SUMMER/FALL 2009



The Magazine for Alumni and Friends of Albert Einstein College of Medicine of Yeshiva University

2009 Commencement 2009 Commenceverage

EINSTEIN & INDIA

Working together for global health

WORLDWIDE COMMITMENT

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Over the last decade, Albert Einstein College of Medicine has dedicated itself to improving global health. Nowhere is this commitment more evident than in India, home to more than one billion people. Einstein faculty members work with their Indian counterparts in confronting challenges ranging from AIDS to alcoholism. Our cover story, "Einstein & India," shows that global health is truly a two-way street: Knowledge gained in helping less-developed countries can directly benefit America as well.

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Chairperson, Einstein Board of Overseers

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A Message from the Dean

Good fences make good neighbors. – Robert Frost, "Mending Wall," 1914

hese words, spoken by Frost's neighbor as he joined Frost in mending a stone wall separating their properties, noted the value in maintaining boundaries. The articles in this issue of *Einstein* illustrate the opposite: the need to break down walls to advance the cause of health.

Dr. Ruth Gottesman smashed barriers by becoming the first Einstein faculty member to join its Board of Overseers, where she now serves as chairperson. In the interview starting on page 32, she talks about the unique spirit of collegiality that fosters cross-fertilization of ideas and collaboration among researchers at Einstein.

That spirit is evident in "Up, Running & Recruiting" (beginning on page 36), which visits several new scientists at work in the Michael F. Price Center for Genetic and Translational Medicine/Harold and Muriel Block Research Pavilion. At its essence, translational medicine is all about removing walls—those between basic science and clinical medicine—so that laboratory discoveries can improve patients' lives as rapidly as possible. Each of the featured scientists crosses boundaries between disparate fields in a way that affords new opportunities for discovery.

The profile of Benefactors Marilyn and Stanley Katz, beginning on page 42, shows that they haven't forgotten their Bronx roots. Their generous gift establishes a cancer prevention and control program that will greatly benefit



current Bronx residents, and simultaneously help break down walls separating behavioral/social science and molecular/ genetic research.

"Einstein & India" (pages 20 through 30) shows that we have crossed national boundaries to become a major player in global health. This is vital from a social justice perspective and for our own good, since such efforts help prevent the spread of diseases that don't recognize borders.

Frost's retort to his neighbor— Something there is that doesn't love a wall, that wants it down—was correct. By dismantling barriers and crossing over them, Einstein is improving the lives of people everywhere, from the Bronx to the rest of the world.

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ALLEN M. SPIEGEL, M.D. The Marilyn and Stanley M. Katz Dean

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ON THE FRONT COVER A mother and child in Calcutta, India. Photo by Gary Goldenberg

ON THE BACK COVER

Class of 1959 alumni (left to right) Drs. Chester Berschling, Marion Zucker Goldstein, Itamar Salamon, Arnold Lieber, Evelyne Albrecht Schwaber, Mark Reiss, Michael Heitler, Henry Spector, Irwin Bernhardt, Louis Aledort, Marvin Kirschner

VISIT US ON THE WEB!

On our website, readers can keep up with what's happening at Einstein: research and education news; features; multimedia offerings; access to all our electronic and print publications—and much more. You can also review news and updates that are specifically targeted toward alumni, donors, faculty and students. When you visit our website, you'll join the more than 3.5 million people who click annually on www.aecom.yu.edu.

Send us your thoughts!

elcome to the new and improved *Einstein*. The magazine still covers the science that is truly at "the heart of medicine" here at Einstein, but now it also includes much more.

For example, we've added a section devoted to goings-on around campus ("Collegial Life"); two new sections highlighting Einstein staff members: "Passionate Pursuits" (a profile of a staffer with an interesting obsession) and "Einstein Editions" (write-ups of new books by faculty members); and a final page that returns to the Einstein of old ("A Look Back").

We have also recognized two vitally important groups not previously included in the magazine: Einstein alumni and donors. "Our DNA," the alumni section, contains a Q & A with a prominent Einstein alum, as well as Alumni News. "Making a Difference" highlights the donors—individuals, family and corporate foundations, and members of Einstein's Men's and Women's Divisions—whose generosity is so important to the College of Medicine.

This issue's cover story, "Einstein & India," describes the thriving collaborations involving Einstein scientists and their Indian counterparts—a prime example of Einstein's expanding efforts to advance global health. The article was written by freelance writer Gary Goldenberg. A regular contributor to Einstein publications and an inveterate traveler, Gary also took the stunning photographs of India that accompany this article. To see more examples of Gary's photography, visit his website, www.mindlesspleasures.com.

In the future, we'll continue to cover global health and to keep you updated on student and faculty activities, research news, alumni news and the contributions of donors who help make it all possible.

Finally, in coming issues we will devote this page to your letters—what you like or don't like about the magazine, your candidates for articles and profiles, and the like. Please email us at letters@aecom.yu.edu. We look forward to hearing from you.

LARRY KATZENSTEIN

Science and Publications Editor

A Makeover for Einstein's Image

Einstein's new identity is rapidly coming into focus. Things got started last fall, when—after nine months of research and analysis—the College of Medicine held a festive "Branding Event" to unveil its new logo (right), which stresses our direct and powerful connection to our namesake, Albert Einstein.

On the new logo, we feature the E-shaped segment of the famous DNA double helix, which links the worlds of science and medicine. The logo's new tagline—"Science at the Heart of Medicine"—captures the enduring values of our institution and reflects everything we do at Einstein.

In coming months, the Einstein name will grace the email addresses of ever more College of Medicine faculty and staff, replacing "aecom" so that addresses will read firstname.lastname@ einstein.yu.edu. Similarly, the URL that announces Einstein's Internet presence to the world is being switched to www.einstein.yu.edu.

The new look will also be integrated into a "co-branding" strategy now being developed between Einstein and Montefiore Medical Center, the University Hospital and Academic Medical Center for Einstein.

With its emphasis on "Einstein," the new logo serves to closely identify the College of Medicine with Albert Einstein. The words and deeds of this brilliant scientist continue to guide Einstein today, more than a half century after his death.







Albert Einstein College of Medicine OF YESHIVA UNIVERSITY





ON THE WEB

To learn more about our new identity program, please visit the Branding Zone at http://www.aecom.yu.edu/brandingzone.

Hope, Anxiety and Joy on Match Day

Expectation filled Lubin Dining Hall on Thursday, March 19, as this year's Match Day commenced. One hundred seventy-five fourth-year students lined up for the envelopes that told them which hospital and community they would call home for the next several years.

Match Day has been run for more than 50 years by the National Residency Matching Program, which matches thousands of graduating students to hospitals from the Bronx to California. The program weighs the achievements, backgrounds, interests and geographic preferences of each applicant against the requirements of participating hospitals.

Einstein students attained residencies at some of the nation's most prestigious hospitals. Many will stay in the Einstein community, with residencies at Montefiore and Jacobi Medical



4th-year students Lisly Chery and Monica Payares display their acceptance letters.

Centers; others will serve at Memorial Sloan-Kettering, NewYork-Presbyterian Hospital, Mount Sinai Hospital and the SUNY system. More-distant locations include Massachusetts General Hospital, University of Michigan, UCLA Medical Center and UC San Diego. In keeping with Einstein's long-standing emphasis on primary care, internal medicine was the leading residency choice.

An E-Zine at Einstein

The e-magazine *Pulse: Voices from the Heart of Medicine* recently celebrated its first anniversary.

Pulse was created by Paul Gross, M.D., assistant professor of family and social medicine at Einstein, who saw it as a forum where people would share their tales of unexpected illness, challenging patients or a health system run amok. Dr. Gross shared his vision with his department chair, Peter Selwyn, M.D., and *Pulse* was launched in April 2008 with Dr. Gross as editor-in-chief and Dr. Selwyn as publisher.

Available free through online subscription and sent out each Friday, *Pulse* is geared to medical and lay audiences alike. A principal aim is to stimulate dialogue on how health care is—or isn't —being delivered in the United States.

Those wishing to subscribe to *Pulse* can do so by visiting its website, www.pulsemagazine.org.

Free Clinic Celebrates 10 Years of Community Service

he Einstein Community Health Outreach (ECHO) Free Clinic celebrated its 10th anniversary with a banquet on March 19 in Lubin Dining Hall. Since its inception, ECHO has provided free, comprehensive health care to more than 5,000 uninsured residents of the Bronx and neighboring communities. The clinic is coordinated by Einstein students and supported by the Institute for Family Health, a nonprofit organization offering family-centered health care to New York City residents.

"Most people can't get the kind of caring and love that you all give, and the clinic is a tribute to your commitment," said Neil Calman, M.D., founder, president and CEO of the Institute for Family Health, clinical professor of family and social medicine and assistant professor of epidemiology & population health at Einstein.

Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean, thanked ECHO's students and supporters: "It's been a privilege to learn about your efforts on behalf of the underserved members of our community. You have the opportunity to help eliminate health disparities. It's also wonderful to see the compassion you all show, curing if need be, but also preventing disease. You're inspiring!"



Second-year medical student Eddie Lawrence (left) presents a "State of the Clinic" report at ECHO's 10th anniversary celebration. He was joined by Amarilys R. Cortijo, M.D., ECHO's medical director and assistant clinical professor of family and social medicine at Einstein.



Website Captures a Diverse Community

he revitalized Einstein website—far more colorful and information-rich than its predecessor—has added several new features since debuting 18 months ago. The website offers the latest news as well as articles, photographs and videos that vividly portray the Einstein community. New offerings on the site include:

- **Inside Einstein**: the monthly roundup of Einstein community news. Read about newly published scientific research, faculty and staff appointments and much more.
- **Einstein in the Media**: a section highlighting faculty who've recently appeared in major print and electronic stories. Each item is linked to the article or video segment in which the faculty member appeared.
- Einstein Features: in-depth coverage of important campus events and human-interest stories about members of the Einstein community. A recent entry, "Team Up with Einstein and the Yankees," describes the fund-raiser at Yankee Stadium that launched the initiative by the Einstein Men's Division to raise \$3 million for its Research Scholars Program.
- Einstein Multimedia: a wide range of multimedia choices, including audio and video interviews, discussions and lectures featuring Einstein faculty, guest speakers, students and administrators. A single mouse-click takes you to our YouTube and iTunesU channels where you can view, download, share or easily transfer this material to your iPhone, iPod or other portable device.

The enhancements are having an impact: Over the past year, visitors to Einstein's website increased by 49 percent, to more than 320,000 a month.



ON THE WEB

Help the hits "keep on coming" by visiting the website at our URL, http://www.aecom.yu.edu.

Five Einstein Researchers Receive Tenure

Five Einstein faculty members have been awarded tenure for their research excellence in fields ranging from stem cells to computational biology.



Aviv Bergman, Ph.D., Professor and Chairman, Systems & Computational Biology; Professor, Pathology, Neuroscience

Dr. Aviv Bergman is founding chair and professor of systems & computational biology at Einstein. Dr. Bergman combines computation, theoretical and experimental methodologies in research programs to answer fundamental questions in biology, ranging from the function of biological systems to understanding how life's diversity evolves. Dr. Bergman then applies these insights to biomedical and clinical research. He has teamed up with Einstein colleagues in studying a number of research areas, including head and neck cancer, aging and immunology. Prior to joining the Einstein faculty in 2004, Dr. Bergman was founder and co-director of the Center for Computational Genetics and Biological Modeling at Stanford University, where he previously had earned a Ph.D. in biological sciences.



Eric E. Bouhassira, Ph.D., Professor, Cell Biology, Medicine

Dr. Eric E. Bouhassira came to Einstein in 1990 and holds the

Ingeborg and Ira Leon Rennert Chair in Stem Cell Biology and Regenerative Medicine. Dr. Bouhassira was the organizing force behind the three-year, \$3 million federal grant for human embryonic stem cell research that Einstein received in 2005. He is director of Einstein's Center for Human Embryonic Stem Cell Research and is a professor of medicine and of cell biology. Dr. Bouhassira's research focuses on developing hematopoietic (bloodforming) stem cells that can differentiate into red cells, T cells, platelets and all other cell types that compose blood. Dr. Bouhassira received his B.S., M.S. and Ph.D. degrees from the Université Pierre et Marie Curie in Paris, France.



Streamson C. Chua, Jr., M.D., Ph.D., Professor, Medicine, Neuroscience

Before coming to Einstein in 2005, Dr. Streamson Chua

was at Rockefeller University, where he worked with Drs. Jules Hirsch and Rudolph Leibel in efforts to understand the genetics of obesity. He then joined the faculty of NewYork-Presbyterian Medical School, where he continued his studies on the function of leptin, a hormone that has a major influence on obesity and diabetes. At Einstein he is pursuing research on genes that are linked to increased susceptibility to obesity and diabetic complications, particularly beta-cell loss and nephropathy.

After receiving his bachelor's degree from Johns Hopkins University, Dr. Chua earned a combined M.D./Ph.D. at Columbia University. He completed a one-year internship at New York Hospital and then undertook a postdoctoral fellowship in pediatric endocrinology.



Winfried Edelmann, Ph.D., Professor, Cell Biology

Dr. Winfried Edelmann, a member of the Einstein faculty since

1990, is professor of cell biology and director of the Gene Targeting Facility of the Albert Einstein Cancer Center. His research has helped reveal the role played by a family of genes, known as DNA mismatch repair genes, in predisposing people to cancer. To study these genes, he creates mouse lines that carry mutations in the genes. He also has served on several national committees, including the Steering Committee of the Mouse Models for Human Cancer Consortium of the National Cancer Institute. He received his undergraduate and graduate training at the University of Würzberg, Germany.



Jan Vijg, Ph.D., Professor and Chairman, Genetics

Dr. Jan Vijg holds the Lola and Saul Kramer Chair in Molecular

Genetics. He came to Einstein in 2008 from the Buck Institute for Age Research, in Novato, CA. Among his first acts as chair, Dr. Vijg has changed the department's name from molecular genetics to genetics, reflecting its original name when, in 1963, Einstein established the first department of genetics at any medical school. Dr. Vijg has gained distinction for his use of genetically engineered mice to investigate how DNA damage influences human disease and aging. He received his bachelor's, master's and doctoral degrees from the State University of Leiden, in the Netherlands.



Diversity Gala Honors Efforts to Mentor Local Students

An April 2 dinner celebrated three Einstein-based programs that encourage minority students to pursue health-care careers: the Summer Undergraduate Mentorship Program of the Hispanic Center of Excellence; the Maternal and Child Health Summer Mentorship Program of the Department of Family and Social Medicine; and the Einstein Enrichment Program of the Office of Diversity Enhancement.

Six people were recognized for their outstanding mentorship (left to right, above): Wilfredo Valentin, Evelyn Cantillo, M.P.H., Noe Romo, M.D., Christopher Phang, M.D., Chinazo Cunningham, M.D. and Michael Lazo.

Einstein Campus Beautification Project a Success

From the repainted Robbins Auditorium to sprouting flowerbeds and curvy new walkways, signs of Einstein's campus beautification program are everywhere. The effort stems from Dean Spiegel's desire to make the campus more attractive to the Einstein community and to students and investigators thinking about coming here. Projects were planned and carried out under the direction of Salvatore Ciampo, senior director of facilities management, with the help of the supporting services department and Burton Resnick and Samuel Weinberg, co-chairs of the Board of Overseers' facilities and planning committee. Many of the improvements were timed to coincide with the formal dedication of the Price Center/Block Research Pavilion in June 2008. Others, such as replacing the cooling tower on the roof of the Forchheimer building, are in progress.























Honoring Medical Education and Mentoring

he sixth annual Davidoff Education Day, held on March 17, honored two outstanding mentors and provided useful advice to Einstein's busy clinician educators.

The event featured two keynote speeches by Patricia Carney, Ph.D., professor of family medicine and of public health and preventive medicine at Oregon Health & Science University. The first speech offered faculty members advice on getting their educational research papers published and their grants funded. In the second, she outlined strategies for the challenging task of preparing manuscripts and applying for grants while maintaining a busy clinical schedule.

Dr. Carney also led a lively discussion on the importance of effective mentoring in medical education research. "Our mentees don't know how to be mentored," she noted. "It's like the seventh- or eighth-grade dance, where you don't know exactly how to come together. It's something we need to address better."

Dr. Allen M. Spiegel, the Marilyn and Stanley M. Katz Dean at Einstein (pictured at left), presented Faculty Mentoring Awards to Julia Arnsten, M.D., M.P.H. (center), professor of medicine, epidemiology & population health and psychiatry and behavioral sciences; and to Donald S. Faber, Ph.D. (right), chair of the Dominick P. Purpura Department of Neuroscience and director of the Rose F. Kennedy Center for Research in Mental Retardation and Human Development.

"Davidoff Education Day formally celebrates teaching and education here and at our affiliated hospitals, and mentoring is at the heart of such activity," said Dr. Spiegel. "It's important for us to highlight those mentors who have a positive impact and show our appreciation."

More Einstein Students Combine Medicine and Maternity

n June 2, when Monique Bushman and Bat-Sheva Maslow received their medical degrees, their babies—Monique's daughter and Bat-Sheva's twins—were there to witness the event.

The two women were among at least a dozen Einstein graduates who were accompanied by children when they crossed the stage at Avery Fisher Hall to receive their diplomas—a far cry from just a few decades ago.

"When I was a medical student in the 1960s, having children was unheard of—even among the couples in which only the male was in medical school," says Stephen G. Baum, M.D., senior associate dean for students at Einstein. "It was just assumed that you waited until your career was established before having kids."

The desire to start a family while in medical school is understandable: Medical students learn that a woman's



Monique Bushman with her baby, Gemma, who is also pictured at right in a more recent photo.

prime reproductive years are between the ages of 20 and 30—a time when most of them are pursuing their medical training. But juggling child care and medical school isn't easy. Long hours of study are followed by even longer hours on clinical wards, leaving little time or energy for the round-the-clock needs of a newborn.

And then there are the challenges unique to pregnant medical students.

"You get to go on break when your attending physician gets a break," says Monique, describing the emergency medicine rotation she completed during her fifth and sixth months of pregnancy. "The baby is pressing on your bladder but you can't go to the bathroom, you're hungry and your feet are swelling."

Yet Monique has no regrets about going through motherhood and medical school at the same time. In fact, having a baby in the midst of her medical education was something that she and her husband, Bert, had planned.

"I've always wanted kids, and there wasn't ever going to be a better time," she says. "There will always be a reason why you should wait a little longer, but you make choices for your future life and family."

