie Molholm, Ph.D., were all present at the Soho House gathering.

“I’m so pleased to see a new group of excited young people supporting Einstein, and honestly thrilled that they want to help CERC,” says Dr. Marion, CERC’s director and a member of Einstein’s class of 1979. “We serve more than 8,000 children and their families each year, and whatever support EEL can provide will be put to good use.”

Based on the overwhelming response to its inaugural event, the group has begun making plans for a spring dinner and sponsoring a team for the New York City Marathon, and is thinking ambitiously about the future.
Einstein in Florida 2012

For Einstein’s many friends and supporters in the Palm Beach area, a highlight of the winter season is the College of Medicine’s annual “Einstein in Florida” program, featuring seminars and discussions with leading Einstein experts from a wide range of scientific and clinical disciplines. This year’s program focused on two vital areas of medical research: translational medicine and cancer.

“Stories in Translational Medicine” was the theme of a luncheon seminar hosted by Einstein Overseers Marilyn and Stanley M. Katz at Palm Beach Country Club (PBCC) on January 11. Attendees heard John J. Foxe, Ph.D. ’99, professor in the department of pediatrics and in the Dominick P. Purpura Department of Neuroscience and director of research at Einstein’s Children’s Evaluation and Rehabilitation Center, and Victor L. Schuster, M.D., professor of medicine and of physiology & biophysics, chair of medicine at Einstein and Montefiore, and the Ted and Florence Baumritter Chair in Medicine, describe how important laboratory findings at Einstein evolve into cutting-edge advances in patient care.

On March 14, Allen M. Spiegel, M.D., Einstein’s Marilyn and Stanley M. Katz Dean; Anne R. Bresnick, Ph.D., professor of biochemistry and an investigator at the Albert Einstein Cancer Center; and Steven C. Almo, Ph.D., professor of biochemistry and of physiology & biophysics, the Wollowick Family Foundation Chair and the director of the structural biology resource at the center, were the guest speakers at a luncheon seminar hosted by the Katzes at PBCC, and at an evening reception hosted by Overseer Karen Mandelbaum and her husband, David, in their Jupiter home. The topic at both events: “Cancer Treatments, Drug Discovery and Design.”
New Belfer Chair Will Advance Neurodegenerative Disease Research

Einstein Overseers Robert A. Belfer and Renée E. Belfer have made a commitment to endow a new academic chair at Einstein, which will be known as the Robert and Renée Belfer Chair for the Study of Neurodegenerative Diseases.

Ana Maria Cuervo, M.D., Ph.D., a recognized expert on cellular and organ aging, has been named the inaugural chair holder. She directs the Cellular and Tissue Aging Core at Einstein’s NIH-designated Nathan Shock Center of Excellence in the Basic Biology of Aging.

Dr. Cuervo’s research focuses on neurodegeneration in Alzheimer’s and Parkinson’s diseases. Her investigations of the respective roles played by autophagy (a natural recycling process whereby cells obtain the energy to keep dividing) and by protein degradation in the aging process and in age-related disorders may lead to the development of new treatments.

The Belfers are longtime distinguished Benefactors of the College of Medicine, having previously established the Renée and Robert A. Belfer Chair in Developmental Biology at Einstein and generously supported research programs in cancer and in genetic and translational medicine.

Mr. Belfer is chair emeritus of the Einstein Board of Overseers, on which he has served for 40 years. In recognition of his dedicated service to the College of Medicine, Yeshiva University awarded him an honorary doctorate in humane letters in 1986. Mrs. Belfer was elected to the Einstein Board in 1995. She serves as a vice president of Einstein’s National Women’s Division and on the executive committee of its New York chapter.

“As our population gets older, the incidence of neurodegenerative diseases associated with aging is rapidly growing, yet this problem is severely underfunded by the federal government,” notes Mr. Belfer. “I view Dr. Cuervo’s research as addressing this challenge both for its humanitarian benefits and for helping manage the runaway costs of national healthcare.”

Evelyne Albrecht Schwaber, M.D. ’59, Supports Clinical Skills Education

“Listening to your patients is an essential part of being a good physician,” says Evelyne Albrecht Schwaber, M.D. ’59. A graduate of Radcliffe College and one of the three women in Einstein’s very first graduating class, Dr. Schwaber is a practicing psychiatrist and psychoanalyst and an internationally recognized expert on clinical listening.

