

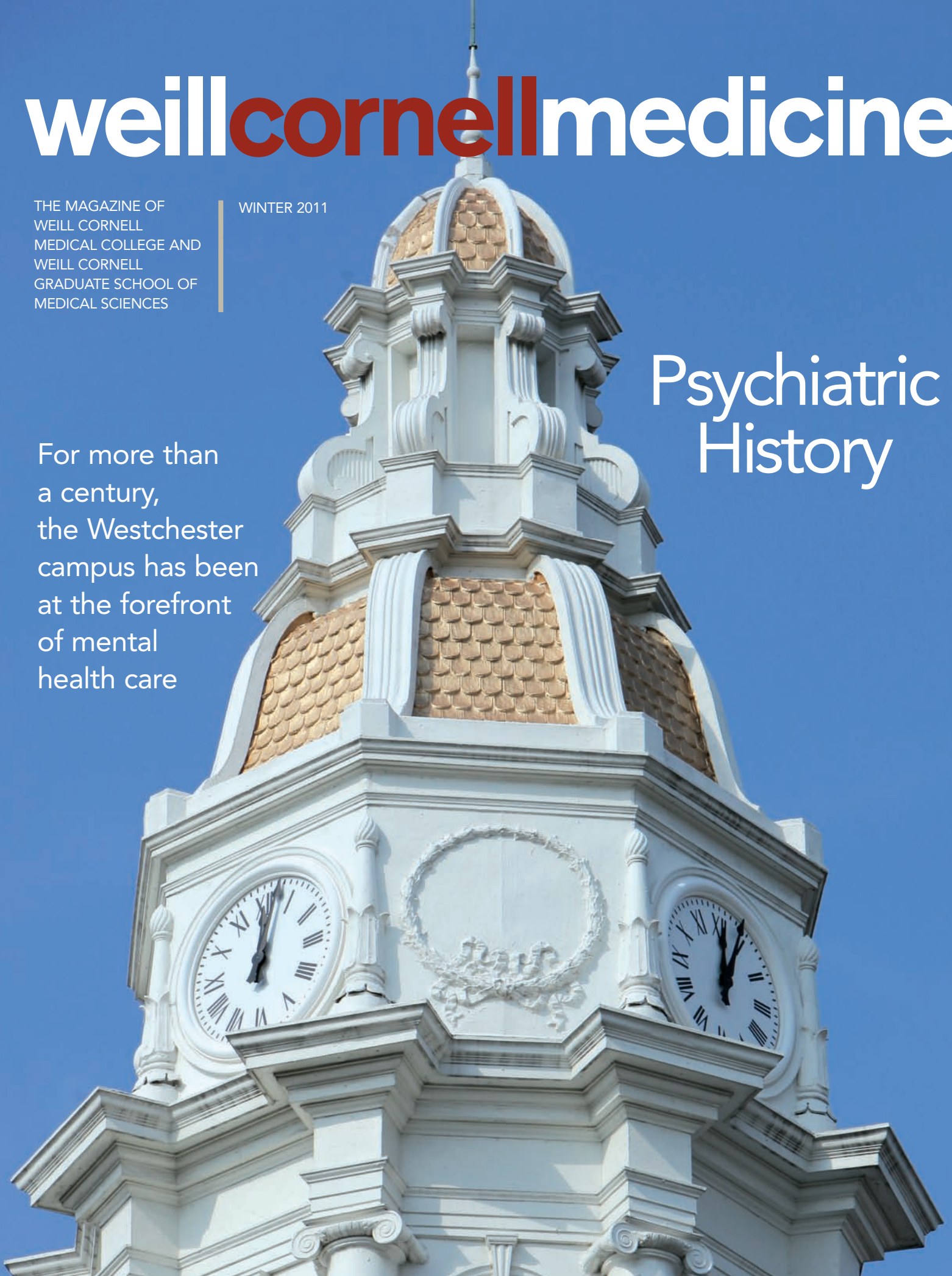
weillcornellmedicine

THE MAGAZINE OF
WEILL CORNELL
MEDICAL COLLEGE AND
WEILL CORNELL
GRADUATE SCHOOL OF
MEDICAL SCIENCES

WINTER 2011

For more than
a century,
the Westchester
campus has been
at the forefront
of mental
health care

Psychiatric History





Aaron Flanders, MD '07, Amy Zwettler, MD, and Alden Chiu, MD '05, in Washington, D.C.