For Bat-Sheva, expecting twins meant dealing with a high-risk pregnancy in the midst of everything else. But she'd already surmounted problems that had prepared her for the difficulties ahead. Her husband, Jon, had battled stage IV Hodgkin's disease between her first and second years at Einstein. His illness only strengthened the couple's desire to start a family once he was well.

"I was able to accomplish my school goals and deal with the issues connected to my pregnancy because the school was extraordinarily helpful," says Bat-Sheva.

Both Monique and Bat-Sheva single out Nadine T. Katz, M.D., associate dean for students, for the extraordinary help and guidance she provided before and after their babies were born. Dr. Katz, who is also an obstetrician/gynecologist, often meets with students to discuss the various challenges and rewards of this lifechanging decision.

"We want students to know that we support them

when they're making such an important decision," says Dr. Katz. "They have one life, and being a medical student is just one aspect of their lives. If students are ready to have children, then we need to encourage them to fulfill this part of their personal life."

For some female students, having a baby may require delaying course work and graduating a year later. "The important thing in deciding to start a

> family while in medical school or residency is to be flexible," she says. Dr. Katz speaks from experience. While an Einstein medical student in the late 1980s, Dr. Katz and two classmates



Bat-Sheva Maslow with her twin daughters, Aderet and Tehila, at Commencement.

determined that fourth year was the right time for them to begin families a decision just as unheard of then as in Dr. Baum's time 20 years earlier, and one that she knew could adversely affect her career.

"We've come a long way since then and even though taboos still exist, seeing young professionals who are pregnant is much more common now," says Dr. Katz, who notes that Einstein now offers pregnant students a designated maternalcare room where they can go to express their milk.

"I would absolutely do it all again and am glad that I did it now," says Monique. "I can't imagine doing this later, during residency, when I'd have to leave Gemma and be putting in very long hours. I'm grateful that Einstein is so supportive and helps us to live the lives that we want to live."

President Joel Speaks to Einstein Senate



YU President Richard M. Joel speaks while Brian Cohen, M.B., B.S., senate speaker, looks on.

n May 27, Yeshiva University President Richard M. Joel addressed Einstein's monthly senate meeting in Riklis Auditorium. In remarks spiced with humor, President Joel—who has served as YU president since 2003—talked about his personal history, the state of YU and the shared mission of YU and Einstein.

He said he never could have dreamt that he would one day be president of YU. He recalled the day when he was 12 and visited the YU campus with his parents. His father, an immigrant from Europe who was then in his 50s, had cried and told his son, "Never in my life

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did I think I would see such a place! I am so proud. You must go to high school here."

His father died the next year and never lived to see his son attend the yeshiva. But the boy would grow up to lead the very institution that had brought his father such pride.

Regarding the Bernard Madoff Ponzi scheme and its financial impact on YU finances, President Joel had this to say: "Mostly, Madoff contributed to a recession of spirit. I believe the lay leadership of our university is very fine, guided by talented, visionary deans and good senior management. We will be able to move forward proudly and strongly, but we have a lot of challenges ahead."

President Joel noted that YU has cut \$28 million in operating expenses. "We took painful steps to reduce administrative staff and there is nothing good about that," he said. "But we're prepared to move forward."

In discussing the ties that bind YU and Einstein, President Joel said that "we are one corporate family. We share the quest for a value of values, a value of life and a value of respect. We are bound together in hopefulness.

"There are interests that converge and others that have not," he added. "But our relationship now is the strongest that it's been in 51 years. The university is proud of you."

Einstein Lab Tech Scores Big on "Millionaire" Show

Max Bernstein, who studies roundworms at Einstein, displayed all-round knowledge this spring by winning \$100,000 on the syndicated game show "Who Wants to Be a Millionaire."

Max, a research technician in the genetics lab of Scott W. Emmons, Ph.D., correctly answered 12 questions, ranging from the pig Latin name for a reptile (akesnay) to the homepage of the American Numismatic Association (money.org). But the highlight was Max's humorous exchange with host Meredith Vieira over his work at Einstein: Vieira: You have kind of an odd job. Max: We work with nematodes, which are microscopic roundworms, and basically what I do all day is watch them do it. Vieira: Why do you watch them have sex? Max: I won't lie to you—it's exciting, somewhat.

Ultimately, Max was stumped by the \$250,000 question asking for the artist who coined the term "mobile" to describe moving sculptures (Marcel Duchamp). His \$100,000 winnings will go toward graduate education for his girlfriend and him and also to charity.



In Memoriam

Three members of Einstein's original faculty were among the five notable researchers and teachers who died over the past two years.

Ernst R. Jaffé, M.D., died on February 11, 2008, at age 83. He came to Einstein when it opened in 1955 and subsequently held several positions, including professor of medicine, first chief of the Division of Hematology (1970 to 1982), senior associate dean, and interim dean (twice). He was known for his gentle manner and extraordinary diplomacy.

Dr. Jaffé was one of the founders of modern hematology and made significant contributions to understanding hereditary methemoglobinemia as well as hereditary anemias caused by enzyme deficiencies.

Dr. Jaffé served as editor-in-chief of the journal *Blood*, as co-editor of *Seminars in Hematology* and as president of the American Society of Hematology.

Anatol Morell, M.D., professor emeritus of medicine, died at age 95 on March 16, 2009. A member of Einstein's original faculty, Dr. Morell collaborated for many years with Dr. Herbert Scheinberg (see next obituary).

Dr. Morell isolated and crystallized the blood copper-binding protein ceruloplasmin, which is assayed in Dr. Scheinberg's test for Wilson disease. In 1974, Dr. Morell and Gilbert Ashwell, M.D., of the National Institutes of Health discovered a receptor in the liver that recognizes glycoproteins dubbed asialoglycoproteins; they then isolated and chemically characterized this molecule—the first lectin (sugar-binding receptor) ever found in animals. The function of this liver receptor—later called "the Ashwell receptor"—remained a mystery until 2008, when researchers reported in *Nature Medicine* that the receptor is essential for helping the body combat abnormal blood clotting during bacterial infection and sepsis.

Herbert Scheinberg, M.D., a founding faculty member and chairman of the Division of Genetic Medicine from 1973 to 1992, died on April 4, 2009, in Elizabethtown, NY, at age 89.

Dr. Scheinberg specialized in rare hereditary diseases and helped develop a simple and inexpensive blood test and treatment for Wilson disease a potentially fatal buildup of dietary copper in the body.

He developed the blood test in the early 1950s in collaboration with David Gitlin, M.D., of Harvard Medical School and Dr. Anatol Morell of Einstein (see previous obituary). The test, still in use, detects abnormally low levels of ceruloplasmin, a protein that helps excrete copper from the body.

Dr. Scheinberg later collaborated on developing a treatment for Wilson disease that uses the oral drug D-penicillamine (or, more recently, trientine hydrochloride) to help the body excrete excess copper.

Sam Seifter, Ph.D., a beloved member of the Einstein community since the College of Medicine was founded in 1955, died on February 25, 2009, in New Rochelle, NY, at age 92. He was highly regarded among generations of M.D. and Ph.D. students as an innovative and inspirational teacher and mentor.

Dr. Seifter was internationally recognized for his work on collagen, the protein in skin, tendons, bone and cartilage that literally holds the body together. His research showing that collagen's protein chains are cross-linked into strong, ropelike units helped explain collagen's superb structural abilities.

He was appointed professor of biochemistry in 1961, and chaired that department from 1976 to 1987. After becoming professor emeritus in 1988, he continued his research and teaching well into his 80s.

Dennis Shields, Ph.D., a renowned cell-biology researcher and an Einstein faculty member for the last 30 years, died of a heart attack at White Plains Hospital on December 1, 2008, at age 60.

Dr. Shields studied the cellular organelle called the Golgi apparatus. In particular, he worked to discover how protein precursors are processed and transported within the cell and how the Golgi apparatus is able to direct the correct molecules to their appropriate cellular destinations.

A native of Great Britain, Dr. Shields did his postdoctoral work in cell biology at Rockefeller University in 1977 and a short time later joined the Einstein faculty. Dr. Shields was a professor in the departments of developmental biology and of anatomy and structural biology.

He also served as the first director of the Belfer Institute for Advanced Biomedical Sciences from 1996 to 2003, and as acting chair of developmental and molecular biology from 1993 to 1994.

"Dennis was known to students, postdocs and colleagues as a wonderful mentor, teacher, thinker and friend, as well as a brilliant scientist," said Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean at Einstein.

NIH Funds Research Center on Reproductive Health

The National Institutes of Health have awarded Einstein a \$7.5 million grant to establish a Specialized Cooperative Center Program in Reproduction and Infertility Research—one of only 13 such centers in the country and the only one in New York State. The center will study a wide range of problems that affect the female reproductive tract, including menstrual disorders, endometriosis and infertility.

"The grant will allow us to launch studies of reproductive biology and to position Einstein as the focus of such research for the entire state," says Jeffrey W. Pollard, Ph.D., professor of developmental and molecular biology and of obstetrics & gynecology and women's health, who will be leading the new center.

The center will focus on endometrial biology and reproductive neuroendocrinology, with particular emphasis on the reproductive health needs of the local Bronx community. "Obesity, diabetes and metabolic syndrome are especially common here in the local community," says Dr. Pollard, who also is the Louis Goldstein Swan Chair in Women's Cancer Research. "And each of these conditions is strongly associated with disorders of the reproductive tract."

Other Einstein researchers involved in the center are Nanette Santoro, M.D., Maureen J. Charron, Ph.D., Anne M. Etgen, Ph.D., Genevieve Neal-Perry, M.D., Ph.D. and Streamson C. Chua, Jr., M.D., Ph.D.

\$46 Million Biodefense Grant Aids Einstein Researchers

The Northeast Biodefense Center has received a \$46 million grant from the National Institutes of Health to conduct research on biodefense and emerging infectious diseases. The center—composed of researchers from Einstein and 27 other institutions in New York, New Jersey and Connecticut—was formed by the region's scientific community in 2002 in response to vulnerabilities revealed by 9/11 and the anthrax attacks

that followed it. (Spores of *Bacillus anthracis*, the microbe that causes anthrax, are pictured at right.)

"The magic of the Northeast Biodefense Center is that it has brought together for the first time many regional institutions that had no history of collaboration, in a joint effort to protect our society from a wide range of emerging infectious diseases," says the center's deputy director, Arturo Casadevall, M.D., Ph.D., the Leo and Julia Forchheimer Professor and chair of microbiology & immunology at Einstein.

One of five Einstein researchers involved in the center, Dr. Casadevall is developing a strategy known as passive immunization for treating anthrax. In contrast to active immunity, in which the body produces its own antibodies in response to infection, passive immunity involves protecting people by providing them with preformed antibodies produced by other people or by animals. So for individuals at risk, passive antibody therapies provide immediate immunity against infection and disease.

The other Einstein scientists participating in the biodefense consortium are:

Bettina C. Fries, M.D., associate professor of medicine and of microbiology & immunology. She is investigating monoclonal antibodies as a therapy against *Staphylococcus* enterotoxin B. This toxin is released by the bacterial species that causes staph infection. "In humans, this toxin can cause lethal shock at low

> doses," says Dr. Fries. "Since diseases caused by toxins are notoriously difficult to treat, developing antibodies that can neutralize enterotoxin B is the best option at present."

Matthew D. Scharff, M.D., distinguished professor of cell biology and of medicine and

the Harry Eagle Professor of Cancer Research/National Women's Division. He is carrying out studies to make monoclonal antibody therapies more effective in preventing or treating several different infectious diseases.

Margaret Kielian, Ph.D., professor of cell biology. She is studying how dengue and chikungunya viruses infect cells. These viruses infect tens of millions of people worldwide, causing serious, debilitating illness.

Steven Almo, Ph.D., professor of biochemistry and of physiology & biophysics. He is making new protein reagents that will be used to stimulate animal models to produce unique antibodies. These antibodies would have potential use for diagnosing and treating infectious diseases.

NIH Funds Einstein Effort to Target HIV-Related **Brain Disease**

The National Institute on Drug Abuse has awarded Einstein a three-year, \$3 million grant to establish a research center to study the neurological complications that afflict people infected with HIV, the virus that causes AIDS.

"More than a quarter of those infected with HIV exhibit some form of cognitive impairment," says Ruth Hogue Angeletti, Ph.D., professor of developmental and molecular biology and of biochemistry at Einstein, who will direct the Einstein Proteomics Research Center for HIV-Associated Neurological Disorders and Substance Abuse. Dr. Angeletti and her proteomics center colleagues are pictured at right.

The new center will use powerful mass spectrometers to identify the brain proteins responsible for neurological complications in people infected with HIV-particularly those who are also addicted to drugs. Proteomics is the branch of molecular biology that studies the set of proteins expressed by the genes of an organism.

HIV's neurological complications, referred to as neuro-AIDS, can involve AIDS dementia, HIV-related encephalitis and fungal and parasitic infections. Several studies of autopsy tissue show that the destructive neuro-AIDS process is worsened by drug abuse, particularly the use of opioids such as heroin.

"Therefore, the intersection between HIV infection and opioid use represents an especially important area of neuro-AIDS research on which our proteomics center will focus," says Dr. Angeletti.



Front row: Julia H. Arnsten, M.D., M.P.H.; Ruth Hogue Angeletti, Ph.D.; Joan W. Berman, Ph.D.; Monica Rivera-Mindt, Ph.D. Back row: Andras Fiser, Ph.D.; Louis Weiss, M.D., M.P.H.; Harris Goldstein, M.D.; Abdissa Negassa, Ph.D.

Protein Implicated in Brain Damage Caused by Stroke

Recent findings by Einstein researchers could lead to treatments for minimizing the brain damage caused by stroke, the third-leading cause of death in the US.

When someone has a stroke, the shutoff of blood flow can result in the injury or death of brain tissue. A research team headed by R. Suzanne Zukin, Ph.D., professor of neuroscience and F. M. Kirby Chair in Neural Repair and Protection at Einstein, has identified a protein that plays an essential role in the death of neurons (nerve cells) associated with stroke.

Focusing on the hippocampus of adult rats, the researchers showed that a protein, CTMP, is expressed and activated when a stroke restricts blood flow. CTMP in turn binds to and turns off AKT, an enzyme crucial to the signaling pathways that govern normal cellular processes, including growth and proliferation.

The researchers found that the



In this photomicrograph of the rat brain, hippocampal neurons are shown in green, and glial cells (non-conducting cells that help to protect and nourish neurons) are shown in red.

inactivation of AKT by CTMP contributes significantly to the nerve damage from strokes. They propose that CTMP might be a good target for stroke therapies. Their study was published in the May 2009 issue of Nature Neuroscience.

In addition to Dr. Zukin, the other Einstein scientists involved in the research were Takahiro Miyawaki, M.D., Ph.D.; Dimitry Ofengeim; Kyung-Min Noh, Ph.D.; and Adrianna Latuszek-Barrantes.

Dr. Nancy Carrasco Wins Horwitz Prize

Nancy Carrasco, M.D., a leading authority on the transport system that concentrates iodide in the thyroid gland and other tissues, has received the third annual Marshall S. Horwitz, M.D. Faculty Prize for Research Excellence.

The award was established in memory of longtime faculty member Marshall S. Horwitz, M.D., who died in 2005. It was presented to Dr. Carrasco by Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean.

As part of the program, Dr. Carrasco, who is professor of molecular pharmacology and of biochemistry at Einstein, delivered the Horwitz Prize Lecture. She described her 20 years of research on the transport system, known as NIS, and its role in pulling iodide from the bloodstream and into cells of the thyroid gland, salivary glands and lactating mammary glands. Her findings have important implications for thyroid disease and breast cancer.



Nancy Carrasco, M.D. (left), with Susan Band Horwitz, Ph.D., distinguished professor of molecular pharmacology and cell biology and the widow of Marshall S. Horwitz, M.D.

Four Ph.D.s Recognized for Research Excellence

Four Einstein graduate students were honored for outstanding research this spring at the 13th Annual Julius Marmur Symposium. The annual event was established in memory of Julius Marmur, Ph.D., a longtime Einstein faculty member, who died in 1996 at age 70 and is considered one of the

founders of molecular biology. Dr. Marmur was also beloved at Einstein for his enthusiasm and dedication to education.

In introducing the day's program, Victoria H. Freedman.

Research Awards are:

ies, noted that Dr. Marmur "nurtured

and took care of graduate students. He

would be pleased that this symposium is

a real showcase of our student research."

The recipients of this year's Marmur

Irene Jarchum, a graduate student in

the laboratory of Teresa P. DiLorenzo,

Ph.D., for her research on insulin and

IGRP (a novel pancreatic beta cell anti-

gen) as targets of the autoimmune attack

in type 1 diabetes. She will soon be join-

ing the laboratory of Eric Pamer, M.D.,

at Memorial Sloan-Kettering Cancer

Center, for a postdoctoral fellowship.

dent in the laboratory of Ana Maria

on chaperone-mediated autophagy,

Susmita Kaushik, a graduate stu-

Cuervo, M.D., Ph.D., for her research

Graduate students Hyungbae Kwon, Susmita ents of the 2009 Marmur Research Awards.

one of several intracellular surveillance systems that find, digest and recycle damaged proteins. Her research received international recognition in 2006, when she received the Walter Nicolai Award for meritorious basic biologic aging research by a graduate student at the Annual Meeting of the American Aging

> Association. Hyungbae Kwon, a graduate student in the laboratory of Pablo Castillo, M.D., Ph.D., for his research on synaptic plasticity (the ability of the junction between two neurons to change in strength) in

Kaushik, Irene Jarchum, and Irene Puga, recipi-Ph.D., assistant dean for graduate stud-

the CA3 area of the hippocampus. Since earning his doctorate last June, he has joined Bernardo Sabatini, M.D., Ph.D.'s group at Harvard Medical School, where he is studying synaptic function using high-resolution imaging techniques.

Irene Puga, a graduate student in the laboratory of Fernando Macian-Juan, M.D., Ph.D., for her research on the enzyme caspase 3 and its role in modifying the immune system's T cells so they don't trigger autoimmune reactions. She is currently completing her postdoctoral fellowship in the laboratory of Andrea Cerutti, M.D., at Weill Cornell Medical College, after which she plans to continue her research in her hometown of Barcelona, Spain.

Einstein Researcher Receives Prestigious Award



Jonathan R. Lai, Ph.D., assistant professor of biochemistry at Einstein, has been awarded the Arnold and Mabel

Beckman Foundation's 2009 Young Investigators Award.

The \$300,000 award will allow Dr. Lai to continue his innovative research on HIV and antibody-mediated immunity over a three-year period. The Beckman Young Investigators Award supports the work of the nation's most promising young researchers in the early stages of their academic careers in the chemical and life sciences.