In recognition of her most recent gift to Einstein, the College of Medicine was pleased to name a classroom in the Gottesman Clinical Skills Center in memory of her parents, Henry and Augusta (née Hellreich) Albrecht.

“I have very happy and meaningful memories of my Einstein years,” says Dr. Schwaber (see “A Look Back” on page 64 of this issue, where Dr. Schwaber and several classmates are pictured). She married Jules Schwaber, M.D., during her first year of medical school. They are the parents of four sons: Carl, Jeff, Mitchell and Glen. Mitchell Schwaber, M.D., a 1991 Einstein graduate, lives in Israel (as does his brother Glen), where he directs the National Center for Infection Control.

In September 1938, when Evelyne was four years old, her parents fled with her—their only child—from Nazi-occupied Vienna to Switzerland. The family arrived in the United States in 1940 and settled in Brooklyn, where her mother and father started a wholesale candy business.

“My parents worked tirelessly to rebuild their lives and afford me the best education possible,” says Dr. Schwaber. “They would be so pleased to know that a classroom bearing their names will be a place for future Einstein physicians to enhance their clinical listening skills.”

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Reunion 2012

Wednesday, May 30, 2012
Welcome Luncheon for the Class of 1962
Yeshiva University Museum at the Center for Jewish History, New York City

Einstein Commencement Exercises
Avery Fisher Hall, Lincoln Center, New York City
Alumni are invited to march in cap and gown

Thursday, May 31, 2012
Gala Reunion Dinner for all classes
Hilton New York, New York City

Friday, June 1, 2012
We invite all alumni to join us for Alumni Day, on Einstein’s Jack and Pearl Resnick Campus, featuring:
Educational Symposium with CME credit available
Alumni-Faculty Luncheon
Campus Tour

For more information, or to get involved with Reunion, please contact the office of alumni relations at 718.430.2013 or alumni@einstein.yu.edu.

Nine Classes Celebrate Einstein Reunions

All Einstein classes ending in 7 and 2 will return to Einstein’s Jack and Pearl Resnick Campus for Reunion 2012, May 30 through June 1. They’ll have a chance to reconnect with classmates and marvel at the changes that have taken place at their alma mater since their medical school days.

This year’s festivities will include the milestone 50th Anniversary Reunion of the Class of 1962—Einstein’s fourth graduating class. The Einstein community will pay homage to the Class of 1962 for its unique role in Einstein’s history.

“I’m honored to be planning our 50th Anniversary Reunion this year along with many of my friends and classmates,” says Arthur Schapiro, M.D. ’62, a member of the Class of 1962 reunion committee. “We’ve been meeting for several months to plan reunion activities and are very excited to return to campus to see each other this spring.”

Those activities will begin on Wednesday, May 30, with the Class of 1962 Welcome Luncheon at the Yeshiva University Museum at the Center for Jewish History in New York City. Members of the 50th Reunion class will gather—some seeing each other for the first time in decades—to toast their many personal and professional accomplishments since graduating from Einstein.

Immediately following the luncheon, the Class of 1962 will head to Avery Fisher Hall at Lincoln Center for Einstein’s Commencement Exercises at 6 p.m., where all alumni are invited to march in caps and gowns.

The Class of 1962 will be honored at Commencement along with the recipients of the 2012 Einstein Alumni Awards.

On Thursday, May 31, all reunion classes will come together for the Gala Reunion Dinner at the New York Hilton Hotel, where alumni will be joined by Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean, and other Einstein deans and faculty.

On Friday, June 1, the Einstein campus will welcome alumni and their guests for Alumni Day on Campus, which will feature an educational symposium (with Continuing Medical Education credit available) at the
Michael F. Price Center for Genetic and Translational Medicine/Harold and Muriel Block Research Pavilion, followed by lunch and a special campus tour.

Janina Galler, M.D. ’72, who serves on the Einstein Alumni Association board of governors and on the Class of 1972 reunion committee, observes, “As a member of the board of governors, I feel so fortunate to have the opportunity to visit the campus and to see how the school has grown. But nothing compares to the anticipation and excitement of being back on campus with my Einstein classmates.”

“Reunions are always a special time to see classmates and honor the college of medicine that helped launch our careers,” notes Leonard Shapiro, M.D. ’62, a member of the Class of 1962 reunion committee. “Our class looks forward to celebrating our 50th Anniversary Reunion together, and I encourage all reunion-year alumni to return to Einstein this spring.”

For more information about Einstein’s 2012 Reunion celebrations and how you can get involved with your upcoming class reunion, please contact Emily Snyder, director of alumni relations and annual giving, at 718.430.2922 or emily.snyder@einstein.yu.edu.

Congratulations!

2012 EINSTEIN ALUMNI AWARD RECIPIENTS

Dominick P. Purpura
Distinguished Alumnus/a Award
David H. Abramson, M.D. ’69
Evelyne Albrecht Schwaber, M.D. ’59

Distinguished Ph.D. Alumnus Award
Roy S. Wu, Ph.D. ’72

Einstein Honorary Alumnus Award
Alfred J. Spiro, M.D.
Cedric Stuart Raine, Ph.D., D.Sc.

Lifetime Achievement Award
Carl Grunfeld, M.D. ’75, Ph.D. ’75

Lifetime Service Award
Ronald J. Ross, M.D. ’60, FACR

From the Class of 1962 yearbook. Do you recognize any of your classmates?
Edward Stim, M.D. ’60, has been living in Tokyo since December 2011. His publications, *Physician’s Notebooks 1 to 11* and *Slim Novels 1 to 11*, can be viewed at http://physiciansnotebook.blogspot.com and http://adventuresofkimi.blogspot.com. He welcomes fellow alumni and other members of the Einstein community to call him directly from the United States at 011 8180 5034 9898. If you are visiting Tokyo, please call 080 5034 9898.

**1960s**

Melvin Zelefsky, M.D. ’60, chair, department of radiology at Jacobi Medical Center, and professor in the department of radiology at Einstein, was honored in December 2011 at the Jewels Gala, a benefit for Jacobi Medical Center and North Central Bronx Hospital. Dr. Zelefsky was among those recognized for enriching the lives of patients.

Fred M. Sander, M.D. ’63, recently published a book, *Created in Our Own Images.com*, which was the centerpiece in the CUNY Arts & the Sciences Series in October 2011. This book of essays on how we reproduce ourselves in art, psychology, social roles and genomic medicine gets its inspiration from W. S. Gilbert’s *Pygmalion and Galatea* (1871), the play about a sculptor who has created statues of his wife, one of which comes to life. (The play is reprinted in the book.) The stimulating evening included New York actors reading a portion of the play, followed by a panel discussion. The event was co-sponsored by the New York Psychoanalytic Institute and Society, which celebrated its centenary in 2011.

Joel A. Schneider, M.D. ’63, writes, “I have been retired from the practice of radiology for the past four years. In November we celebrated the 20th anniversary of South Florida Jazz, a nonprofit organization I founded that produces jazz concerts at the Rose and Alfred Miniaci Performing Arts Center at Nova-Southeastern University in Fort Lauderdale, FL. We have presented some of the greatest jazz artists in the world to thousands of music lovers in South Florida. Who says retirement is boring?”

Morris Stampfer, M.D. ’63, a cardiologist at Jacobi Medical Center and an associate professor of clinical medicine at Einstein, was honored by the cardiology division at Jacobi in June 2011. The division sponsored a party to celebrate the 50th anniversary of Morris’ first assignment at Jacobi as a third-year medical student in 1961. In addition to reminiscences, there was a display of historic Einstein and
Phone-a-thon Raises Annual Fund Support

To reconnect with alumni and secure gifts for the Einstein annual fund, the alumni relations office held its yearly student-driven fall phone-a-thon on several nights in both November 2011 and March 2012. Each evening, 10 to 15 students representing Einstein's M.D., M.S.T.P. and Ph.D. student communities, along with representatives from the Alumni Association board of governors, made calls to alumni to thank them for their past support, encourage their continued generosity and update them on the latest news from campus. “I was a caller when I was a medical student, so it’s nice to participate as an alumnus,” said board of governors member Edward Zoltan, M.D. ’02.

“I get to reconnect with classmates, and seeing the current students allows me to reminisce and relive the good times I had at Einstein.” This year’s phone-a-thon raised more than $70,000.