One of 11 awardees selected this year, Dr. Lai studies the proteins that coat the surface of HIV and help the virus infect cells of the body.

The immune response to viral infections involves antibodies that bind to viral-coat proteins to prevent the virus from entering human cells. Vaccines work by prompting the body to make antibodies against proteins that mimic the viruses' coat. But infection with HIV rarely provokes an antibody response to those proteins—one reason that an effective vaccine against HIV has been so difficult to produce.

To overcome this problem, Dr. Lai's lab uses a new technology that produces large "libraries" of antibodies from synthetic DNA. As a result, Dr. Lai can obtain antibodies that are not limited to human or animal sources. He hopes that this approach will produce entirely new antibodies that might prove useful against HIV infection. After authoring or co-authoring 16 papers on peptide chemistry and natural products research, Dr. Lai shifted his focus to HIV and AIDS research in 2007 when he left Harvard Medical School for Einstein. Starting a new lab in a new field at a new institution was challenging, but Dr. Lai credits Einstein with easing the transition.

"Einstein is extremely open and collaborative, which is one of the reasons I wanted to join the faculty," says Dr. Lai. "Coming from a chemistry background, it was easy to get up to speed on the biological aspects of HIV because of the support of the faculty."

A "Silent" Gene Promotes Spread of Breast Cancer

A few years ago, 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, helped discover a gene called ZBP1 (zipcode binding protein 1). The gene—which is very active in the developing embryo



An isolated breast cancer cell.

but largely silent in adults—helps cells move, grow and organize spatially.

Later research showed that ZBP1 is reactivated in several types of cancer (including breast, colorectal and non– small cell lung cancers). In the May 20 online edition of the *Journal of Cell Science*, Dr. Singer describes how the ZBP1 gene is turned off.

After examining mouse, rat and human breast cancer cells, Dr. Singer and his team found that ZBP1 is silenced when a methyl group (CH₃) attaches to ZBP1's promoter region (the segment of a gene where gene expression is initiated). The attachment of CH₃ prevents the promoter from binding to a protein called betacatenin. Deprived of beta-catenin, the ZBP1 gene is effectively silenced—and dangerous: the study also found that ZBP1 silencing increases the ability of cancer cells to migrate and promotes the spread of metastatic cells.

The findings have important implications for predicting breast cancer outcomes. According to the researchers, signs of ZBP1 silencing in breast cancer cells would indicate that a breast tumor is likely to spread—information that could help physicians in choosing a treatment strategy.

The study also points to potential targets for drug treatment. "If you could turn on this protein in cancer cells, or prevent it from being turned off, you could seriously reduce the ability of the cells to metastasize," says Dr. Singer.

His team is now investigating whether the ZBP1 gene in cancer cells could be reactivated—and the cells prevented from metastasizing—by selectively removing CH₃ from the ZBP1 promoter.

Hyping Health Risks: Environmental Hazards in Daily Life and the Science of Epidemiology



by Geoffrey C. Kabat, Ph.D., senior epidemiologist, department of epidemiology & population health

In the 1990s, Geoffrey Kabat served on a committee evaluating a 500-page

US Environmental Protection Agency draft report on passive smoking. The report indicted secondhand smoke as responsible for some 3,000 lung cancer deaths each year. Most committee members endorsed this finding—putting Dr. Kabat, an epidemiologist, in a difficult position.

He knew that average carcinogen levels in secondhand smoke were quite low compared with the levels that smokers inhale and that measuring someone's exposure to secondhand smoke over several decades is extremely difficult. Those limitations meant that epidemiologic studies—which the EPA report had relied on heavily in reaching its conclusions could not reliably determine the health effects from passive smoking.

Dr. Kabat felt that a supposedly comprehensive report on passive smoking should disclose the weaknesses of the available epidemiologic evidence. It didn't; but his new book— *Hyping Health Risks*—does.

A work of uncommon scientific honesty and clarity, *Hyping Health Risks* takes on four headline-making controversies involving cancer and other chronic diseases: passive smoking as a cause of lung cancer and heart disease; residential radon and lung cancer; electromagnetic fields and a range of diseases; and environmental pollutants and breast cancer. He concludes each chapter by summarizing the strength of the evidence linking the risk to its purported disease.

Dr. Kabat's aim is not to dismiss epidemiologic studies that investigate health risks. Rather, he casts a bright light on the not-so-disinterested parties that "interpret" the findings from those studies, including industry consultants, consumer groups, the legal profession, the media and even scientists themselves.



All are prone to deliberately skewing or misinterpreting epidemiologic findings to create an atmosphere of anxiety from which they can benefit. The fear-mongering is abetted by the public's willingness to embrace the hazard du jour and by its misunderstanding of the concept of risk magnitude.

For example, Dr. Kabat cites studies indicating that nonsmoking spouses of smokers have a 25 percent higher risk of lung cancer compared with nonsmokers whose spouses don't smoke, which sounds substantial. But lung cancer in nonsmokers is extremely rare—about 15 cases per 100,000 nonsmokers per year.

So a 25 percent increase in risk means just four additional lung-cancer cases per hundred thousand nonsmokers. For perspective, this 25 percent increase in risk for nonsmoking spouses should be compared with the 2,000 percent increased risk for lung cancer for a current smoker.

Dr. Kabat's message to his fellow epidemiologists: To prevent your findings from being used as fodder by alarmists, make sure your studies clearly state what is firmly known, reasonably suspected or improbable. And whenever possible, put findings into context.

PUBLISHED: Columbia University Press, 2009



History of Plagues – Plagues and History

by George Szilagyi, M.D., associate professor emeritus, departments of pathology and of microbiology & immunology

Malaria killed Alexander the Great at the height of his power, preventing him from uniting his eastern and western empires. Typhus helped defeat Napoleon's army in Russia in 1812, and Florence Nightingale's work with cholera patients in the nineteenth century helped establish modern nursing.

In his *History of Plagues—Plagues* and *History*, Dr. George Szilagyi vividly describes the historical and human impacts, as well as the causes and symptoms, of the 10 most notorious infectious killers, including the Black Death, malaria, influenza, cholera and syphilis.

Dr. Szilagyi has lectured on infectious disease since the 1970s, when he made weekly presentations to Einstein physicians. Two years ago, he compiled his lectures into a single volume. The result is this book—especially relevant these days, thanks to the H1N1 ("swine flu") virus now dominating the headlines.



Rachel and Aleks

by Sylvia Wassertheil-Smoller, Ph.D., professor, department of epidemiology & population health

Rachel and Aleks, Dr. Smoller's first novel, won the 2008 ReaderViews Reviewer Prize. It is set in Europe, Japan and America between 1918 and 1945 and tells the story of a couple caught in the upheavals of World War II and the Holocaust. Borrowing from the experience of Dr. Smoller's own family, the novel features Chiune Sugihara, the reallife Japanese diplomat who risked his career by issuing visas to Jews.

The book is also a love story in which Rachel must find her own answer to Freud's famous question: What do women want? Dr. Smoller has a web page about *Rachel and Aleks* that can be found at www.sylviasmoller.com. She recently gave a reading of her novel at the College of Medicine, which is included among the "Einstein On…" features on the Einstein website.

PUBLISHED: iUniverse, October 2007



Rags of My Soul

by T. Byram Karasu, M.D., professor and chair, department of psychiatry and behavioral sciences

The poems in *Rags of My Soul* are divided into three parts: "the scars of an unsubstantiated life," "fear of landing" and "I eluded life." The poems themselves—about longing, loving, sex, aging, regret, death and, above all, human relationships—are suffused with brutal honesty and the unsparing psychological insights of their psychiatrist-author. The poems can't be called uplifting and aren't meant to be. Instead they offer candid glimpses into life's often messy emotional complexity.

Lull of Betrayal

I knew it was coming: I noticed Her eyes Wasting truth. She distilled silence In that autumn of betrayal; Bent the sun and Burned maples orange Lulled me tender.

PUBLISHED: Rowman & Littlefield, 2009







AH, INDIA! Within seconds of arrival, the senses are overwhelmed, if not by the heat and humidity, then by the cacophony of car and truck horns, the kaleidoscopic swirl of saris in reds and greens and yellows or the jumble of architectural styles from across the millennia. Once the eyes, nose and ears begin to adjust, it's the contrasts that amaze: the creaky pushcarts that vie for a bit of pavement with gleaming BMWs and the odd cow; the sweet smells of incense that mix with the stench of raw sewage; the cold, hard stares of strangers that morph into warm, wide smiles. And of course, there are people, people everywhere in India, home to one sixth of humanity.



The rate of HIV/AIDS in India soared throughout the 1990s, and the disease cuts across all sectors of Indian society. Pictured below is Einstein faculty member Hillel Cohen, Dr.P.H., teaching an HIV/ AIDS workshop in Mumbai.

ver the last decade, the many health challenges facing this outsize nation have mobilized scientists half a world away, at Albert Einstein College of Medicine. In keeping with Einstein's mission to improve global health, researchers, clinicians and educators throughout the College of Medicine have launched a wide array of India-centric projects, from basic research into HIV/AIDS, to clinical studies of diabetes, to training programs for public health specialists—just a sampling of which are featured below.

While Albert Einstein College of Medicine may not be a household name in India, officials at the highest levels of its government have taken notice. In June 2008, India's minister for health and family welfare, Dr. Anbumani Ramadoss, paid a visit to the Bronx to learn more about Einstein and its global health ventures. By all accounts, Dr. Ramadoss left Einstein impressed, envisioning even closer ties with the College of Medicine in the years ahead.

HIV-related dementia

Einstein's collaborations with India began in earnest in 2000, when Vinayaka R. Prasad, Ph.D., professor of microbiology & immunology, received a multimillion-dollar, multiyear grant from the Fogarty International Center for Advanced Study in the Health Sciences, a component of the National Institutes of Health, to establish an AIDS International NIH Training and



At first, I was extremely skeptical that this low incidence of dementia in southern India was real. One possible explanation was that people with HIV in India die before developing dementia. But the patients under study had been placed on antiretroviral therapy and were still alive."

— Vinayaka R. Prasad, Ph.D. Professor of Microbiology & Immuno

A paper published last October in the Journal of Neuroscience provides the first clear evidence that the major HIV strains in the US and India differ in their ability to cause dementia.

Research Program (AITRP) at Einstein, one of about two dozen around the US. Using AITRP funds, US researchers help their counterparts in less-developed countries gain expertise in HIV/AIDS research and in public health.

With support from AITRP and the Einstein-Montefiore Center for AIDS Research, Ganjam Kalpana, Ph.D., associate director of AITRP and professor of genetics at Einstein, conducted several workshops for basic scientists and clinical researchers in Bangalore. In another joint effort, Einstein faculty members, including Ellie Schoenbaum, M.D., and Hillel Cohen, Dr.P.H., created a condensed version of Einstein's Clinical Research Training Program for Indian and Rwandan doctors, which was held in Mumbai (formerly Bombay) in early 2008. AITRP has also hosted more than two dozen Indian scientists who have come to Einstein for advanced training.

Research supported by AITRP is especially rich and varied, involving

studies of HIV-prevention programs, the molecular biology of fungal infections, and attitudes and behaviors regarding antiretroviral medications, to name just a few. Thus far, AITRP research has laid the groundwork for two major NIH grants and led to about 20 peerreviewed papers jointly authored by scientists from Einstein and India.

One such paper, published last October in the *Journal of Neuroscience*, provides the first clear evidence that the major HIV strains in the US and India differ in their ability to cause dementia, a finding with important implications for therapy.

This paper's genesis can be traced to 2001, when Dr. Prasad traveled to India to work with Udaykumar Ranga, Ph.D., a scientist at the Jawaharlal Nehru Centre for Advanced Scientific Research in Bangalore. Comparing notes, the two were stunned to learn that in southern India, only a small percentage of people with HIV develop dementia—about one-tenth the rate in the US. Together, the researchers set out to determine why.

"At first, I was extremely skeptical that this low incidence of dementia in southern India was real," says Dr. Prasad, who hails from Bangalore, India's Silicon Valley. "One possible explanation was that people with HIV in India die before developing dementia. But the patients under study had been placed on antiretroviral therapy and



In 2008, India's minister for health and family welfare, Dr. Anbumani Ramadoss, visited Einstein to learn more about its global health ventures. Dr. Ramadoss is pictured at left with Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean.

were still alive. Another possibility was that the patients weren't properly diagnosed. But the study was kosher by our standards."

This left two plausible explanations: that Americans and Indians differ genetically, affecting their response to HIV; or that the dominant subtypes of HIV in each country differ genetically, affecting the way the virus interacts with the immune system. "I'm a virologist and Dr. Ranga is an immunologist, so we decided to look into the viral genetics," says Dr. Prasad.

After HIV enters the body, it quickly gains access to the brain by stealthily hitching a ride inside immune cells known as macrophages. These HIVinfected macrophages release their HIV cargo once they cross the blood-brain



"Global health is no longer just the First World helping the Third World."

— Sanjeev Gupta, M.D.
Professor of Medicine and of Pathology

barrier. Then a crucially important protein called Tat, on the surface of HIV, lures additional HIV-infected macrophages into the brain and triggers production of chemicals known as chemokines that attract even more infected macrophages.

Dr. Ranga suspected that there might be differences between the Tat protein in the Indian HIV subtype, know as clade C, and in the Western subtype, clade B—which proved to be the case. Dr. Prasad and colleagues then discovered that the Tat protein in the two clades differs by a single amino acid at a key position on the virus.

The next question was whether this single change in Tat's amino acid sequence could explain the contrasting neurotoxicities exhibited by the two HIV subtypes. To find out, the researchers injected clade B or clade C viruses into a special strain of immunodeficient mice. After six days-enough time for the viruses to cause neurological damage in these animals-the mice were put into a complex water maze that challenged their short-term memory as well as their working memory (which temporarily stores and manages the information needed to carry out complex cognitive tasks, such as learning, reasoning and comprehension). "It's like having to remember where you parked your car at work if you have no assigned space, which requires you to update your memory every day," says Dr. Prasad.

In the end, mice infected with clade C performed much better in the maze than those infected with clade B, confirming that Tat does play a significant role in the development of HIV-related dementia. According to Dr. Prasad, therapies capable of disabling the Tat protein might protect against dementia in people infected with HIV.

The need for such drugs has grown more acute in recent years, thanks to anti-retroviral therapies that allow people to live longer lives but don't fully eradicate HIV from the brain or the rest of the body. In 1996, a 20-year-old newly diagnosed with HIV could expect to live another 36 years, according to a recent study in the *Lancet*. Today, that same person could expect to live another 49 years. But the low levels of remaining virus can cause significant brain damage, with estimates suggesting that up to half of the people infected with HIV will develop neurologic complications.

More papers from Einstein's AITRP can be expected in the years ahead. In 2006, Einstein's funding for AITRP was renewed for another five years, and its geographic scope was expanded to include Bangladesh and Rwanda.

Global health: A two-way street

AITRP will surely benefit India, but America will gain as well. "Global health is no longer just the First World helping the Third World," says Sanjeev Gupta, M.D., professor of medicine and of



pathology and a native of Jaipur, India's "Pink City," so named for its brightly colored sandstone palaces and homes.

The work of Einstein's William Jacobs, Ph.D., professor of microbiology & immunology and of genetics, is a perfect example. For years, he has been trying to perfect a rapid and inexpensive way to diagnose tuberculosis (TB). The test is based on a bacteriophage (a virus that infects bacteria) specific to the TB bacterium. In brief, the test involves



taking a sample of the patient's sputum and adding a specially engineered phage that glows in the dark in the presence of TB. Dr. Jacobs' assay worked well in the lab, but tests in the real world found that the phage caused patients' cells to burst, or lyse—which ruined the test. What was needed was a phage that infects TB bacteria without lysing it.

"When we started AITRP, we discovered a TB research center in India that has collected hundreds of phages," adds



A single Indian medical center might see as many as 50 to 100 liver-failure patients in a single year, due to the sheer size of the population and the high prevalence of toxins and infectious agents that cause liver failure.

Dr. Prasad. "They knew how to isolate them and whether they were lytic or nonlytic and which ones were specific to TB. AITRP brought the Einstein and India groups together, and by the end of eight visits to India by three graduate students, one postdoc, and one professor, they had identified and built a phage that would do exactly what Dr. Jacobs was hoping it would do."

Dr. Gupta's own research also exemplifies global health's two-way street. Using gene-transfer and celltransplantation technologies, he and his colleagues are trying to transform liver cells and stem cells into replacement therapies for a variety of diseases, including liver failure, diabetes and hemophilia. These therapies have shown great promise when tried on laboratory animals.

How quickly Dr. Gupta's team can move to clinical trials may well depend on India's health-care system. For example, in the US, even a large teaching hospital may see only a handful of patients with liver failure in a given year. "If we wanted to do a study with, say, 20 or 30 patients, we might have to wait years, or involve ten or more centers around the country, which is very logistically complex and time consuming," says Dr. Gupta.

By contrast, a single Indian medical center might see as many as 50 to 100 liver-failure patients in a single year, due to the sheer size of the population and the high prevalence of toxins and infectious agents that cause liver failure. Would India's health-care system be up to the task of conducting a sophisticated clinical trial? According to Dr. Gupta, who regularly collaborates with scientists in India, the answer is an emphatic yes.

"Many health-care facilities in India are on par with what we have over here in the US," he says. "One Indian



"Keralans went from a predominantly vegetarian diet, perfected over the centuries, to a high-fat diet. And they started exercising less."

Joe Verghese, M.D., M.S.
Associate Professor of Neurology
Louis and Gertrude Feil Faculty Scholar



"Among people in India, dementia is still considered a natural consequence of aging, rather than a disease process. In fact, most Indian languages contain no word for dementia."

India has more people with diabetes than any other country. In 2008, Meredith Hawkins, M.D. (center), professor of medicine at Einstein and a specialist in diabetes, spent three weeks in India to set up research and education partnerships with the staff of Christian Medical College in Vellore. CMC has special expertise in treating diabetes in poor areas and has also teamed up with Einstein researchers to create diabetes prevention-and-care programs in Uganda, where the incidence of diabetes is on the rise. institution we are working with does 100 living-donor liver transplants a year —more than any medical center in the US. So they possess the technical knowhow and facilities to manage people with complex disorders, which bodes well for collaborative efforts."

The risks of "Westernization"

India has caught up to the West in many other ways, for better and for worse. Today, the country is grappling with long-standing Third World scourges such as TB and malaria while also confronting a rise in diabetes, hypertension and other chronic ailments associated with modern lifestyles and longer life spans.