Jacobi photographs, and the awarding of a commemorative plaque. Dr. Stampfer writes that all four full-time faculty in the cardiology division at Jacobi Medical Center, including him, are Einstein alumni. The others are Jay Meisner, M.D. ’87, Ph.D. ’87; Seth Sokol, M.D. ’97; and Robert M. Siegel, M.D. ’03.

Stephen M. Weissman, M.D. ’63, has written a psychobiography entitled Chaplin: A Life, which will be translated into Hebrew and published in Israel by Modan Publishing House. The book has also been published in the United States, the United Kingdom, Germany, Russia, Portugal, Georgia and Brazil.

Joseph H. Berke, M.D. ’64’s new book, Why I Hate You and You Hate Me: The Interplay of Envy, Greed, Jealousy and Narcissism, will be published in the spring of 2012 by Karnac Books. His previous work, Malice Through the Looking Glass, is available on Amazon’s Kindle. His new projects include a study of Sigmund Freud’s Jewish identity and a Haggadah for Tu B’ Shevat. Dr. Berke is pictured above with his “co-therapist, Teva.”

Martin Klughaupt, M.D. ’64, writes, “I’ve been retired for three and a half years, after 40 years of practice in cardiology. My wife, Naomi, and I have lived in the Palo Alto, CA, area since I began a cardiology fellowship at Stanford in 1966. Our children and 7-year-old granddaughter live nearby. We are very active in the local Jewish community, which has grown markedly since we first arrived. I enjoy bicycling, walking, traveling and taking courses at Stanford (primarily modern history and linguistics).”

Edward Lynn, M.D. ’65, writes, “Retirement continues to be a wonderful experience after years of rewarding practice. My frequent visits to the gym help me keep the old body functioning, and volunteering with Big Brothers and Sisters, the Humane Society and the Medical Reserve Corps keeps my spirits up.”

Melvin Stern, M.D. ’65, received the title of emeritus professor of psychiatry at George Washington University School of Medicine in Washington, DC, at graduation ceremonies in May 2011.
Sheldon Schechter, M.D. ’66, and his wife, Jan Schechter, are happy to announce the marriage of their son, Joshua M. Schechter, M.D. ’06, to Dr. Ilana Pister. Joshua is an attending physician in the department of emergency medicine and internal medicine at Downstate Medical Center, Brooklyn, NY. Ilana is a resident in the department of pediatrics at Downstate.

Fred C. Hirschenfang, M.D. ’67, FAAP, is currently section chief, pediatric ambulatory service, and medical director, JUDY Center for Down Syndrome, at the Joseph M. Sanzari Children’s Hospital at Hackensack University Medical Center in Hackensack, NJ. He writes, “I have cut down to three days a week rather than retire. In my free time, I’m enjoying biking, the outdoors, shows, museums and novels. My wife, Harriet, and I were excited to welcome our fourth grandchild, Rachel Florence, born in January 2012. Harriet is still teaching Pilates and mentoring beginning elementary school teachers. I’m looking forward to seeing my classmates at our 45th Reunion in May.”

Stephen Kardon, M.D. ’67, writes, “After losing my classmate and beloved wife of 39 years, Natalline Berman Kardon, M.D. ’67, in 2008, I recon- nected with a summer love from 1960. (The story is in the New York Times ‘Vows’ column, February 22, 2009.) While working full time as a radiologist at Lincoln Hospital in the Bronx, I underwent hip and bilateral knee replacements with excellent recovery, but later, melanoma metastases and a right temporal lobe metastasis were discovered. With the help of a skilled neurosurgeon and industrial-strength doses of Decadron, I came through. But my new wife, Ellen, suffered a surgical catastrophe and is now in a rehab facility. My main consolation is my three sons and daughters-in-law and nine grandchildren. My oldest son, David Kardon, M.D. ’95, is an Einstein alumnus. After high school and college at YU, my middle son, Brian, went to dental school at Penn and is an endodontist in Suffern, NY. My youngest son, Aaron, is an urban planner in New Jersey. Ellen and I are hoping that we will both be well enough to attend the Reunion festivities in May.”

Philip Herschenfeld, M.D. ’68, writes, “I continue to enjoy full-time psychoanalytic practice, my marriage of 11 years to Linda, my three grown kids and six grandkids. I remain thankful for the excellent medical education I received at Albert Einstein College of Medicine and in my residency at Einstein.”

1970s

Marc S. Berenzweig, M.D. ’71, writes, “While in residence, I continue to follow advances in cell biology and molecular oncology by attending major national conferences. In family news, my daughter, Julie, and her fiancé, Scott Kligerman, will marry in April 2012. Julie is an assistant to the dean of freshmen at Harvard College. My son, Adam, and my daughter-in-law, Anya Kamanetz, declared a new generation of Berenzweigs with the birth of Luria Stone Berenzweig (Lulu) on December 10, 2011. Adam is a senior research engineer at Google; Anya is a staff writer at Fast Company magazine and the author of Generation Debt.”

Lawrence Kaplan, M.D. ’73, is a veteran of multiple international relief operations, beginning in Cambodia in 1979. Now retired as a gastroenterologist, he has returned to Haiti nine times since the 2010 earthquake to provide medical care in Cité Soleil, a severely impoverished area in Port-au-Prince. He is founder and president of Cité Soleil Opportunity Council, a non-profit, 501(c)(3) organization dedicated to job and business creation, community improvement and free medical care. Funds are raised through the sale of traditional Haitian tin art at www.CreativeHaiti.com; proceeds support services provided by the Cité Soleil Opportunity Council.

Rick Strassman, M.D. ’77, co-produced a documentary about his clinical psychedelic drug research at the University of New Mexico in the 1990s. The film, DMT: The Spirit Molecule, was recently picked up for distribution by Warner Brothers. Rick is now working on a book relating Old Testament prophecy to endogenous brain activity. He lives near Taos, NM, and is a clinical associate professor of psychiatry at the University of New Mexico School of Medicine.
Commencement this spring will be especially noteworthy for Dr. Joshua Miller; his daughter, Dr. Lauren Kimmel; and her son Joseph Kimmel, who is graduating—the first three-generation family of Einstein grads on record.

The First Generation
Dr. Joshua Miller is an internationally renowned pioneer in organ transplant surgery, board certified in general and cardiothoracic surgery, and a member of the Alpha Omega Alpha Honor Society. He enrolled at Einstein in 1957, after graduating from Yeshiva College, and recalls his time at Einstein as “a period of great mentorship that stimulated my academic career.”

He was particularly inspired by his immunology professor, Jack R. Battisto, Ph.D., calling him “a great teacher.” South African émigré Robert Goetz, M.D., convinced Dr. Miller to go into cardiothoracic surgery—and asked a memorable question about giraffes: How could such a tall animal have a normal blood pressure in the brain? “Goetz operated on giraffes and observed the rete mirabile, a variant of the carotid sinus, which regulates blood pressure,” says Dr. Miller. Another reason Einstein was perfect for him: “I’m a Sabbath observer,” he says, “and Einstein allowed me that.”

Now at Northwestern University in Chicago, Dr. Miller served for 25 years as chief of organ transplantation at the University of Miami and became American Society of Transplant Surgeons president in 1998. His research into the clinical use of bone-marrow stem cells to induce immunologic tolerance in organ-transplant recipients has been funded for 30 years by the National Institutes of Health and the Veterans Administration.

Dr. Miller fondly recalls his membership in an Einstein student singing group called the Lymph Notes. He and his wife, Roberta, married and had their first child while he was at Einstein. Daughter Lauren came along soon after.

The Second Generation
“I remember sitting at the dinner table as a twelve-year-old while my father gave us step-by-step instructions on how to perform a roadside tracheostomy with a pen and Swiss Army knife,” says Lauren. “When I’d come home from school, my father would say, ’Your job right now is to study.’” With support from both parents, Lauren became interested in medicine and chose Einstein.

During her Einstein years, Lauren married her husband, Steven, and their first child, Joseph, was born. The College of Medicine’s regard for family—plus support from her mentor, anesthesiology professor Rhoda Levine, M.D.—helped Lauren balance motherhood and medical school. “Einstein let me live a life while pursuing a medical career,” she says. She graduated well prepared for both and now practices anesthesiology in Florida.

The Third Generation
“In my family, everybody’s a scientist,” says Joseph. He flirted with engineering but soon recognized his true calling. “Choosing Einstein wasn’t a hard decision,” he says. “When I came to interview, I could tell that the teachers really loved Einstein. And it’s still the best place for an observant Jew.”