India's smallest state, Kerala, is at the forefront of this troublesome trend. The standard of living in this verdant sliver of land on India's southwestern coast began rising in the 1970s, thanks mainly to money sent home by Keralans working abroad. "Lifestyles changed," says Joe Verghese, M.D., associate professor of neurology, who was born and raised in Kerala. "Keralans went from a predominantly vegetarian diet, perfected over the centuries, to a high-fat diet. And they started exercising less."

The changes took their toll, often in the form of heart attacks, heart failure, hypertension and diabetes. Dementia has also become relatively common although exactly how common is not known.

"Nobody has done a true prevalence study of dementia here," says Dr. Verghese, who remains closely tied to the area, personally and professionally. "Among people in India, dementia is still considered a natural consequence of aging, rather than a disease process. In fact, most Indian languages contain no word for dementia. The family structure has provided a kind of security blanket for people with this problem."

But as India modernizes and the population ages, this security blanket may fray or disintegrate. "Because India has about a billion people, even just a small percentage with dementia translates into a huge number," says Dr. Verghese. An estimated three percent of India's seniors—some six to seven million people, or more than in the US—already



An estimated three percent of India's seniors—some six to seven million people, or more than in the U.S. already suffer from dementia. This number may well double over the next two decades, both in India and the rest of the developing world.

suffer from dementia. This number may well double over the next two decades, both in India and in the rest of the developing world.

Dr. Verghese decided it was time to learn more about dementia in India, starting with his home state. Thus was born the Kerala-Einstein Study, a twoyear project funded by the National Institute on Aging and aimed at strengthening dementia-related research and identifying risk factors for cognitive decline in Kerala.

Dr. Verghese's first challenge was administrative in nature. "Since it's difficult to do this research from afar, we wanted to build an infrastructure that allows local investigators to set up their own studies and develop a research network across Kerala and, in the long term, across India," he says.

Another challenge was assessing cognitive decline in a manner free of bias against people who cannot read or write. Compared to the rest of India, literacy rates are relatively high in Kerala, but many people would still have trouble with standard memory impairment tests, which rely on printed words. "It gets even more complicated if we want to expand this research across the country, since India has about 18 official languages and a hundred dialects," says Dr. Verghese. His solution: develop a test based on pictures and on



spoken rather than written words.

With his new test now in hand, Dr. Verghese and colleagues will look for factors that put Keralans at risk for dementia. A top suspect is cardiovascular disease, which has risen in tandem with dementia in this region of India. "While cardiovascular disease and dementia often coexist," says Dr. Verghese, "we don't know whether the relationship between them is coincidental or causal. Establishing causal links between cardiovascular disease and cognition will be the first step towards developing effective preventive strategies."

The researchers will also look at such risk factors as low education levels and lack of participation in leisure activities—factors that Einstein studies have linked with cognitive decline.

The next phase of the study will establish whether these risk factors can predict the onset of cognitive decline and dementia. To find out, some 2,000 patients will be tested at a new dementia clinic that the team has established at Sri Chitra Tirunal Institute in the Keralan city of Thiruvananthapuram.

Information from the Kerala-Einstein study will help the Indian government better predict its future health needs and may help the US as well. "I think studying diseases there will give us some insights into problems that immigrant populations face over here," adds Dr. Verghese. "Moving from a developing country to a developed country completely changes your lifestyle, as well as your risk for disease."



"With all the HIV cases occurring in India, I wanted to return and do something for the community there."

Rosy Chhabra, Psy.D. Assistant Professor of Pediatrics



STEPs in the right direction

When it comes to topics like sexually transmitted diseases and substance abuse, the last person teenagers want to listen to is a know-it-all adult. They're much more likely to pay attention to their peers or near-peers such as college students—the philosophy behind the School-based Teen Education Program (STEP), which trains undergraduates to tell Indian adolescents about the dangers of HIV and alcohol abuse.

STEP is the brainchild of Rosy Chhabra, Psy.D., assistant professor of pediatrics at Einstein, who comes from Simla, a town in India's mountainous north. Many Westerners know this area for its cool, lush green hill stations established by the British in the 1800s.

"With all the HIV cases occurring in

India, I wanted to return and do something for the community there," says the researcher, an expert in grassroots HIV-prevention efforts.

Everything fell into place for Dr. Chhabra during a 2000 conference in India, where she met people working with teens to prevent drug abuse, but not HIV. "They had the interest and the drive but lacked the expertise," she says. "We proposed a joint project, and the result was STEP."

STEP began as a pilot project in Mumbai combining Western know-how and Eastern sensibility. "Teenagers are teenagers no matter where they live, but there are some big social and cultural differences," Dr. Chhabra explains. For example, STEP's trainers couldn't talk about dating, which is frowned upon by parents in cosmopolitan Mumbai, but they could discuss intercourse. Go figure. "It helped that I was born in India and brought up there, so I understand a lot of this," she adds.

Dr. Chhabra also understood the importance of involving parents, teachers and school administrators every step of the way—especially in a program targeting youngsters with potentially controversial material. "I'm not sure the program would have been as successful if it had been done after school or in a community center," she says. "As it turned out, not a single parent refused to let their children participate."

In educating teens about HIV/ AIDS, Dr. Chhabra hopes to reduce the disease's stigma, which often prevents people from getting tested and treated. "So many are already symptomatic by the time they get to the doctor," says the researcher. "I want people to think about prevention rather than treatment. That can change the whole scope of the disease."

Funded by the World AIDS Foundation, STEP has reached some 2,000 eighth-graders in 25 schools. For the vast majority, STEP was the first HIV-prevention program they'd ever attended.

Dr. Chhabra calls the results "amazing." Questionnaires given before and after STEP training sessions showed that STEP helped educate students about HIV/AIDS and make them more accepting of people with HIV/AIDS and less likely to be swayed by peers to engage in risky behaviors. "The communities and the schools were very happy, because they felt the students gained some skills they could carry on," she adds.

With funding from the National Institute on Alcohol Abuse and Alcoholism, Dr. Chhabra launched a second phase of the program, STEP II, which adds a new emphasis on





STEP III, which has just been funded by the MAC AIDS Fund, a private philanthropy, will bring Dr. Chhabra's intervention to her home state of Himachal Pradesh, a rural, mountainous region where the population is largely unprepared for HIV/AIDS. "They are simple, sweet people," she says, "so we need to reach them and educate them before they are affected by the epidemic." Punjab, a state in northwest India, will also be included in STEP III.

Dr. Chhabra has no illusions about the hurdles ahead. "There are more than 300 million people in India under 30," she notes. "But for every person we touch, we make a difference."

Funded by the World AIDS Foundation, STEP has reached some 2,000 eighthgraders in 25 schools. For the vast majority, STEP was the first HIV-prevention program they'd ever attended. preventing the alcohol abuse that often leads to risky sexual behavior. STEP's second incarnation has reached 8,000 teens in two Indian states.

"The data from STEP II are still being analyzed, but so far it seems to be working very well," says Dr. Chhabra. "The strength of the program lies in its simplicity. We teach the life skills that youth really need, like dealing with peer pressure."



"Our goal was to combine structured education, learning gained by doing and the research enterprise."

– Sonia Suchday, Ph.D.

Associate Clinical Professor of Epidemiology & Population Health; Co-Director, Institute of Public Health Sciences, Ferkauf Graduate School of Psychology

The next generation of global health specialists

"I don't think anything can sufficiently prepare you for India," says Elesheva Levine, a third-year medical student at Einstein. She visited Mumbai last summer as part of a pilot training program in global health research offered by the Institute of Public Health Sciences (IPHS), which is jointly sponsored by Einstein and the Ferkauf Graduate School of Psychology. "The first thing that hits you is the humidity. And then the crowds and the poverty."



But Ms. Levine, a native of Woodmere, Long Island, isn't complaining. Actually, she can't praise highly enough the six-week program, split evenly between lectures in the Bronx and a mix of seminars and hands-on research at St. Xavier College in Mumbai, one of India's most progressive educational institutions. "The lectures here at Einstein were a good preview of global health research," she says. "But doing it firsthand in India was a lot more powerful." And that was the intended effect.

"Our goal was to combine structured education, learning gained by doing, and the research enterprise," says the program's principal investigator, Sonia Suchday, Ph.D., associate clinical professor of epidemiology & population health and co-director of IPHS. "Teaching each in isolation doesn't make sense. You can teach students wonderful skills, but those skills are lost unless you give them a place to try them out."

While in Mumbai, Ms. Levine and her 13 classmates worked on a project involving metabolic syndrome: a cluster of conditions, including abdominal obesity and insulin resistance, that increase one's risk of developing heart disease and diabetes—two lifestyle-related diseases approaching epidemic proportions in India. Ms. Levine and her colleagues helped Dr. Suchday collect data on biological, psychological and behavioral markers for metabolic syndrome among rural and urban youth in India, paralleling studies that Dr. Suchday has done in



Students at Xavier High School in Mumbai with Elesheva Levine (center), a medical student at Einstein.

the US. Dr. Suchday hopes to find ways to predict people's risk for heart disease and diabetes and develop strategies for preventing those problems.

Several students in the global health research program were struck by the different teaching styles in the two countries. "In the West, we tend to be very fact-based in teaching and communicating," explains Dr. Suchday, a native of Mumbai. "In India, there's an equal emphasis on research and on learning through personal experience. The students noticed that when one teacher lectured about the epidemiology of cancer, she also talked about her own battle with the disease and how her strong spiritual beliefs influenced her health. One of our students, who knew a lot about the psychosocial aspects of cancer, said to me, 'I never really understood this until I heard it there."

Endless lessons

There are endless lessons to be learned in India, as Einstein students and faculty are finding out for themselves. A work of fiction—*Midnight's Children*, Salman Rushdie's epic tale of the founding of modern India—best sums up this sentiment. Speaking for all Indians, Saleem Sinai, the novel's protagonist, exclaims: "To understand me, you'll have to swallow a world." **E** Einstein's Global Health Fellowships Mean the World to Our Students



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Albert Einstein College of Medicine OF YESHIVA UNIVERSITY



Ruth L. Gottesman, Ed.D.

Chairperson, Einstein Board of Overseers

Dr. Ruth L. Gottesman joined the Einstein Board of Overseers in 2002 and has been its chairperson since 2007. But her affiliation with Einstein began much earlier: For more than three decades, beginning in 1968, Dr. Gottesman had a distinguished academic career at the Children's Evaluation and Rehabilitation Center (CERC), where she specialized in diagnosing and treating people with learning disabilities. Glenn Miller, associate dean for institutional advancement, recently talked with Dr. Gottesman about her long record of service to the College of Medicine.

Dr. Gottesman, you worked at Einstein as an educator for more than 30 years. Could you discuss some of your accomplishments?

When I first came to Einstein, I started a program at CERC for children who did poorly at school despite "normal" intelligence. Soon, Frances Cerullo came on board, and we developed a diagnostic and treatment program that has helped thousands of children since its inception. We also created a rapid-screening test to help pediatricians, psychiatrists, neurologists, ophthalmologists and other professionals identify young patients who are at risk for school-learning difficulties. It is still being used.

In the early '90s, I also initiated the Adult Literacy Program for adults with learning disabilities. In this program, we evaluated our clients' problems and helped them by giving them reading materials that focused on practical skills they could use in their jobs and everyday lives. Later, we taught them how to use computers containing programs that "read" digitized text and "speak" it aloud. I was fortunate to have an outstanding partner in Dr. Mary Kelly, who succeeded me as director of the Fisher Landau Center for the Treatment of Learning Disabilities at CERC after I retired in 2002.

Was moving from the Einstein faculty to its Board of Overseers a big change for you?

For many years, I saw Einstein through the lens of a clinical faculty member. So when I first joined the Board, I wanted to help my fellow Board members gain a better sense of the atmosphere here-of how Einstein actually works. As chairperson of a new committee on student affairs, I invited overseers to sit in on a course called "Introduction to Clinical Medicine," where they saw for themselves how problems such as diabetes and drug abuse were presented to medical students and how first-year students learn to interview patients. I also organized a "mini-med-school" for Board members, who came to the campus and heard lectures from our faculty. I believe the participating overseers had a fine experience that deepened their appreciation of Einstein.

What was it like to become chairperson of the Board of Overseers?

I felt very fortunate to become chair at an important point in Einstein's history. Allen Spiegel had been dean for just a year. And as with any new administration, a lot of changes were taking place. We've worked together closely for three years now, and I don't think we could have a better relationship. Allen respects my judgment, I certainly respect his, and I believe that his goals are the best possible ones for Einstein. He is tireless, giving all of his energy, passion and intellect toward the cause of Einstein, which is enormously gratifying.

What are your thoughts about Einstein's campus master plan?

Developing a campus master plan was essential for us. We're lucky that, before Allen came, people had the vision to imagine a new center for genetic and translational research—and that the City of New York agreed to lease us 10 acres on the Jacobi Hospital site. We built the Price Center/Block Research Pavilion on this land, which also includes the 350,000-square-foot former Van Etten Hospital. Renovating Van Etten for multipurpose use is a key aspect of the campus master plan.

Now it's the dean's job to fill our wonderful new research center with investigators whose science will revolutionize Einstein and, hopefully, medicine. It will take a tremendous amount of time, energy and money. But I have no doubt we will be successful.

Dean Spiegel is actively recruiting new investigators to Einstein. What would you say to someone who might consider coming here?

They should first of all be aware of the collegiality that prevails among our brilliant, committed and productive faculty. There truly is a welcoming and cooperative spirit here that includes sharing of research findings. And because of that openness, we have a lot of crossfertilization of ideas that contributes to our enviable record of productivity. There's also the feeling at Einstein that you're doing good, that you're saving the world, so it's just an inspiring place to work.

What advice can you offer alumni who are considering getting involved with their alma mater or making a donation?

I think most of the alumni have a very good feeling about their time at Einstein. I'd tell them, "We are still the wonderful place you remember. So come back and see us. And besides visiting, tell us about your experiences—we're very interested in hearing from you. Once you graduate, you shouldn't be separate from Einstein. We need your many skills."

Ruth L. Gottesman looks on as John Greally, M.B., B.Ch., Ph.D., who directs the new Center for Epigenomics, shows her a gel in his lab.




The chair of any board must spend a lot of time on fund-raising. What do you tell friends or colleagues when you ask them to consider investing in Einstein?

First of all, when they look in my eyes they can see the passion I have for this place. And I say, "Let me tell you about Einstein. Let me tell you what's so great about it, and why you can really make a difference."

Donating to Einstein can be personally gratifying in a way that's different from giving to other institutions. We're growing, so we're at a point where every gift is tremendously important in sponsoring the research that will help us shape the future of medicine. And we're located in an area where the clinical efforts we undertake-efforts that often rely on donations-are so vitally needed. The Bronx is a thriving and diverse community, but it's medically underserved and has tremendous health challenges, including high rates of diabetes and HIV/AIDS. For donors, knowing they can have a real impact on improving health care for people who desperately need it can be inspirational.

An Einstein medical student practices clinical skills in one of the 23 examination rooms in the new Ruth L. Gottesman Clinical Skills Facility.

In the fiscal year that ended last June, Einstein raised more money than it ever had before and, obviously, your gift was a big part of that.

I've always wanted to be a part of the growth of Einstein, and in ways that would be most helpful. So the dean and I worked together to determine priority areas where we thought my family's gift could be most useful. I give to other places, too, because it is important to give, but donating to Einstein gives me special joy. A minute ago, I used the word "inspirational," and that's how I feel about Einstein. I know it so well, I know that what it does is terrific, and I know that my contributions will be used in the most productive way.



Human embryonic stem cells are a principal focus of research conducted in the Ruth L. and David S. Gottesman Institute for Stem Cell and Regenerative Medicine Research.

THREE TARGETED AREAS

n 2008, Ruth Gottesman and her husband, David, donated \$25 million to Einstein—one of the largest gifts in the College of Medicine's history. The funds were allocated to three areas of vital importance to Einstein's mission:

Stem cells and regenerative medi-

cine. Much of the work in the Ruth L. and David S. Gottesman Institute for Stem Cell and Regenerative Medicine Research involves human embryonic stem cells. Since these cells can develop into virtually any cell type in the body, they offer tremendous potential for improving human health. Regenerative medicine involves transplanting stem cells or other cells that then multiply and restore lost or diseased tissue.

Epigenomics. This exciting new field focuses on so-called epigenetic changes involving chemicals that attach to genes and turn them on or off. Our total repertoire of epigenetic controls is referred to as our epigenome. The Gottesman gift has created the Center for Epigenomics, where Einstein scientists look for epigenetic control mechanisms that go awry and contribute to aging, diabetes and many types of cancer. Since epigenetic changes are reversible, such discoveries could lead to therapies for major health problems.

Clinical training. Einstein has long needed a facility dedicated to teaching students the skills essential for becoming well-rounded physicians. The Ruth L. Gottesman Clinical Skills Facility fills that need. One of the largest such centers in the United States, the Ruth L. Gottesman Clinical Skills Facility contains 23 fully equipped examination rooms where students are tested on physical diagnosis, examination techniques and other clinical skills.

Up, Running & Recruiting

A year after its gala opening, the Price Center/Block Research Pavilion boasts talented new tenants

The Michael F. Price Center for Genetic and Translational Medicine/Harold and Muriel Block Research Pavilion was built primarily as a place for conducting cutting-edge science that will help transform modern medicine. But there was also another motivation: to retain outstanding Einstein researchers while attracting the most-promising scientists from around the nation and the world. Indeed, since the building's formal opening on June 12, 2008, some two dozen new arrivals have settled into the Price Center/ Block Research Pavilion's state-of-the-art laboratories. The following profiles show some of the winding paths that led three new recruits to join the diverse Einstein community.

A Juggler of Quanta

earing jeans and an old Who t-shirt, Jeremy Metz, Ph.D., looks more like a high-school student than a postdoctoral research fellow. But when he begins talking about stochastic simulations and mitotic spindles, it becomes clear that he really does belong at Einstein.

Dr. Metz is a research associate in the laboratory of Ao Ma, Ph.D., assistant professor of physiology & biophysics. He specializes in quantum information, quantum computing, quantum optics—new fields all based on the bizarre behaviors of particles at the atomic (quantum) level. There, for instance, a single particle can act as if it were in more than one place at the same time. Scientists are harnessing these strange properties to develop all sorts of new technologies, some of them proving highly useful in biomedical research.

Born in Germany and raised in Wales, Dr. Metz developed a taste for physics at an early age. "I always liked the way physics allows you to explain things from the bottom up—that is, the way you can start with a few basic principles and then build complicated models," he says. "But I also had an interest in biology, and I wanted to try applying physics principles to biological systems, which is what I am doing here at Einstein," he says.