Continuing in the family tradition, Joseph married his wife, Lizzy, during medical school. In March, Joseph won a preliminary residency in internal medicine at Jacobi Medical Center, and a residency in anesthesiology at NYU Langone Medical Center.

Drs. Miller and Kimmel look forward to the honor of hooding Joseph at Commencement this year.
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“The Alumni Scholarship has been life-changing. It’s given me the freedom to pursue the things I feel passionate about, to consider social equity and altruism in my career, and to seek out and respond to need in the world.”

– Eric Tanenbaum, Alumni Scholar Class of 2014

For more information, please contact the Office of Alumni Relations at 718.430.2013 or alumni@einstein.yu.edu.
Joseph Barbuto, M.D. ’78, writes: “My private practice has a 50 percent component in the area of psycho-oncology, and I am a consultant in the department of psychiatry and behavioral science at Memorial Sloan-Kettering Cancer Center in New York City. I am also a clinical associate professor of psychiatry at Cornell University.”

Robert J. Friedman, M.D. ’78, M.Sc., is a clinical professor in the department of dermatology at the New York University School of Medicine. He is also in clinical practice at Dermatologic Oncology in New York, specializing in melanoma. Dr. Friedman serves as chair and CEO of MDSolarSciences, Inc., in Norwalk, CT, as well as on the scientific advisory board for MelaSciences. In 2011, he co-edited a book published by Elsevier, Cancer of the Skin Textbook. His recent awards include the Patients’ Choice Award 2010 and the Arnold P. Gold Foundation’s 2011 Gold Doctor Award.

Janet S. Sunness, M.D. ’78, received the Gass Medal for outstanding achievement in macular disease, at the 2011 annual meeting of the Macula Society.

James M. Mozzillo, M.D. ’79, M.S., M.P.H., writes that he and his family had an old-fashioned Thanksgiving, and that he “happily spoiled” his seven grandchildren during the holidays. Dr. Mozzillo is working for four different companies providing family medicine, urgent care and occupational medicine services. He is in the process of starting a company to provide occupational medicine services for smaller companies that cannot afford a full-time occupational medicine physician.

1980s

Alan Brody, M.D. ’80, is a pediatric radiologist at Cincinnati Children’s Hospital, where he has been since 1995. He lives in Cincinnati with his wife, Marsha, and their three sons. He writes, “The kids take up most of the time outside of work, but there is some left for old cars and travel. There is always a hot meal, a cold beer and a warm bed for friends.”

Michael J. Katz, M.D. ’80, has an active private practice in orthopedic surgery in Flushing, NY. Michael and his wife, Sherry, are enjoying their first grandchild, Matthew Simon Katz, born in 2010 to Jonathan and Jessica Katz. He writes, “All four of my children are grown, and all graduated from Cornell. Jonathan is a tax associate at Cravath, Swaine & Moore LLP; Judith is a second-year medical student at New York University Medical School; Ezra lives in Philadelphia and is an electrical and computer software engineer at Siemens Healthcare; and Daniel is an energy analyst in Cambridge for the Brattle Group.”

Javier Lugo, M.D. ’81, is chair, department of pediatrics, at Chilton Hospital in Pequannock, NJ, and associate professor of pediatrics at New York Medical College in Valhalla, NY. He is passionate about providing primary care to underserved children. Dr. Lugo writes, “I recently celebrated the 35th anniversary of my marriage to my lovely wife, Vivian. We have two children and both are doing well.”

Abraham Port, M.D. ’81, is medical director of Complete Women’s Imaging (CWI) in Garden City, NY, and Oceanside, NY (www.cwiny.com). Dr. Port advocates making ultrasound a mainstream diagnostic tool for early detection of breast cancer. He is active in numerous national, state and local professional and radiological societies and also serves as director of breast imaging services at South Nassau Communities Hospital in Oceanside.

Steven Merahn, M.D. ’82, has been named the chief medical officer of the PDR Network, in Montvale, NJ, where he leads the effort to integrate medication management information and adverse-event reporting within clinical information systems. He serves on the board of Clinical Performance Solutions (CPS), where he was chief executive officer. CPS builds clinical decision support technology based on cognitive software architecture.