Dr. Metz is developing mathematical models of the assembly and function of the cell's mitotic spindle, a self-organizing "machine" composed of microtubules, that segregates chromosomes into two identical groups in preparation for cell division.

This line of inquiry (a collaborative effort with Dr. Ma and David James Sharp, Ph.D., associate professor of physiology & biophysics) exemplifies basic research with tremendous clinical potential. "A number of diseases, including cancer and many birth defects, are believed to result from dysfunctions of the microtubules," he explains.

This fertile mix of science, math and computing seems to come naturally to Dr. Metz, who is at the leading edge of the first generation to come of age after the Internet was created. Still, he doesn't take it for granted. Most of all, he prizes the instant accessibility of the scientific literature. "If you have a hunch about something, you can just check it out online, instead of spending hours in the library," he says.

Just a few years ago, Dr. Metz was working as a bartender and then as a machine operator—temporary jobs during his "gap year" (the lengthy holiday that many British students take between high school and college). He's now conversant in four languages, thanks to his travels and his multicultural childhood.

Dr. Metz enrolled in 2000 at Imperial College in London, where he earned a master's degree in physics, followed by a doctorate in theoretical quantum optics and quantum computing —credentials that, in 2008, landed him his first academic post,



JOHANNA DAILY, M.D.

at Einstein. "In terms of academics, the US is a central hub," he says. "Back in Britain, scientists are encouraged to come here at some point in their careers, and I decided to do that first."

In his spare time, Dr. Metz enjoys swimming, running, juggling, sampling the city's multicultural cuisine, reading (especially books by Haruki Murakami and Stephen King) and—no surprise—"playing around with three-D computer graphics modeling."

Visitors to the Price Center/Block Research Pavilion should take note: That "kid" who looks as if he's playing video games is actually working toward a cure for cancer.

Daily's News

arlier in her career, Johanna Daily, M.D., found herself at a crossroads. While she loved clinical care, she also had a flair for research. But doing justice to her lab work would sharply curtail her time in the clinic. To sort things out, she did the sensible thing: took a long vacation from her post as an infectious disease specialist at Boston's Brigham and Women's Hospital. But instead of heading for the nearest beach, she journeyed to Malawi, Africa, to participate in a study investigating why some children die of malaria and others don't.

The experience affected her profoundly but didn't solve her conundrum. "I came back and thought, 'research is too much for me—let me just stay in the clinic,'" she recalls. Not until a few years later, in 1999, did she finally shift her emphasis from patients to test tubes. "I was a little bit of a ping-pong ball," she admits.

After a few strategic bounces—including graduate studies in epidemiology at Harvard and field work in Senegal—Dr. Daily landed at Einstein in January 2009 as an associate professor of medicine. She is working to define the molecular mechanisms responsible for the variable outcomes in people with malaria. "It was not a direct route to a career as an investigator, but the journey has enriched the research questions I ask," says the new recruit. "We have had some interesting results."

"Groundbreaking" would be a better description of the results that she and her Boston colleagues published in *Nature* in 2007. Using blood samples from more than 40 malaria patients in Senegal, they determined which of the nearly 6,000 genes in *Plasmodium falciparum*—the most virulent species of the malaria parasite—switch on or off during human infection. Her team identified three distinct biological states of the parasite never before observed, including one in which the microbe seems to sense what is happening within its human host and adjust its biology accordingly. The research not only revealed novel targets for anti-malarial drugs and vaccines but fundamentally shifted the way scientists view this ancient disease. For decades, our understanding of *P. falciparum* was based on studies carried out in cultured cells, not in the parasite's natural environment. Thanks to Dr. Daily, it is now apparent that we've overlooked key parts of the malaria parasite's biological repertoire.

Dr. Daily also studies drug resistance, a never-ending concern with this wily and resilient parasite. Humans have the upper hand for now, with combination therapies based on artemisinin (a drug derived from the wormwood plant), but that advantage may be short-lived. In one field project, she has been teaching Senegalese researchers molecular techniques for detecting drug resistance, a key step in guiding changes in therapy and staying one step ahead of the disease.

The Bronx sees only a handful of cases of malaria a year, so Dr. Daily must travel thousands of miles to conduct research and find scientific partners. She must also navigate institutional review boards in both local and foreign institutions. "These are tremendous challenges," she says, "but I am compelled by the questions and the partnerships."

Dr. Daily hopes to offer research opportunities in global health to students here at Einstein. "If you have a chance to see this as a possible career, then your imagination takes over," she says. "That is what happened to me."

10,000 Steps to Good Health

resh out of engineering school, **Irwin J. Kurland**, **M.D.**, **Ph.D.**, had a dream job designing satellites, lasers and other high-tech wonders at Hughes Aircraft in California. But after a few years, he began to worry that he'd end up like his supervisors—"all working on military contracts and figuring out how to blow things up more effectively," he recalls. "I decided I'd rather apply my engineering skills to medical research."

The idealistic young engineer would go on to earn an M.D. and then a Ph.D. in molecular physiology, a prelude to a highprofile career in endocrinology, diabetes research and—most recently—metabolomics. This emerging discipline assesses a person's health by looking at changes in the concentrations of nutrients, such as fats and carbohydrates, when they are metabolized by the body's chemical reactions.

While his career trajectory is unusual, Dr. Kurland's very existence borders on the miraculous, with both his parents survivors of the Holocaust in Poland. His mother and her family evaded the Nazis by living for years in a tiny "room" dug beneath the forest floor, and his father barely escaped execution



in a concentration camp. "The day before they were going to kill everyone, the Russians came," he says.

Earlier this year, a generation and a world away from those dark days, Dr. Kurland joined the Einstein faculty as an associate professor of medicine and director of the new Metabolomics and Stable Isotope Core Facility of the Einstein Diabetes Research Center. He is also studying metabolic flexibility—the body's ability to match fuel demand to fuel supply as it switches between using carbohydrates (right after meals) and fats (after fasting overnight). "Individuals who have a problem in fuel switching are commonly obese and predisposed to developing diabetes," he explains.

Another research focus is a symptomless condition called prediabetes, in which blood glucose levels are barely above normal but not yet in the diabetic range. Pre-diabetes is surprisingly common in the US: 57 million people are affected, according to the American Diabetes Association; those most at risk of developing it are overweight or have high blood-cholesterol levels. Detecting and treating pre-diabetes (mainly through weight loss, exercise and, when necessary, drugs) is crucially important: Not only does the condition often lead to full-blown diabetes, but researchers now know that pre-diabetes itself can contribute to long-term damage to the heart and circulatory system.

Diagnosing pre-diabetes has been notoriously difficult. But that may change now that Dr. Kurland has patented a test that will soon be evaluated in a clinical trial.

The standard glucose-tolerance test for diabetes involves drinking a glucose solution and then, two or more hours later, measuring blood sugar; a high level indicates insulin resistance (the body's failure to respond properly to the insulin it produces)—the hallmark of type 2 diabetes. But the test isn't sensitive enough to detect the subtle faltering of the normally rapid insulin response that occurs right after a carbohydratecontaining meal, indicating that the person has pre-diabetes.

Dr. Kurland's pre-diabetes test uses glucose tagged with stable, non-radioactive isotopes. By measuring the isotope pattern in the glucose response, the test spots subtle metabolic abnormalities that can occur within minutes of a meal.

Dr. Kurland notes that his test wouldn't be needed if people avoided becoming overweight, the main culprit underlying prediabetes and type 2 diabetes. The solution, he says, is a balanced diet and regular exercise. His suggestion: Buy a pedometer, and take 10,000 steps a day—equivalent to about five miles.

"Studies show that this level of activity works wonders at helping people control, or prevent, diabetes," he says. "And increased walking in general has been found to lower the death rate in adults with diabetes." \mathbf{E}

Price Center/ Block Research Pavilion **Recognizing Our Donors**

he Price Center/Block Research Pavilion represents the shared vision of the Board of Overseers, deans past and present, Einstein faculty and, crucially, our donors. Their desire to make a difference led the LeFrak and Winter families to make major commitments to advance the research at the new facility. Both families were recognized for their generosity at receptions held in their honor.



Winter Family Attends Dedication

Benjamin and Susan Winter were honored on March 9 at a private dedication ceremony and reception at the Price Center/Block Research Pavilion. The event was hosted by Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean. It was held to recognize the Winters for their recent major gift to Einstein in support of biomedical research at the new facility, whose main lobby has been named in their honor.

Following the dedication ceremony, Mr. and Mrs. Winter and their family were given a guided tour of the laboratories of Jeffrey E. Pessin, Ph.D., the Judy R. and Alfred A. Rosenberg Professor of Diabetes Research and director of the Diabetes Research Center, and Matthew Levy, Ph.D., assistant professor in the department of biochemistry. Dr. Pessin is spearheading the creation of a Metabolomic Core Facility in the Price Center/Block Research Pavilion. Dr. Levy's work focuses on the design of aptamers, nucleic acids that may be useful in the diagnosis and treatment of diabetes and other diseases.

Pictured above are Susan and Benjamin Winter (second and third from right) with (from left) daughter Alison, son David, grandson Charlie and daughter-inlaw Liz.



Ethel LeFrak Is Honored

Mrs. Ethel LeFrak was the guest of honor at a reception and dinner hosted by Dean Allen M. Spiegel, M.D., at the Price Center/Block Research Pavilion on March 24. The evening celebrated Mrs. LeFrak for her recent \$3 million gift in support of the new research facility. In appreciation of her remarkable generosity, the College of Medicine has named the auditorium of the 223,000-square-foot building the Ethel and Samuel J. LeFrak Auditorium, honoring Mrs. LeFrak and her late husband.

"This gift is the culmination of our family's more than 50year relationship with Einstein," said Richard LeFrak, speaking on behalf of his mother and the LeFrak family. Mr. LeFrak was referring to the fact that his parents and his paternal grandparents, Sarah and Harry LeFrak, all were original Founders of the College of Medicine.

His mother, Ethel, a longtime leading supporter of Einstein's National Women's Division, started a family tradition of service to Einstein. Her daughters, Francine A. LeFrak and Denise LeFrak Calicchio, have been involved with the Women's Division for many years. Mrs. Calicchio and her daughter, Allison Koffman, serve on the board of the division's New York chapter.

Among the 50 guests who gathered to honor Mrs. LeFrak were Einstein Overseer Linda Altman and her husband, Earle Altman, and Mrs. Ingeborg Rennert, all of whom are friends of the LeFrak family and Benefactors of Einstein; Dr. Harry Shamoon, associate dean for clinical and translational research; and Dr. John Greally, director of the Center for Epigenomics at the Price Center/Block Research Pavilion.

Pictured above: Mrs. Ethel LeFrak (center) with her children (left to right) Richard LeFrak, Denise LeFrak Calicchio and Francine A. LeFrak. Dean Allen M. Spiegel, M.D., is at right.

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Every gift to Einstein's Michael F. Price Center for Genetic and Translational Medicine/Harold and Muriel Block Research Pavilion is an investment in the advancement of translational medicine, the new frontier of biomedical research and patient care.

To find out about major giving opportunities at the Price Center/Block Research Pavilion, please contact:

Glenn Miller, Associate Dean for Institutional Advancement Albert Einstein College of Medicine 718-430-2411 or gmiller@aecom.yu.edu



Marilyn and Stanley M. Katz: Giving Back to the Bronx

Marilyn and Stanley M. Katz, longtime Benefactors of Albert Einstein College of Medicine and members of its Board of Overseers, donated \$7 million to start a major new program to improve the health of Bronx residents. The Marilyn and Stanley M. Katz Comprehensive Cancer Prevention and Control Program will carry out studies to identify lifestyle and environmental factors that cause cancer and will launch cancer-prevention initiatives focusing on smoking cessation, exercise and healthy nutrition. The results of these studies will have the potential to influence cancer-prevention efforts nationwide.

arilyn Resnick and Stanley Katz met as children living across the street from each other on Decatur Avenue in the Bronx, where they both attended P.S. 94.

"The Bronx was the best place to grow up," says Marilyn, who is chairperson of the Cancer Research Advisory Board of the Albert Einstein Cancer Center. "We didn't have to depend on our parents to carpool and take us places. Every place was walkable. From our building we'd go downstairs to the Williamsbridge Reservoir Oval, a park that had a track, a wading pool and areas for bike riding and roller skating. You could walk to the movies on Jerome Avenue. You had the school yard and the Wakefield and Fordham public libraries."

"For anyone growing up in the Bronx, there is an indescribable attachment," adds Stanley. "You didn't have to be rich, but the life was rich. You would go to school, then come home and drink your milk and, in 10 minutes, be



Above: Marilyn and Stanley M. Katz at home in Westchester County, NY

Right: The couple during their courtship in July 1951, at Senate Caterers, a popular catering hall on Fordham Road owned by Mr. Katz's uncle, Joseph Katz. The occasion was the wedding reception of Stanley's older sister, Estelle.

outside with 25 or 30 kids on the block. There was so much to do—and it didn't involve computers! Stick ball, curb ball, johnny-on-the-pony, ringaleveo and checkers with bottle caps."

One Saturday afternoon, after an Evander Childs–DeWitt Clinton football game, Stanley asked Marilyn if he



could walk her home, and invited her to the movies for the following Saturday night. She was 16, he was 18, and it was their first date.

"We saw Montgomery Clift in *The Search* at the Loew's Paradise on the Grand Concourse," Marilyn remembers, "and then we went for pizza on Fordham Road." They became engaged when Marilyn turned 18, and a year later, in 1953, they married and moved in with her parents. He was in law school, and she was a college student.

Marilyn's parents, Pearl and Jack Resnick, had begun their married life in the Bronx during the Depression. Jack opened a one-man real estate office in the Busher Building at 349 East 149th Street. Although times were hard, the Resnicks always managed to donate to Jewish charitable organizations. They believed in the Jewish tradition of *tzedakah*, or charitable giving, and passed that tradition on to their four children. The couple's generosity made a strong impression on their son-in-law.

"I admired how they were giving back so much—it was a great lesson," observes Stanley Katz. His own mother, Gertrude, faithfully filled the tzedakah box she kept in their Bronx apartment. "Whenever I had to take an exam," Stanley recalls, "my mother would put money in the box." By the time Marilyn and Stanley were married, her parents had moved from the Bronx to Westchester County. Their new neighbors spoke enthusiastically about a medical school planned for the Bronx. Admission would be based on academic excellence, not social quotas, and it would be named for Albert Einstein, the great humanitarian and physicist.

The mission of the new school improving the human condition through the science of medicine and the art of healing—became one of Pearl and Jack Resnick's favorite causes and inspired Jack Resnick to become an early supporter of the College of Medicine. Einstein's Jack and Pearl Resnick Campus is not far from where Marilyn and Stanley grew up. "Thanks to my parents' passionate commitment to Einstein and the Bronx, the College of Medicine has long been a part of my life," says Marilyn.



DIPLOMA VANDER-CHILDS-HIGH-SCHOOL mass to construct our Marilus Restrictor Marilus Restrictor Academic-course or source Marilyn's involvement with Einstein began in 1970, when its Women's Division started a Westchester committee, later known as the Westchester/ Fairfield chapter. Marilyn served as its president from 1977 to 1980 and today serves on the division's national board. Stanley, who was introduced to the College of Medicine's Men's Division by Jack Resnick and his son, Burt, was elected to the Einstein Board of Overseers in 1983, and is a member of its executive committee.



Above: Marilyn and her mother, Pearl Resnick, at an Einstein gala held at the Breakers Hotel in Palm Beach, in the late 1960s or early 1970s

Left: Marilyn Katz's father, Jack Resnick (at right), receives a Founder's plaque honoring him for his role as one of the early donors to Einstein.

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ENCE AT THE HEART OF MEDICINE 43



Marilyn Katz standing in front of the Benefactors Wall at Einstein.

A tragedy—the death of her sister Susan from brain cancer at age 50—would inspire Marilyn to become even more closely involved with Einstein. She decided to honor Susan's memory "by dedicating my life to doing all I can to help find a cure for this terrible disease." In 1998, Marilyn became founding chairperson of the Cancer Research Advisory Board of the Albert Einstein Cancer Center. She calls her work with Cancer Center director I. David Goldman, M.D., the center's faculty, and her fellow advisory board members "a rare privilege, the most rewarding experience of my life."

The Katzes' gift to the Cancer Center was announced at a luncheon honoring Marilyn for her dynamic leadership of the Cancer Research Advisory Board.

(The new program created by their gift is described below.)

"I'm delighted that Stan and I have the opportunity to help initiate this new program at Einstein," Marilyn said. "Both of us have such wonderful memories of growing up in the Bronx, so it's especially gratifying to be able to give back to the community in this way. I know that our involvement in this vitally important program would make my parents very proud."

"The Marilyn and Stanley M. Katz Comprehensive Cancer Prevention and Control Program will expand the scope of the population-based research at Einstein and will help lead to new approaches to the prevention and early detection of cancer," notes Dr. Goldman, director of the Albert Einstein Cancer Center and the Susan Resnick Fisher Professor. "It not only will benefit the Bronx community but will contribute to cancer control efforts throughout the United States."

Allen M. Spiegel, M.D., Einstein's Marilyn and Stanley M. Katz Dean, concurs. "Einstein has great strengths in the behavioral and social sciences when it comes to diabetes and AIDS. The new gift from Marilyn and Stanley Katz will allow us to extend this important approach to cancer research so we can address a broader range of serious diseases and health disparities." **E**

The Katzes' Generous Gift Creates a Promising New Program

The Katzes' \$7 million gift has created the Marilyn and Stanley M. Katz Comprehensive Cancer Prevention and Control Program. Its scientists will conduct studies to identify lifestyle and environmental factors responsible for the high incidence of several types of cancer in the Bronx compared to the rest of the country. They will also design new approaches for combating lung, prostate, colorectal and other cancers that afflict Bronx residents.

The program's director, Bruce Rapkin, Ph.D., is nationally recognized for his success at the community level in helping diverse groups—the elderly, HIV/AIDS patients, cancer patients—to recognize and overcome hurdles to better health. Dr. Rapkin was recruited from Memorial Sloan-Kettering Cancer Center, where he served as director of the Community Health and Health Disparities Laboratory. Several of his Memorial Sloan-Kettering colleagues have accompanied him to the Bronx.

"I look forward to integrating the work that we started at Sloan-Kettering with the impressive research and the clinical and community outreach efforts at Einstein," says Dr. Rapkin. "Our goal is to make a lasting, positive impact on the health of the Bronx community." Pictured below (left to right) are: Elisa S. Weiss, Ph.D., Hayley S. Thompson, Ph.D., Bruce D. Rapkin, Ph.D. and David Lounsbury, Ph.D.







Make Einstein a part of your legacy

Your bequest ensures that we'll continue to provide outstanding medical education and support research that holds the key to translating the origins of disease into clinical treatment and prevention.

You'll have the satisfaction of knowing your generosity will have an impact on generations to come.



Albert Einstein College of Medicine

To find out more about making a bequest in your will, and to learn the advantages of other tax-favored legacy gifts, please contact:

Glenn Miller

Associate Dean for Institutional Advancement Albert Einstein College of Medicine 718-430-2411 or gmiller@aecom.yu.edu

Henry Rubin, Esq. Senior Director, Planned Giving Albert Einstein College of Medicine 212-960-0870 or hrubin@yu.edu





Anatomy students follow in Leonardo's footsteps

An anatomy lab was transformed into an art studio where 16 medical students and several faculty members participated in Einstein's first "Da Vinci Night"—a chance to appreciate the human body the way Renaissance artists did: not just something to be dissected and studied, but as art.



Medical students and faculty sketched human forearms and hands during the first "Da Vinci Night" at Einstein. The session was supervised by classically trained artist Andrew Lattimore (at right) of Cornwall, NY.



he class was the brainchild of Todd R. Olson, Ph.D., professor of anatomy and structural biology. Dr. Olson is well known on campus for urging students to look beyond their textbooks to the world around them.

During the 16th century, human dissection flourished at many Italian universities—Bologna, Ferrara, Florence, Pisa, Rome and, most notably, Padua, where musicians entertained observers during breaks. Literally and figuratively, Renaissance Italy's anatomical theaters were centers of cutting-edge science where artists such as Leonardo da Vinci and Michelangelo Buonarroti came to observe and sketch. Their curiosity about how the human body is put together and their amazement at God's handiwork were transformed into masterpieces that adorn the world's museums.

Over succeeding centuries, human anatomy remained an essential part of the training of artists and physicians. Teachers emphasized science as well as humanism—an appreciation of the beauty inherent within the human body. By contrast, anatomy lab for today's medical students is about inculcating knowledge, with little discussion of the humanity and art beneath the blue sheet.

"My goal for 'Da Vinci Night' was for students to see the multidimensional qualities of what they are going to focus on as physicians: the human body and the persona occupying it," said Dr. Olson. "Facts are the minimum expected from Einstein's students. We also need to reconnect them with what stimulated them to choose medicine in the first place." Todd Olson, Ph.D. (in lab coat), and Andrew Lattimore view a drawing in the making. Below are three examples of sketches created at "Da Vinci Night."

So great was the enthusiasm for this inaugural "Da Vinci Night" that more than 30 applicants had to be turned away. The 16 participants were arrayed around eight cadavers, where they worked for two to three hours drawing the human forearm and hand. The class results were displayed in a poster presented at the 25th Anniversary Meeting of the American Association of Clinical Anatomists in Toronto, Ontario. Selected drawings were digitized and made into a 50" x 36" collage on permanent display in Riklis Auditorium.

First- and second-year medical students will be invited to three additional "Da Vinci Nights"—covering the heart, skull, and forearm and hand—that are planned for the 2009-10 anatomy course. E







A Conversation with Julie R. Ingelfinger, M.D. '68

Julie R. Ingelfinger, M.D. '68, is senior consultant in pediatric nephrology at Massachusetts General Hospital and professor of pediatrics at Harvard Medical School. Since April 2007, she has served as a deputy editor at the *New England Journal of Medicine*. Dr. Ingelfinger recently spoke with Einstein about her multifaceted career.

The New England Journal of Medicine must be an interesting place to work. What do your duties involve?

The seven deputy editors evaluate submissions to the *Journal* and also edit and write for the *Journal* and its website. We receive between 20 and 40 research articles per day, so much of our time is spent reviewing and discussing them. This requires a great deal of collaborative work—with authors, other editors and production staff. I'm responsible for handling many of the original research articles in nephrology, hypertension, endocrinology, medical education and pediatrics. I also supervise drug therapy and medical progress articles, as well as a new series, Videos in Clinical Medicine.

How do you balance your work at the *Journal* with your medical practice and research?

I've been unbelievably fortunate to have a career that allows me to do many things I love. The majority of my time is now spent at the *Journal*, but I still have a consultative clinic in pediatric nephrology and hypertension and do some teaching and collaborative research. I've had NIH funding for more than 20 years, and we're continuing research in vasoactive peptides in renal development and in nephropathies.



What brought you to the Journal?

In the mid-1970s, during the time my late father-in-law, Franz Ingelfinger, was editor-in-chief of the *New England Journal of Medicine*, I'd often visit him in his office. We'd talk about what he was working on, and his job seemed exciting to me. In 2000, the *Journal* was looking for new editors, and so I applied. I started working there in 2001, and it feels like a perfect fit—a dream come true.

How did you choose medicine as a career?

My dad was an engineer and inventor who had over 70 patents. As a family, we'd discuss ideas every day and believed in trying to do our best in whatever we chose. I had thought I might be a pianist or journalist but was always intensely anxious when performing. I entered a piano competition and thought it would be a "sign" not to pursue music if I lost. Obviously, I moved on! I wanted to do something difficult and jumped at the chance to study medicine. Recently, I went to a piano master class in Aspen and wondered if I'd feel I had "blown it" by passing on a music career. After listening to a few phrases from other musicians, it was clear to me that I had made the right choice to do something else.

How did your Einstein years prepare you for your career and shape your views?

Einstein encouraged students to ask questions as we learned -an invaluable lesson. My teachers were friendly and respected the students, as well as the learning process. I didn't feel the sense of hierarchy that I've felt in other settings. One result is that when I'm acting as a mentor these days, my attitude is that I'm working with a colleague who just happens to be younger than I.

Having recently celebrated your 40th Einstein reunion, how do you feel about this institution?

Einstein was a good place to be-a place without any pretension or rigid hierarchy. I know how hard it can be for faculty to make time for students, but many of them did. They went out of their way to invite us to their homes, and they came out to dinner with us. These nurturing qualities still characterize Einstein and make it unique among medical schools.

What changes in science and health policy do you hope to see in the new Obama administration?

Some welcome changes have already occurred. For example, I am more than pleased that restrictions on stem cell research have been lifted. In addition, the health-care provision of the recently passed stimulus package offers much-needed assistance, including nearly \$25 billion to continue health insurance for people who lose their jobs, \$1 billion for health maintenance and wellness and \$87 billion for Medicaid and other state health programs. The stimulus package also provides \$10 billion to the NIH, much of it for new grants.

Are you hopeful that more people will gain healthcare coverage under the Obama administration?

My views on health-care access haven't changed since my first year as a medical student at Einstein: I believe that access to adequate health care is a basic right. With a committed administration, new initiatives at the NIH and restructuring at the FDA, there will be important improvements in health-care access and quality of care. So I have high hopes that, despite the bad economy, this new administration will improve our health-care system.

Foodborne illness has been much in the news lately. As a pediatric nephrologist, you've been quoted regarding hemolytic uremic syndrome, notorious for causing acute kidney failure in children who eat food contaminated with E. coli serotype 0157:H7. How could food safety be improved?

A crucial need is for better and faster ways to monitor the food we eat. We don't currently detect food contamination in a timely manner, yet the technology for doing so exists. For example, by applying recent advances such as real-time polymerase chain reaction, researchers have developed techniques that accurately detect foodborne pathogens in a matter of hours.

These new techniques need to be commercialized and widely deployed so they can be used to monitor foods as they're being manufactured, in the end products and during storage. We also need more-effective epidemiologic surveillance that can promptly discover outbreaks of foodborne illness so we can minimize the number of people affected.



Each year in the US, foodborne E. coli 0157:H7 causes an estimated 73,000 infections and more than 60 deaths. Most cases result from eating undercooked, contaminated ground beef. As few as 10 cells constitute an infective dose.



Elizabeth G. Nabel, M.D.: Putting People First

The choice of Elizabeth G. Nabel, M.D., as commencement speaker reflected Einstein's emphasis on training doctors and scientists who treat patients with knowledge, dedication and dignity.

Dr. Nabel, director of the National Heart, Lung and Blood Institute of the National Institutes of Health, focused on the importance of the doctor-patient relationship in her speech to the Class of 2009. Becoming a physician or researcher, she said, "is a commitment to keeping people first, your patients first, their families first."

In offering words of advice and reassurance to the graduating students, Dr. Nabel predicted that they would approach their residencies with equal measures of excitement and anxiety. But she also promised them that "you will get on with life and all the responsibility that it brings."

Family is as important as work, she told the graduates, noting that she met her husband of 25 years during her residency—when he was her intern.

Dr. Nabel sent the graduates out into the world with some inspiring words: "The commitment you're making today... is your promise to make ours a society in which the very best in medical science is used in the service of all humankind."

Commencement 2009



instein's commencement is always a special day, but this year's was doubly so: Commencement 2009 also marked the 50th anniversary of the Class of 1959—Einstein's first graduating class.

Twenty-two members of that original group of 55 students were present for Commencement 2009 on June 2 in Lincoln Center's Avery Fisher Hall. As the ceremony began, Allen M. Spiegel, M.D., the Marilyn and Stanley M. Katz Dean, asked the Class of '59 alumni to stand and be recognized. The group received thunderous applause.

Next, Dean Spiegel and Richard Joel, president of Yeshiva University, conferred degrees on 179 M.D. graduates and 59 Ph.D. grads (14 graduates earned both). In addition, 10 master's degrees were awarded to graduates of Einstein's Clinical Research Training Program.

Representing his pioneering group, Louis Aledort, M.D. '59, addressed the Class of 2009, noting that the two classes had much in common:

"Although the facilities and the faculty have changed, the commitment to producing outstanding clinicians, scientists and academicians remains the same. My fellow classmates and I congratulate you and wish for you the enthusiasm, energy and inquisitiveness to face the challenges and the pleasures that await you."



Dean Allen M. Spiegel (right), with Stephen Goldstone, M.D. '79, and Carl Franzblau, Ph.D. '62







Several alumni awards were also presented during commencement. The alumni honored were Robert Ritch, M.D. '72, who received the Dominick P. Purpura Distinguished Alumnus Award; Carl Franzblau, Ph.D. '62, Distinguished Ph.D. Alumnus; and Alan Fleischman, M.D. '70, Lifetime Achievement. Todd Olson, Ph.D., professor in the department of anatomy and structural biology at Einstein, received the Honorary Alumnus Award. Peter Barland, M.D. '59, received the Lifetime Service Award at the banquet held the previous evening.

Rounding out the ceremony, keynote speaker Elizabeth Nabel, M.D., director of the National Heart, Lung and Blood Institute, emphasized the need to put patients first.

"You've chosen a profession that is so much more than a job or a career—it's a noble calling of the highest order," she told the new graduates. "By keeping your patients first, you will always make the right decisions and you will lead the life of integrity embodied by the Hippocratic Oath." (For more on Dr. Nabel's talk, see the sidebar at left.)

The excitement of the day was infectious. Proud family members, who filled the hall to capacity, greeted the newly minted graduates with whoops, cheers and applause.

By the time the ceremony was over, the Classes of 1959 and 2009—Einstein grads separated by half a century shared a special bond.

- Members of the Class of 1959 wearing special medallions created by the Alumni Association in honor of their milestone 50th reunion. Left to right: Drs. Chester Berschling, Marion Zucker Goldstein, Itamar Salamon, Arnold Lieber, Evelyne Albrecht Schwaber, Mark Reiss, Michael Heitler, Henry Spector, Irwin Bernhardt, Louis Aledort, Marvin Kirschner
- 2 Dean Allen M. Spiegel with Robert Ritch, M.D. '72
- 3 Dean Allen M. Spiegel with Elizabeth G. Nabel, M.D., and Steven M. Safyer, M.D. '82, president, Montefiore Medical Center
- 4 Todd Olson, Ph.D., and Alan Fleischman, M.D. '70
- 5 Faculty Award recipients: George Fruhman, Ph.D., Amy Kesselman, M.D. '97, Maria Teresa Santos, M.D., Pamela Stanley, Ph.D., Lloyd Fricker, M.D., Leslie Bernstein, M.D.





Reunion 2009 Celebrates the First Einstein Graduates



CLASS OF 1959, 50TH REUNION, JUNE 1, 2009. Seated (I to r): Drs. Martin Rosenthal, Itamar Salamon, Michael Heitler, Marion Zucker Goldstein, Isabelle Rapin, Irving London, Milford Fulop, Christine Lawrence, Evelyne Albrecht Schwaber. Standing: Alan Schrift, Calvin Ackerman, Louis Aledort, Emanuel T. Phillips, Chester Berschling, Irwin Bernhardt, Arnold Lieber, Mark Reiss, Jesse Roth, Leonard Green, Robert Simon, Marvin Kirschner, Sheldon Eisenman, Leon Chameides, Peter Barland, Eugene Heller, Seligman Rosenberg, Henry Spector, Melvin Shay

Reunion 2009 made history this year as the College of Medicine marked the 50th anniversary of its first graduating class. The three days of celebration leading up to Commencement drew 150 alumni from classes ending in 4s and 9s, including 27 members—nearly half—of the pioneering Class of 1959.

A highlight for Class of '59 alums was a special **50th Reunion Dinner** at the Harmonie Club in New York City. They were thrilled to share their celebration with four beloved professors: Isabelle Rapin, M.D., Irving London, M.D., Milford Fulop, M.D. and Christine Lawrence, M.D. (pictured above, seated fifth through second from right). In his after-dinner remarks, Dr. London, founding chair of the Department of Medicine, spoke with deep affection of his former students. "We didn't know whether this new institution would take flight and flourish. The students were taking a gamble, too. This first class exceeded all of our expectations...You're not only advancing medical care, you're doing it with compassion and an understanding heart."

-Irving London, M.D.

In turn, he was fondly recalled as a distinguished—and sometimes formidable—teacher, as well as a kind and caring mentor.

Images of cherished faculty members drew cheers and applause, and some tears, as celebrants viewed a video created for the milestone 50th reunion. It included clips from a rare home movie of the first Einstein Commencement, held on June 10, 1959, in what is now the parking lot of the Abraham Mazer



Irving London, M.D., speaking at the 50th Reunion Dinner

Building, the first Einstein student dorm. (To view the video, visit www.aecom.yu.edu/reunion59.)

Einstein deans, faculty and students joined the other eight returning classes at a **Gala Reunion Dinner** on Sunday, May 31. Med school anecdotes shared by class representatives resonated with all alumni, but none more poignantly than the recollections of special guest



CLASS OF 1959, COMMENCEMENT, JUNE 10, 1959. The first Einstein graduating class assembled on the lawn in front of the Van Etten Building, now the site of the Price Center/Block Research Pavilion, for their history-making photograph.

The Class of '59 Remembers...

"The credibility of the school depended on our ability to pass the boards. As we went into the exam, the faculty was lined up with lemonades to make sure we were comfortable." —Leon Chameides, M.D.... "I learned under the tutelage of great female role models... I walked down the aisle at graduation pregnant and felt I was sharing the experience with my first child." —Evelyne Schwaber, M.D.... "After I got home from graduation my entire neighborhood turned out and gave a party. It was such a historic thing." —Louis Aledort, M.D.



"It felt wonderful hooding graduates while looking out at cheering family members and friends so proudly applauding these new Einstein doctors." —Mark Reiss, M.D. '59 (pictured with Claire Zar-Kessler, M.D. '09)

Einstein Then and Now...

	Class of 1959	Class of 2009
Class size (entering students)	55	179
Gender – Women – Men	3 52	98 81
Age range (in years)	< 30	19–47
Number of undergrad colleges represented	23	69
Number of U.S. states represented	4	16
Faculty	212	2,000
Degrees granted – M.D. – M.D./Ph.D.	48 _	179 14



Peter Barland, M.D. '59, who received the Alumni Association's Lifetime Service Award. Stephen Goldstone, M.D. '79, president-elect of the Alumni Association, joined Dean Allen M. Spiegel in congratulating the alumni.

Alumni and guests from all reunion classes gathered for Alumni Day on Campus, Monday, June 1, which began with a panel discussion, "Einstein Then and Now." Moderator Peter Barland, M.D. '59, led panelists Leon Chameides, M.D. '59, Ira Leviton, M.D. '84, Alumni Scholar Elizabeth DeWitt, M.D. '09, and faculty members Milford Fulop, M.D., distinguished university professor (who taught all the alumni present) and Albert Kuperman, Ph.D., associate dean for educational affairs, in a lively discussion on topics ranging from the fledgling days of the medical school to the challenges of practicing compassionate medicine in today's era of managed care.

Later that day, graduate students,



postdocs and faculty met the 2009 Distinguished Ph.D. Alumnus Award recipient, Carl Franzblau, Ph.D. '62, who gave an informal talk about his fascinating career in research and innovative science education.

After an alumni-faculty luncheon, Irwin Dannis, M.D. '60, and first-year students Jason Matos (a Class of 2012 Alumni Scholar), Jordan Nestor and Jeremiah Hinson led a tour of the campus. Alumni were struck by the impressive changes that have taken place since they were medical students.

- 1 Dr. Fred Hirschenfang, Harriet Hirschenfang, Dr. Michael Harris, Dr. Anthony Russo, Class of '69
- 2 Drs. Karen Bernstein Horwitz, Penny Stern, Monique DeFour Jones, Lisa Bootstaylor, Paige Farkas, Class of '89
- 3 Drs. David Michelson, Stephen Jesmajian, Sarah Muscat, Larry Bochner, Class of '84
- 4 Dean Allen M. Spiegel, Peter Barland, M.D. '59, Lifetime Service Award recipient, Stephen Goldstone, M.D. '79, Alumni Association president-elect
- 5 Drs. Bruce Berkowitz, Marjorie Cohen, Marc Cohen, Joanna Davis Berkowitz, Class of '79















- 1 Dr. Todd Olson (center) with Drs. Ronda Janowski-Bloom, David Podwall, Jeffrey Morgan, Edward Attiyeh, Class of '99
- 2 Drs. Itamar Salamon, Alan Schrift, Chester Berschling, Class of '59
- 3 Irwin Dannis, M.D. '60, leads campus tour
- 4 Mark Birns, M.D. '74, greeting his former Einstein professor, Martin Cohen, M.D.
- 5 Drs. Jeffrey Rudikoff and Alan Rashba, Class of '64
- 6 Drs. Steven Kussin and Richard Hansen, Class of '74
- 7 Alumni Day panelists (left to right): Ira Leviton, M.D. '84, Albert Kuperman, Ph.D., Elizabeth DeWitt, M.D. '09, Milford Fulop, M.D., Leon Chameides, M.D. '59

ON THE WEB

To see more reunion photos, visit our Online Community: www.aecom.yu.edu/alumni

CLASS NOTES

1959 & 1960s

Marion Zucker Goldstein, MD '59,

professor, Department of Psychiatry, SUNY at Buffalo School of Medicine and Biomedical Sciences, is program director for PGY-V Geriatric Psychiatry. Dr. Zucker Goldstein has chaired the American Psychiatric Association Council on Aging and is a past president of the Association of Women Psychiatrists. Alumni interested in a fellowship in geriatric psychiatry should contact her at mzg@buffalo.edu.