Todd Sacktor, M.D. ’82, was promoted to distinguished professor of physiology, pharmacology and neurology at the State University of New York Downstate Medical Center in Brooklyn, NY. The appointment recognizes his work in characterizing the biochemical mechanism involved in memory storage. Distinguished professor is the highest academic rank in the SUNY system, and Dr. Sacktor is the seventh faculty member in the history of the medical school to attain this title.
Kurt B. Nolte, M.D. ’82, was recently appointed director of the Radiology Pathology Center for Forensic Imaging at the University of New Mexico School of Medicine. The center explores ways that imaging technology can transform the practice of forensic pathology. In the past year, he and Stephen Phillips, M.D. ’82, a Seattle-based ophthalmologist, have indulged their hunter-gatherer side by hunting elk in New Mexico and fishing for salmon in Washington State.

Jack Gladstein, M.D. ’83, is professor of pediatrics and neurology at the University of Maryland School of Medicine. He is still happily married to Bette. Their three children are doing well: Aeli recently married Sonia Gonzalez; Ari Gladstein, M.D. ’09, recently married Rachel Marom; and Penina is a junior at Beth Tfiloh High School in Baltimore, MD.

Ariel Fischer, M.D. ’83, is a hematologist/oncologist working for the Mid Hudson Medical Group in Dutchess County, NY. He and his wife have four children and two grandchildren.

Mark Teicher, M.D. ’84, is happy to announce that he and his wife, Debby, became grandparents in the fall of 2011 to Jaedyn Eve Teicher, daughter of David and Lauren Teicher. He also notes, “Our daughter Ilana was named a Siemens (formerly Westinghouse) regional finalist and will be graduating from high school in spring 2012. Our older daughter, Rachel, graduated from New York University summa cum laude in December 2010.”

David Panush, M.D. ’85, is section head of neuroradiology at Hackensack University Medical Center in Hackensack, NJ. He is also medical director for the Newman Street (Hackensack, NJ) and Oradell (Oradell, NJ) New Century Imaging Centers.

Young Alumni Meet and Greet at Holiday Party

Nearly 50 Einstein alumni from the Classes of 2000 through 2010 kicked off the 2011 holiday season at the Einstein Holiday Party for Recent Graduates. Hosted by the Alumni Association, the festivities took place in early December at Marx Restaurant in Manhattan. Alumni Association board of governors member Edward Zoltan, M.D. ’02, greeted the attendees, who enjoyed chatting and having a chance to network in a relaxed, casual atmosphere.

“I had a great time catching up with friends and hearing about what they’re up to these days,” said Christina Gagliardo, M.D. ’07. “So many of us loved our time at Einstein. I hope to get more involved in the future and help spread the word.”

Dr. Zoltan’s fellow host committee members included Snehal Amin, M.D. ’00; Rachel Biller, M.D. ’09; Tova Fischer, M.D. ’09; Phillip Green, M.D. ’06; Ari Grinspan, M.D. ’08; Emily Schonfeld, M.D. ’09; Eric Segal, M.D. ’05; Olga Pantukhova Segal, M.D. ’04; and Monique Tanna, M.D. ’09.

The event built on the success of the bowling party held in 2010. Plans are under way for more events for young alumni. For more information on how to get involved with Einstein’s recent graduates’ network, please contact Sari Linder, alumni relations coordinator, at 718.430.3167 or sari.linder@einstein.yu.edu.
1990s

David Handin, M.D. ’93, has been named director of the hospital medical program at Emerson Hospital in Concord, MA. Dr. Handin joined Emerson as a hospitalist in 2004, and has been with the hospitalist group as it has evolved and grown from four physicians to more than ten.

Jack H. Silvers, M.D. ’93, changed his last name in 1997 from Hakimian to Hakimian Silvers. He now runs a solo dermatology practice in West Los Angeles, CA, and has self-published a book, Biopsies of the Bible, through Amazon. The book juxtaposes the laws of science and the Bible, and explores current political topics. Jack encourages classmates to get in touch at biopsiesbible@yahoo.com, or facebook.com/Hakim Yaqob.

Robert Stern, M.D. ’93, and Gillian Schweitzer, M.D. ’94, and their children, Trevor and Talia, are living in Cairo, Egypt, where Robert is working as a regional medical officer for the U.S. Department of State. Robert will continue his work in the U.S. Embassy in Cairo until the summer of 2013, when they will be posted to another U.S. mission in a foreign country.