Ruth Stein, MD '66, past vice chair of pediatrics at Montefiore Medical Center, received the Douglas K. Richardson Award from the Society for Pediatric Research in May 2008.

Arthur I. Eidelman, MD '63, was recently named the 2009 Distinguished Honoree of the Israel Clinical Pediatric Society for more than 30 years of contributing to the development of academic pediatrics and neonatology in Israel.

Francis Forte, MD '64, was feted at a concert last October at Englewood Hospital and Medical Center marking the 15th anniversary of the Dizzy Gillespie Cancer Institute and the Dizzy Gillespie Memorial Fund. Dr. Forte was instrumental in creating this program, which provides pro bono services for musicians, fulfilling a promise to his patient Dizzy Gillespie at the time of his death in 1993. Dr. Forte, a jazz guitarist himself, was also honored by the Jazz Foundation of America last May.

Laurence Marton, MD '69, is

chief scientific officer of Progen Pharmaceuticals. Prior to joining Progen in 2008, Dr. Marton was chief scientific officer of CellGate, which focused on the discovery and development of novel polyamine analogs and other compounds for the treatment of cancer and other serious diseases.

1970s

Stan Lindenfeld, MD '71, is senior vice president and chief medical officer at U.S. Renal Care Inc., a leading provider of outpatient kidney dialysis services in Dallas, TX.



Drs. Calvin Ackerman and Chester Berschling, Class of '59

Daniel L. Lorber, MD '72, director of endocrinology and associate director of the Lang Center for Research and Education at New York Hospital, Queens, and a clinical associate professor of medicine at Weill Cornell Medical College, received the American Diabetes Association's 2009 Outstanding Physician Clinician in Diabetes Award.

Woodie Kessel, MD '74, MPH,

has joined Academic Network LLC (Portland, OR), a health industry– focused PR and telecommunications firm, as senior scientific advisor. A community pediatrician for over 30 years, Dr. Kessel served as an assistant US surgeon general and has been a senior advisor on public health, health policy and child and family health matters to the White House, cabinet secretaries, surgeons general and Health and Human Services officials spanning eight presidential administrations. Jesse Goodman, MD '77, a member of the Institute of Medicine of the National Academy of Sciences, has been appointed acting chief medical officer for the FDA. He was previously director of the FDA's Center for Biologics Evaluation and Research. Dr. Goodman is widely recognized for his research in infectious diseases.

Lynne M. Mofenson, MD '77, chief, Pediatric, Adolescent and Maternal AIDS Branch, National Institute of Child Health and Human Development, is co-author of a paper published in July 2008 in the *New England Journal of Medicine* on the Malawi post-exposure prophylaxis of infants trial.

Tamara Harris, MD '78, holds a fulltime research position in the Intramural Research Program at the National Institute on Aging. She initiated and leads two major studies on understanding musculoskeletal aging in relation to comorbidity.

Art Davidson, MD '79, director, Denver Public Health Informatics, has been appointed to the national Health Information Technology Policy Committee by the US Government Accountability Office. The committee, established by the American Recovery and Reinvestment Act, will make recommendations on creating a policy framework for developing and adopting a nationwide health-information technology infrastructure, including standards for the exchange of patient medical information.

Joanna A. Davis, MD '79, associate professor of clinical pediatrics and medical director, University of Miami Comprehensive Pediatric Hemophilia Treatment Center, received a grant from NovoNordisk to make emergency room medical personnel more aware of



DAVID ABRAMSON, MD '69

Chief, Ophthalmic Oncology Service, Department of Surgery Memorial Sloan-Kettering Cancer Center

" y first two years of medical school were the most awful of my life," says David Abramson, M.D. '69. "I needed to work very hard every day

just to stay even, and I seriously considered dropping out." Fortunately, the last two years were much better. "Einstein provided the unusual combination of remarkable clinicians, superb

teachers and a system that permitted students to work on patients," he says. "It prepared me to be a physician in every way."

Considered the world's leading authority on retinoblastoma, Dr. Abramson has published more than 400 books, chapters, original articles, scientific reviews, audiotapes and videotapes; was editor of the American Academy of Ophthalmology's instruction book

on ophthalmic oncology; has delivered more than 400 lectures worldwide; and regularly mentors students. Teaching is important to Dr. Abramson; he remembers the powerful impact that some of his own teachers—such as Alfred A. Angrist, M.D., Barry Bloom, M.D. and David Follett, M.D.—had on his education. "Einstein faculty gave me a vision of what I could do. It's a privilege to give that to others."

"EINSTEIN PROVIDED THE UN-USUAL COMBINATION OF RE-MARKABLE CLINICIANS, SUPERB TEACHERS AND A SYSTEM THAT PERMITTED STUDENTS TO WORK ON PATIENTS. IT PREPARED ME TO BE A PHYSICIAN IN EVERY WAY."

Dr. Abramson recalls how he got to know some of his Einstein classmates very well; students were paired up by alphabetical order and partnered in all lab work. "One night, Warren Andiman—my partner in everything—and I were doing a gross anatomy study, looking for the recurrent laryngeal nerve. If this nerve is cut, it leads to vocal paralysis. After three hours of looking, we finally found it. Just as he gingerly put a hook under it, the lights went out—first in the lab and then all over the Bronx.

> It was the beginning of a blackout for the entire Northeast but we thought that damaging that nerve had cataclysmic effects. We laughed at this 'sign' of just how important anatomy was."

> Dr. Abramson believes that the challenges for physicians today lie in keeping up with developments outside one's specialty and that interspecialty collaboration is key to medical progress.

In 2006, Dr. Abramson, along with two

colleagues, Pierre Gobin, M.D., an interventional neuroradiologist, and Ira J. Dunkel, M.D., a pediatric oncologist, developed a new technique called intra-arterial chemosurgery. During the procedure, a drug is injected through a tiny blood vessel in the eye and permeates the tumor. "The cancer either just disappears—the body literally eats it up—or it becomes calcification," says Dr. Abramson. "Not one of us could have done this alone."

bleeding disorders. The eight booklets she has written for children and families have been incorporated into the National Hemophilia Foundation Educational Resource Library.

Martha Grayson, MD '79, was

appointed vice dean for medical education, New York Medical College (Valhalla, NY), as of July 2008.

1980s

Alan D. Legatt, MD, PhD '81, a

professor of clinical neurology at Einstein, recently became president of the American Clinical Neurophysiology Society. **S. Lawrence Zipursky, PhD '81**, has been elected to the National Academy of Sciences in recognition of distinguished and continuing achievements in original research.

Gordon Tomaselli, MD '82, has been named director of the Johns Hopkins University School of Medicine's division of cardiology and co-director of the school's Heart and Vascular Institute. In addition to his new roles, Dr. Tomaselli will continue as co-director of the Donald W. Reynolds Cardiovascular Clinical Research Center at Johns Hopkins.



Drs. Judith Weingarten and Jill Jacovitz, Class of '79



Drs. Stanley Cooper and Rubin Brecher, Class of '84

Mark J. Levine, MD '83, MPH, was recently appointed deputy commissioner for emergency preparedness and response by the Virginia Department of Health. He is responsible for public health planning and preparation for naturally occurring and manmade disasters and threats.

Israel Franco, MD '83, a recognized expert on voiding dysfunctions in children, is program chairman of the urology section, 2009 American Academy of Pediatrics National Meeting.

Albert Quiery, MD '84, director of hematology, Geisinger Health Systems, received the Distinguished Teacher Award. He also serves as president of the school board in Danville, PA.

Barbara McGovern, MD '88, associate professor, Tufts University School of Medicine, is associate editor of *Clinical Infectious Diseases* and deputy editor of *Infectious Diseases*, *UpToDate*. Her clinical research focuses on HIV/hepatitis C coinfection, and she has had numerous publications in this area.

Arie Blitz, MD '89, is director of heart transplantation and mechanical circulatory assistance, University Hospitals/ Case Medical Center, and president of the Cleveland chapter of the American Heart Association.



READ MORE CLASS NOTES ONLINE

Go to the Alumni home page at

www.aecom.yu.edu/alumni and click on Einstein Online Community. First-time users, please send an email to alumni@aecom.yu.edu for your login ID.

1990s

José Ortiz, Jr., MD '92, has been promoted to the position of assistant professor of orthopaedics at the Mayo Clinic College of Medicine (Rochester, MN).

Glen Markowitz, MD '94, has been promoted to professor of clinical pathology & cell biology at Columbia University.

Mel Feany, MD, PhD '95, associate professor of pathology at Harvard Medical School, is the recipient of this year's Outstanding Investigator Award from the American Society for Investigative Pathology.

Hsiao Dee Lieu, MD '96, has been named vice president of clinical research at Nile Therapeutics (San Francisco, CA).

Mary D. Ruppe, MD '98, serves as associate program director for the endocrinology fellowship at University of Texas Health Science Center at Houston. She specializes in metabolic bone disease and is involved in research on genetic forms of rickets.

Patricia Kavanagh, MD '99, traveled to Iraq in 2008 to lecture at "Science Defeating Darkness," the first medical conference for the physicians of Anbar Province.

Jeffrey A. Morgan, MD '99, was recently recruited to Henry Ford Hospital in Detroit as director of mechanical circulatory support and heart transplantation and director of minimally invasive cardiac surgery. Phioanh Nghiemphu, MD '99, as-

sistant clinical professor of neurology, is associate director of the UCLA Neuro-Oncology Fellowship Program.

2000s

Lisa A. Shultz, MD '00, is chief, division of neurology, Our Lady of Lourdes Medical Center and medical director, Lourdes Stroke Center (Camden, NJ). Dr. Shultz was instrumental in developing the stroke center.

Romit Majumdar, PhD '01, joined Sterne Kessler Fox, attorneys at law (Washington, DC), as a technical specialist in the biotechnology/chemical group, where he assists primarily in preparing and prosecuting patent applications.

In Memoriam

We sadly acknowledge the passing of the following Einstein alumni. We regret that we do not have space to include an obituary for each of them. We honor their memories and extend our deepest condolences to their families and friends. Robert Bernzweig, MD '65 Lawrence Breslau, MD '59 Paul Cranefield, MD '64 Robert Geronemus, MD '74 Sheldon Jacobson, MD '64 Barry Korey, MD '82 Alexander Mittelmann, MD '76 George Morann, MD '65 Dennis Munjack, MD '67 Eric Muñoz, MD '74 Jerome M. Shevell, MD '62 Michael R. Zales, MD '64

Honoring an Outstanding Einstein Graduate

By Harris Goldstein, M.D. '80, assistant dean for scientific resources and director, Einstein-Montefiore Center for AIDS Research

On April 24, 2008, my younger sister, Marsha Goldstein Basson, M.D. '89, died at age 49 after a valiant 18-month battle with pancreatic cancer. Marsha was married to Craig Basson, M.D., Ph.D., and was a wonderful and caring mother to their three young children—Ariela, 10, Bayley, 4, and Noah, 6.

arsha graduated *magna cum laude* from City College of New York with a B.S. in nursing and worked as a ward and CCU nurse at major New York City hospitals, including Einstein's Weiler Hospital. She developed warm relationships with many of her patients that continued for years after their discharge.

After several years as a nurse, Marsha decided to become a physician. She was inspired by her close interactions with many physicians and, perhaps, by my telling her how much I was enjoying my medical training at Einstein, Montefiore and Jacobi. During Marsha's clinical training at Einstein, attending physicians often did double takes after recognizing her from her time spent as a nurse. Marsha joined me as an Einstein alumnus and was elected to the medical honor society, AOA, in recognition of her outstanding academic performance.

Marsha did an internship in internal medicine at NewYork-Presbyterian Medical Center, a residency in pathology at Einstein, a fellowship in surgical pathology at Memorial Sloan-Kettering Cancer Center and a fellowship in hematopathology and molecular pathology at New York University.

Marsha became director of hematopathology at the University of Medicine and Dentistry of New Jersey in 1996. There she co-authored papers (sometimes with me or with her husband, Craig) published in leading journals, including the *Proceedings of the National Academy of Sciences* and the *Journal of Immunology*. Thanks to her reputation as an outstanding diagnostic pathologist, Marsha was recruited in 2004 to be director of immunohistochemistry at BioReference Laboratories in Elmwood Park, NJ.

Marsha had tremendous empathy for others, especially vulnerable people, underdogs and those less fortunate than herself. She exemplified the "can do, will do" approach to providing medical care that distinguishes Einstein graduates.

A few years ago, while examining slides at her microscope at BioReference, Marsha heard cries for help. She came out of her office and saw one of the



senior administrators lying on the floor in total respiratory and cardiac arrest. Marsha quickly took charge. She strode toward the lifeless woman, knelt down and gave mouth-to-mouth respiration until the ambulance arrived. In between breaths, Marsha instructed a pathologist standing nearby to administer cardiac compressions. After being on a respirator and in a coma for several days, the woman made a complete recovery. She visited while we were sitting shiva after Marsha's death and told us how grateful she was to Marsha for saving her life.

Until the end of her life, Marsha tried to ensure that young physicians would provide comfort and care to patients of the future. During one of her last hospitalizations, Marsha learned that she was the first patient of a young woman on her first day of internship, who had just graduated from Einstein. Marsha insisted that the intern sit by her hospital bed and proceeded to advise her on how to become the physician she was Einstein-educated to be.

To continue Marsha's legacy, Einstein Overseer Nathan Kahn and his wife, Sandra, have generously established the Dr. Marsha Goldstein Basson Scholarship to support the education of future Einstein medical students and to be an enduring memorial to Marsha's spirit, values, ethos and memory.

If you wish to donate to her scholarship fund, please contact the office of alumni relations at 718-430-2013 or alumni@aecom.yu.edu.

The Einstein Women's Division: A Thriving Tradition of Philanthropy

In 1953—two years before the College of Medicine first opened its doors—a group of pioneering women founded the National Women's Division of the Albert Einstein College of Medicine. They had a shared passion: helping create a new medical school that would welcome gifted students of all backgrounds without the strict quotas that prevailed at the time. Today, the Women's Division boasts more than 1,000 members in two chapters: one in New York City, the other encompassing suburban Westchester County, New York, and Fairfield County, Connecticut.

Over the years, the Women's Division has been a driving force in philanthropy at Einstein, raising more than \$100 million in support of research and educational programs at the College of Medicine.

The Spirit of Achievement Luncheon, the division's flagship fund-raiser, was conceived in 1954 as part of the campaign to launch Einstein, and has remained a proud Einstein tradition. Held every spring in New York City, the Spirit Luncheon honors outstanding individuals in the arts, business, journalism and other fields. The dazzling list of past honorees includes Margaret Mead, Eleanor Roosevelt and Meryl Streep.

The Women's Division also sponsors Hamptons Family Day, a fun-filled "Wild, Wild West Carnival" that typically draws 1,500 parents and children who summer in the Hamptons.

ON THE WEB

To read more about the Women's Division: www.aecom.yu.edu/home/donors/ WomensDivision.asp.

Women's Division Spirit of Achievement Luncheon Shines Spotlight on CERC



ctor Cynthia Nixon, CNN anchor Wolf Blitzer, journalist Janet Wallach, president emeritus of Seeds of Peace, and Einstein faculty member Robert W. Marion, M.D., director of Einstein's Children's Evaluation and Rehabilitation Center (CERC), were honored at the 55th Annual Spirit of Achievement Luncheon hosted by the New York chapter of the National Women's Division on April 28, at the Pierre Hotel. Proceeds from the event brought the Women's Division closer to completing its \$3 million fundraising initiative in support of a clinical research program at CERC.



- 1 Spirit Honoree Robert W. Marion, M.D., with Alena Galan, age 11, one of his young patients at CERC, who presented Dr. Marion's Spirit of Achievement Award to him at the Spirit Luncheon
- 2 Dean Allen M. Spiegel, M.D. (second from right), with Spirit honorees Wolf Blitzer, Janet Wallach, Cynthia Nixon and Robert W. Marion, M.D.
- 3 Bonnie Englebardt Lautenberg, a board member of the Women's Division's New York chapter, with Spirit Luncheon emcee Willie Geist



To join the Einstein Women's Division's campaign for CERC, or to learn more about the Women's Division, please contact Janis Brooks at 718-430-2818 or jbrooks@aecom.yu.edu.

In addition to the four honorees, speakers included Allen M. Spiegel, M.D., Einstein's Marilyn and Stanley M. Katz Dean; Bambi Felberbaum, the outgoing president of the National Women's Division; Jackie Harris Hochberg, president of the division's New York chapter; event co-chairs Andrea Stark, Renée Steinberg and Madge Miller; and Nanette Laitman, who chaired the first Spirit Luncheon in 1953. Willie Geist of MSNBC's popular program "Morning Joe" contributed his time as emcee.

"I sleep better at night knowing that Einstein researchers are working on problems like breast cancer and heart disease," said Ms. Nixon at the start of her acceptance speech. "But the main reason I'm here today is because of the extraordinary work at CERC." She went on to tell the story of a good friend whose child was diagnosed with autism at CERC 20 years ago. As her friend looked on from the audience, Ms. Nixon spoke movingly about the difference that CERC had made in the lives of her friend and her friend's son.



(I to r): Jackie Harris Hochberg, Renée Steinberg, Madge Miller, Andrea Stark and Bambi Felberbaum at this year's Spirit of Achievement Luncheon in New York

Einstein's Women's Division Teams Up with CERC

The National Women's Division of Einstein is sponsoring a \$3 million initiative to establish a new clinical research program at CERC.

Founded in 1956 and a nationally recognized model in its field, CERC delivers state-of-the-art evaluation, diagnosis and rehabilitation services for children with a wide range of developmental disorders such as autism, cerebral palsy, spina bifida, language and learning disabilities and hearing impairments. Each year, CERC serves 8,000 children and their families from the New York area and beyond, and trains 1,000 physicians and allied health professionals. The new research program will bring together CERC's clinical experts with some of Einstein's world-class scientists to find more-effective treatments—and, ultimately, cures—for debilitating conditions that can limit a child's ability to succeed at school and in life.

"Clinical research at CERC has tremendous potential for helping children with developmental disabilities," says Robert Marion, M.D., director of CERC and the Ruth L. Gottesman Professor of Developmental Pediatrics. "We're extremely grateful to the Women's Division. Without their assistance, this program would not exist."



Women's Division National and Chapter Presidents

The National Women's Division owes its success to dynamic and dedicated lay leaders. The division installed Kathy Weinberg (above left) as its new national president at an installation luncheon held at the Harmonie Club in New York on May 28. Also pictured above are Jackie Harris Hochberg, president, New York chapter, and Denise Rothberg, president, Westchester/Fairfield chapter.



Youngsters with autism and autistic spectrum disorders practice their social skills in the RELATE program at CERC. View a video about CERC, and the children it serves, at www.aecom.yu.edu/CERC.

Men's Division Launches New Fund-Raising Initiative



dorned with photographs of Yankee legends from the long-ago and recent past, the walls of the Legends Suite Club at the new Yankee Stadium provided a fitting backdrop for Einstein's medical legendsin-the-making on Tuesday, May 12. The occasion was the Men's Division's annual "Bronx Night" event, marking the launch of the Men's Division Research Scholars Program (see page 63).

- 1 (I to r): Dr. Harry Shamoon, Dean Allen M. Spiegel, Dr. Simon Spivack, Dr. Marla Keller and Dr. Joe Verghese with special guest Darryl Strawberry at Yankee Stadium. The baseball great congratulated Drs. Spivack, Keller and Verghese, who were designated MVPs ("Most Valuable Physicians") by the Men's Division and presented with pinstriped Einstein baseball jerseys. Mr. Strawberry placed personalized Einstein pinstripes on Dean Spiegel and Dr. Shamoon bearing the numbers of Babe Ruth and Lou Gehrig, respectively.
- 2 Arnold Penner (center), Neil Clark (right) and Stu Cantor, guest, head out to the links at Quaker Ridge Golf Club. Mr. Penner and Mr. Clark serve on the Men's Division Executive Board.

In keeping with the evening's theme, "Team Up with Einstein & the Yankees," Peter Gatof, chairman of the Men's Division, thanked attendees for "stepping up to the plate in extraordinarily tough times to fund groundbreaking research that will have an impact for years to come."

When Allen M. Spiegel, the Marilyn and Stanley M. Katz Dean, stepped up to the podium, he noted, "We can do all the stem cell research in the world, but we need to train physician-scientists who can bridge the gap between basic scientists and the clinicians who take care of us. That's exactly what this new program creates."

Harry Shamoon, M.D., associate dean and director of Einstein's Institute for Clinical and Translational Research and faculty advisor to the Men's Division Research Scholars Program, introduced the three "all-star" physician-scientists being honored that night: Marla Keller, M.D., associate professor of medicine and associate director of Einstein's Clinical Research Center; Simon Spivack, M.D., M.P.H., associate professor of medicine and of epidemiology & population health and chief of the Division of Pulmonary Medicine; and Joe Verghese, M.D., M.S., associate professor of neurology and director of the Division of Cognitive and Motor Aging.

The evening concluded with tours of the new stadium.



To learn more about the Men's Division, or the Men's Division Research Scholars Program, please contact Patricia Margulies at 718-430-4170 or pmarguli@aecom.yu.edu.

Teeing Up for Translational Research Nearly 200 Men's Division members and guests turned out to support Einstein at the Division's Annual Golf & Tennis Tournament and Dinner, held on Monday, June 8, at Quaker Ridge Golf Club in Scarsdale, NY. More than 100 golfers played the nationally ranked course, while a smaller but equally energetic group of tennis enthusiasts enjoyed a doubles tournament.

The highlight of the dinner program was the formal presentation of the first recipients of Men's Division Research Scholar awards. Following remarks by Dean Spiegel, six of the eight awardees were introduced by Associate Dean Harry Shamoon, M.D., to loud applause.

The researchers mingled with members and guests during the cocktail hour and dinner. "It was a thrill to meet and get to know the researchers," said Jeffrey Fiedler, a member of the Men's Division's Executive Board and co-chair of its fund-raising committee. "They are not only brilliant at what they



Men's Division Research Scholars at Golf Outing (standing, I to r): Drs. Mooyeon Oh-Park, Gabriele De Vos, William Southern and Tao Wang; (seated, I to r): Amy Sanders and Rebecca Madan. Not pictured are Drs. Matthew Abramowitz and Shadi Nahvi. Flanking the group are Men's Division chairman Peter Gatof (left) and Associate Dean Harry Shamoon, M.D.

do, they are wonderful people."

"Hammering out the concept for this program was a true collaborative effort," said Dr. Shamoon. "But it was the passion and commitment of the Men's Division leadership that brought it to fruition."

The Men's Division Research Scholars Program: Nurturing the Next Generation of Einstein Physician-Scientists

E instein is a leading center for translational medicine, a "benchto-bedside" approach that speeds the application of breakthrough findings from the laboratory to patient care. As they work to uncover the causes of disease and develop more-effective treatments, senior scientists at Einstein partner with physician-scientists—practicing physicians with a strong interest in research. Physician-scientists are key players in a wide range of translational studies, serving as the "bridge" from the laboratory to the community.

The training process for a physicianscientist can take many years. Although Einstein receives support from the National Institutes of Health for this purpose, additional monies are needed to fully fund the career development of Einstein's talented research physicians. The Men's Division Research Scholars Program, a \$3 million initiative launched in the spring of 2009, plays a critical role in helping bridge this gap.

Under the direction of Dr. Harry Shamoon, associate dean for clinical and translational research and faculty advisor to the program, a small group of physician-scientists is selected each year to receive Research Scholar Awards.

Einstein's Philanthropic Band of Brothers

The Men's Division of Albert Einstein College of Medicine was formed in 1961 by a group of businessmenphilanthropists. They were dedicated to supporting a fledgling medical school destined to become one of the nation's premier centers for biomedical research and medical education. Over the years, the Men's Division—whose membership now numbers over 1,000—has encouraged the growth and development of the College of Medicine, providing an invaluable source of volunteer leadership and continuity.

The division carries out its commitment to Einstein by hosting a variety of fund-raising events and educational programs throughout the year. Two flagship events are held each year: Bronx Night, spotlighting Einstein's close relationship with the Bronx community, and the Men's Division Annual Golf & Tennis Tournament and Dinner.

ON THE WEB

To read more about the Men's Division: www.aecom.yu.edu/home/donors/ MensDivision.asp. Gifts from individuals, foundations and corporations provide critical non-governmental support for Einstein's research, educational and patient-care programs. Here are some recent examples of philanthropic partnerships that will make a significant difference to human health for generations to come. **To learn more about how you can become a partner with Einstein, please contact Glenn Miller, associate dean for institutional advancement, at 718-430-2411 or gmiller@aecom.yu.edu; or visit www.aecom.yu.edu.**

Price Family Gift Aids Bronx Kids

Even at a young age, many Bronx children already have two strikes against them: born into poverty to parents with woefully inadequate parenting skills. Intervening early in the lives of these "at risk" children can make a world of difference.

One intervention program—a collaboration between Einstein and Montefiore Medical Center known as Healthy Steps—has already helped hundreds of children. And thanks to a recent commitment from Michael Price and his family, major supporters of Einstein, Healthy Steps will continue helping Bronx children get the best possible start in life.

A national program for children from birth to age three, Healthy Steps is carried out at nearly 50 locally funded sites. It is premised on the idea that fostering young children's mental and social development is as important as treating their illnesses.

The Einstein and Montefiore Healthy Steps site was launched in 2006 with the help of a three-year investment from the Altman Foundation. The Price family recently stepped in to ensure continued funding.

Using a team approach, Healthy Steps gives parents support that helps them become better parents. Many come from



deprived backgrounds themselves, which places their children at risk for aggression, depression, poor academic performance and other problems. For example, 26 percent of mothers in the Einstein-Montefiore Healthy Steps program were raised in foster care and more than 10 percent were physically or sexually abused.

Michael F. Price

The program offers a wide

array of services including home visits, well-child care, parent support groups and referrals to specialists for children and their parents. It also trains attending physicians, pediatric residents and fourth-year medical students at Einstein and Montefiore to become better attuned to normal child growth and development.

Results have been impressive. Children enrolled in Healthy Steps are only one-third as likely as similar children to score "at risk" for social or emotional developmental problems. The Price family's gift will allow Healthy Steps to help many more Bronx children.



Einstein Overseer Roslyn Goldstein Receives Honorary Doctorate from Yeshiva University

Mrs. Roslyn Goldstein, a member of the Einstein Board of Overseers, was awarded an honorary doctorate in Humane Letters from Yeshiva University last December for her extraordinary service to the College of Medicine and to educational, cultural and health-care organizations.

Mrs. Goldstein and her husband, Leslie Goldstein, have made a major investment in stem cell research at Einstein, providing more than \$2 million to support the research of Mark Mehler, M.D., founding director of Einstein's Institute for Brain Disorders and Neural Regeneration.

"For my children and grandchildren—and for *everyone's* children and grandchildren," said Mrs. Goldstein, "we must find cures through stem cell research."

Donors Endow Three New Professorial Chairs

he endowed professorial chair, one of the highest honors bestowed by the College of Medicine, acknowledges the outstanding accomplishments and potential contributions of a senior Einstein faculty member in a major area of research.

Thanks to the generosity of three Einstein donors—Judith and Burton P. Resnick, the F. M. Kirby Foundation and the Reicher family—three new professorial chairs were recently established at the medical school. The inaugural chair holders—Drs. John Condeelis, Suzanne Zukin and Sanjeev Gupta—are pioneering investigators who have broken new ground in the areas of cancer, neuroscience, and stem cell and regenerative medicine respectively.

Judith and Burton Resnick have established the Judith and Burton P. Resnick Chair in Translational Research. John S. Condeelis, Ph.D., professor and co-chair of anatomy and structural biology and co-director of the Gruss Lipper Biophotonics Center, has been named as the first occupant of the new chair in recognition of his groundbreaking research into the way cancer spreads. Most recently, his work with colleagues at Einstein, Cornell and MITpublished in April in Clinical Cancer Research-identified the first marker that may reliably predict whether a breast tumor is likely to metastasize.

The Resnick family has supported medical research at Einstein for many years and has been instrumental in the growth of the College of Medicine since its early days. Burton Resnick is a chairperson emeritus of the Einstein Board of Overseers; he served as chairperson of the board for 18 years. His wife, Judith, serves on the board of Einstein's National Women's Division and is a board member and past president of its Westchester/Fairfield chapter.

The couple previously established the Judith and Burton P. Resnick Chair in Alzheimer's Disease Research and the Judith and Burton P. Resnick Chair in Cell Biology at Einstein.



Judith and Burton P. Resnick at Carnegie Hall

Suzanne Zukin, Ph.D., has been named the F. M. Kirby Chair in Neural Repair and Protection. Dr. Zukin, a professor in the Dominick P. Purpura Department of Neuroscience, is director of the Neuropsychopharmacology Center at Einstein. The honor recognizes Dr. Zukin's research on cell-surface receptors for the neurotransmitter glutamate. Her work has helped reveal how these receptors affect important health problems, including schizophrenia, Huntington's disease and stroke.

The F. M. Kirby Foundation has been a longtime supporter of neurological research at Einstein. In 2001, the foundation established the F. M. Kirby Program in Neural Repair and Protection at Einstein's Rose F. Kennedy Center for Research in Mental Retardation and Developmental Disabilities; the foundation had previously made a major gift to the neuroscience program based at the Kennedy Center.

The Eleazar and Feige Reicher Chair in Translational Medicine has been awarded to Sanjeev Gupta, M.D., M.B., B.S., a professor in the departments of medicine and pathology and program director for Translational Technologies and Resources for the Einstein-Montefiore Institute for Clinical and Translational Research. The naming of Dr. Gupta to the Reicher Chair recognizes his leading role in the field of regenerative medicine. In particular, Dr. Gupta is developing strategies for turning stem cells into fully functioning liver cells that, when transplanted into the body, could help treat liver failure, hepatitis and other liver disorders.

The Reicher Chair is named for the parents of the late Jacob Reicher, who was interested in medical research. The \$2 million endowment is part of a recent \$10 million bequest to Einstein from the Jacob and Gertrude Reicher Family Estate.

By providing support for the work of three exceptional researchers, the new endowments play a vital role in solidifying Einstein's position at the leading edge of translational medicine. These generous gifts reflect the donors' confidence in the ability of investigators like Drs. Condeelis, Zukin and Gupta to translate their discoveries into new and innovative treatments for disease.



Betty Feinberg

Feinberg Research Scholar Named

The Betty and Sheldon Feinberg Senior Faculty Scholar in Cancer Research was established by Einstein Overseer Betty Feinberg and her late husband, Sheldon, to support a senior member of the Einstein faculty whose innovative research is devoted to furthering our understanding of cancer. Jeffrey E. Segall, Ph.D., professor of anatomy and structural biology, has been chosen as the new recipient of the prestigious honor.

Dr. Segall has been recognized for his research on the role of cell motility in breast cancer metastasis and for his insights into how certain proteins influence metastasis. He is collaborating with other Einstein faculty in applying his research methods to other cancers, including glioblastoma and head and neck cancer.

Benefactors of the College of Medicine, the Feinbergs also established the Betty and Sheldon Feinberg Research Fund at Einstein.

Belfer Faculty Scholar Appointed

Ulrich G. Steidl, M.D., Ph.D., assistant professor in the department of cell biology, has been named the new Diane and Arthur B. Belfer Faculty Scholar in Cancer Research. Dr. Steidl's research focuses on stem cells that fuel acute myeloid leukemia, which progresses rapidly, can prove fatal—and is resistant to conventional chemotherapy. His work may lead to new drug therapies against the disease.

The Faculty Scholar position was endowed by Einstein Overseer Diane Belfer, a longtime Benefactor of the College of Medicine. Mrs. Belfer has also made a commitment to establish a research laboratory at the Price Center/Block Research Pavilion. Her late husband, Arthur, established the Belfer Institute for Advanced Biomedical Studies and the Arthur B. and Diane Belfer Educational Center for Health Sciences at Einstein.



Diane Belfer



Ruth L. and David S. Gottesman

Gottesmans Endow Faculty Scholar for Epigenomics

Thanks to a generous gift from Ruth L. and David S. Gottesman in 2008, Einstein ranks as a leader in the exciting new field of epigenomics—the study of the vast network of chemical "marks" inside cells that control the expression of genes, turning them on and off at certain times and in certain tissues. The Gottesmans' gift was used to support the Center for Epigenomics at the College of Medicine and to endow a Faculty Scholar for Epigenomics.

John Greally, M.B., B.Ch., Ph.D., an internationally recognized expert in epigenomics and head of the Center for Epigenomics, has been named the first Faculty Scholar for Epigenomics at Einstein. Dr. Greally has developed a novel method for "mapping" the epigenomic marks and is using it to identify those associated with cancer. Since such marks are reversible, Dr. Greally's research may lead to drugs that remove epigenomic marks and thereby treat or even prevent cancer.

Earle B. Weiss, M.D. '61, Supports Einstein Global Health Programs

Earle B. Weiss, M.D. '61, has made a planned gift of \$900,000 to support global health programs at Einstein. Now retired from a long and distinguished career in pulmonary medicine, Dr. Weiss developed a strong interest in global health while serving as a visiting professor at Mexico's University of Guadalajara Medical School in 1973, 1977 and 1982. There he taught respiratory medicine and frequently visited rural health clinics. His experiences convinced him that modern medicine should be directed toward helping the world's developing nations.

Dr. Weiss conducted pioneering studies using mechanical ventilation to treat respiratory failure caused by chronic obstructive pulmonary disease. He served as president of the Massachusetts Thoracic Society from 1976 to 1978, and in 1990 received its Chadwick Medal for "meritorious contributions to the study and treatment of tuberculosis and other thoracic diseases."





Earle B. Weiss, M.D. '61

Netter Forges Gift Agreement to Support Einstein's Educational Mission



Richard Netter, Esg.

The College of Medicine has received a generous commitment of \$500,000 to support and endow an Einstein assistant deanship at Beth Israel Medical Center, Manhattan campus, one of Einstein's five affiliated teaching hospitals. The joint gift consists of two separate contributions of \$250,000 from the Robert Blauner Testamentary Trust and the Herbert and Nell Singer Foundation. It was arranged by estate attorney Richard Netter, Esq., a longtime board member of Beth Israel and an established donor to Einstein.

The assistant dean oversees the clinical training of Einstein students during their thirdand fourth-year clinical rotations at the hospital. Mr. Netter and fellow estate attorney Jay Sandak, Esq., worked together in drawing up the agreement to fund this faculty position, which is held by a clinical staff member at Beth Israel.

"These commitments reflect Mr. Netter's keen understanding of how Einstein and Beth Israel collaborate to produce outstanding doctors," notes Stephen Baum, M.D., senior associate dean for students, who was instrumental in obtaining the pledges.

This is Mr. Netter's second gift to Einstein. The "Thanks to Scandinavia" educational scholarship fund, co-founded by Mr. Netter in gratitude for the heroic efforts of Scandinavian people to save Jews during World War II, has provided support since 1993 for postdoctoral fellows at Einstein who come from Denmark, Finland, Norway and Sweden.

"We are very grateful to Mr. Netter for his time and expertise in developing this gift agreement," says Dr. Baum. "It funds a key faculty position dedicated to ensuring that our students will have an educational experience consistent with the guiding philosophy of medical education at Einstein. We hope it will serve as a model for donors interested in supporting similar positions at our other affiliate hospitals."

Editor's Note: We regret to report that Richard Netter died on July 2, 2009, shortly before this issue went to press. The Einstein community mourns the passing of this remarkable man, who was our dear friend and a longtime, passionate supporter of the College of Medicine.



Pulse, the *Einstein Magazine* of 50 years ago, was modest in many respects: printed on uncoated stock with a single color, and each issue just 16 pages long. But some of the photos were remarkable: a doe-eyed four-year-old girl who could speak only two or three words; an Einstein surgeon peering into a giraffe's head to observe its cerebral vessels; and our personal favorite, this cover from the Winter 1958-59 issue.

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"I'm honored to be an Alumni Scholar and a member of the Einstein family. This scholarship is enabling me to pursue my dream: a medical career involving my passion for molecular genetics."

Jason Matos, Alumni Scholar Class of 2012

A scholarship can empower a gifted Einstein student to become:

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Please consider making your gift today. You'll find a return envelope in the center of this magazine. Or, to make a contribution online, go to www.aecom.yu.edu/alumni and click "online giving." You don't have to be an Einstein graduate to contribute.



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