Gabriel Sosne, M.D. ’94, is currently associate professor in the departments of ophthalmology and anatomy/cell biology at the Kresge Eye Institute at Wayne State University School of Medicine in Detroit, MI. Dr. Sosne was awarded the 2011 Carl Camras Award in Translational Research from ARVO, the Association for Research in Vision and Ophthalmology. He writes, “The research that I am working on involves the potential use of thymosin beta 4 as novel therapy for corneal wound healing, inflammation and dry-eye disease.”

Seth Sokol, M.D. ’97, associate professor of clinical medicine in the department of medicine (cardiology) at Einstein and a cardiologist at Jacobi Medical Center, was honored at the Jewels Gala, a benefit for Jacobi Medical Center and North Central Bronx Hospital, in December 2011. Dr. Sokol was among those recognized for enriching the lives of patients.

2000s

Christian Faul, Ph.D. ’05, is an assistant professor of medicine and cell biology in the division of nephrology and hypertension at the Miller School of Medicine, University of Miami, in Miami, FL. He writes, “I started my own lab about three years ago, and we recently had a study published in the Journal of Clinical Investigation (JCI). I think this is a great translational study, combining cell biology and clinical research, the analyses of cell culture, mouse and patient data. At Einstein, I was working in the division of nephrology when Dr. Vic Schuster was chief of the department. During that time, I learned how important and exciting it is to combine different disciplines and to communicate and collaborate with other scientists from different research fields. Einstein provided the perfect stage for such communication, and much of what I learned there is reflected in this new JCI paper.”

Jeremy White, M.D. ’05, and his wife, Rachel, welcomed a third baby boy, Jonathan Adiv, on November 7, 2011. Dr. White passed the otolaryngology boards in May 2011 and will complete a plastic surgery residency in June 2012 at Cleveland Clinic Florida.

In Memoriam

We sadly acknowledge the passing of the following Einstein alumni. We honor their memories and extend our deepest condolences to their families and friends.

Richard Adelson, M.D. ’83
Stanley Ames, M.D. ’60
Michael Hanley, M.D. ’72
Stephen A. Morris, M.D. ’78, Ph.D. ’78
Keith M. Sadler, M.D. ’62
Alan Schrift, M.D. ’59
Mastering clinical skills has always been an integral part of an Einstein medical education. This photo appeared on the cover of the Winter 1957–58 issue of Pulse, the predecessor to Einstein magazine. Geared to the article “So You Want to Be a Doctor?” the photo shows a faculty member teaching five students how to conduct a physical exam. (One of them, Evelyne Albrecht Schwaber, M.D. ’59, is profiled on page 53.)

For today’s Einstein students, much of this teaching now takes place in the state-of-the-art Clinical Skills Center, which opened in the fall of 2010. What hasn’t changed are the educational goals expressed in that 55-year-old cover story.

“Students of today . . . are studying medicine in an environment of rapidly expanding knowledge of the physical sciences and increased application of technology to medicine,” said Henry B. Makover, M.D., professor of preventive and environmental medicine and chair of admissions back then. “Medical schools must try to prevent excessive emphasis on the laboratory, seeking rather to develop broadly educated physicians with an overall point of view toward the total problems of the patient and his family.”
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To learn more about making a bequest in your will and the advantages of other tax-favored legacy gifts to Einstein, please contact:

Glenn Miller
Associate Dean for Institutional Advancement
718.430.2411 or glenn.miller@einstein.yu.edu

Henry Rubin, J.D.
Senior Director of Planned Giving
917.326.4959 or hrubin@yu.edu
CONGRATULATIONS!

With competition for residencies more intense than ever, Einstein can be especially proud of this year's 165 graduating medical students. They made excellent matches in desirable specialties such as internal medicine (46 students), pediatrics (24), diagnostic radiology (16), emergency medicine (14), obstetrics and gynecology (11), anesthesiology (8), surgery (8), orthopedics (6), psychiatry (6) and family medicine (6). Of the three Einstein students who won residencies in radiation oncology—a specialty with only 150 spots nationwide—two were from our M.D./Ph.D. program. In addition to our University Hospital, Montefiore, students matched at top institutions across the country, including Yale, Harvard, Johns Hopkins, University of Pennsylvania, Cedars-Sinai, UCSF, and Children’s Hospital Los Angeles. For more on Match Day 2012, watch for the next issue of Einstein magazine or visit www.einstein.yu.edu.

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