Hazel Szeto, MD, PhD '77, in Chicago

Weill Cornell ON THE ROAD



Jeffrey P. Gold, MD '78, Carlyle Miller, MD '75, and Carol Storey-Johnson, MD '77, in Washington, D.C.

Weill Cornell alumni are among the most enthusiastic supporters of the *Discoveries* Campaign, which is helping shape the future of medical research at Weill Cornell and beyond. Dean Gotto recently had the opportunity to host receptions for alumni and friends in Chicago and Washington, D.C. Sponsored by the Weill Cornell Medical College Alumni Association, the Chicago reception was held in conjunction with the American Heart Association Scientific Sessions, and the D.C. reception was held in conjunction with the Association of American Medical Colleges Annual Meeting.



Dean Antonio M. Gotto Jr., MD, DPhil, in Washington, D.C.



Debra Leonard, MD, PhD, Susan Pannullo, MD '87, and Caren Heller, MD, in Washington, D.C.



Peter H. Stone, MD '72, J. Robert Buchanan, MD '54, and Dean Gotto in Chicago



Weill Cornell Medical College

DISCOVERIES
THAT MAKE A DIFFERENCE
THE CAMPAIGN FOR WEILL CORNELL MEDICAL COLLEGE

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WINTER 2011

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FEATURES

22 FORWARD THINKING

BETH SAULNIER

Chasing out the darkness, letting in the light; literally and metaphorically, those aims have long underpinned Weill Cornell's Westchester campus. For more than a century, the facility—housed in elegant buildings atop a hill in White Plains—has been at the forefront of enlightened thought in mental health care, from the moral treatment of the nineteenth century to the Planetree movement of the late twentieth. Says Westchester medical director Philip Wilner, MD: "There is a sense of respite when you come onto the campus."



22

30 DOCTOR OF DISCOVERY

ANNA SOBKOWSKI

Throughout history, the physician-scientist—the person who has made observations about an illness or disease during the course of treating a patient and then brought that observation into the lab—has been at the epicenter of most great medical breakthroughs. But today, many physicians are finding the path to discovery more challenging, and the numbers of MDs winning government research grants has been in decline. Weill Cornell Physician-in-Chief Andrew Schafer, MD, is leading a movement to preserve a vanishing breed: the physician-scientist.

36 FLEXNER FOR THE FUTURE

JORDAN LITE

In 1910, the Carnegie Foundation published Abraham Flexner's groundbreaking report on the state of medical education in the U.S. and Canada—a work that prompted fundamental shifts in how physicians are taught and trained. A century later, a new study may point the way toward major curriculum changes at Weill Cornell and beyond. "Medicine is changing," says Dean Antonio Gotto, MD, "so we need to adapt to prepare our students for the type of practice they will have."

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wcm@med.cornell.edu

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WEILL CORNELL SENIOR ADMINISTRATORS
Antonio M. Gotto Jr., MD, DPhil
The Stephen and Suzanne Weiss Dean,
Weill Cornell Medical College; Provost for
Medical Affairs, Cornell University

David P. Hajjar, PhD
Dean, Weill Cornell Graduate School of
Medical Sciences

Myrna Manners
Vice Provost for Public Affairs

Larry Schafer
Vice Provost for Development

WEILL CORNELL DIRECTOR OF COMMUNICATIONS
John Rodgers

WEILL CORNELL EDITORIAL COORDINATOR
Andria Lam

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of Cornell Alumni Magazine.*

PUBLISHER

Jim Roberts

EDITOR

Beth Saulnier

CONTRIBUTING EDITORS

Chris Furst
Adele Robinette
Sharon Tregaskis

EDITORIAL ASSISTANT

Tanis Furst

ART DIRECTOR

Stefanie Green

ASSISTANT ART DIRECTOR

Lisa Banlaki Frank

ACCOUNTING MANAGER

Barbara Bennett

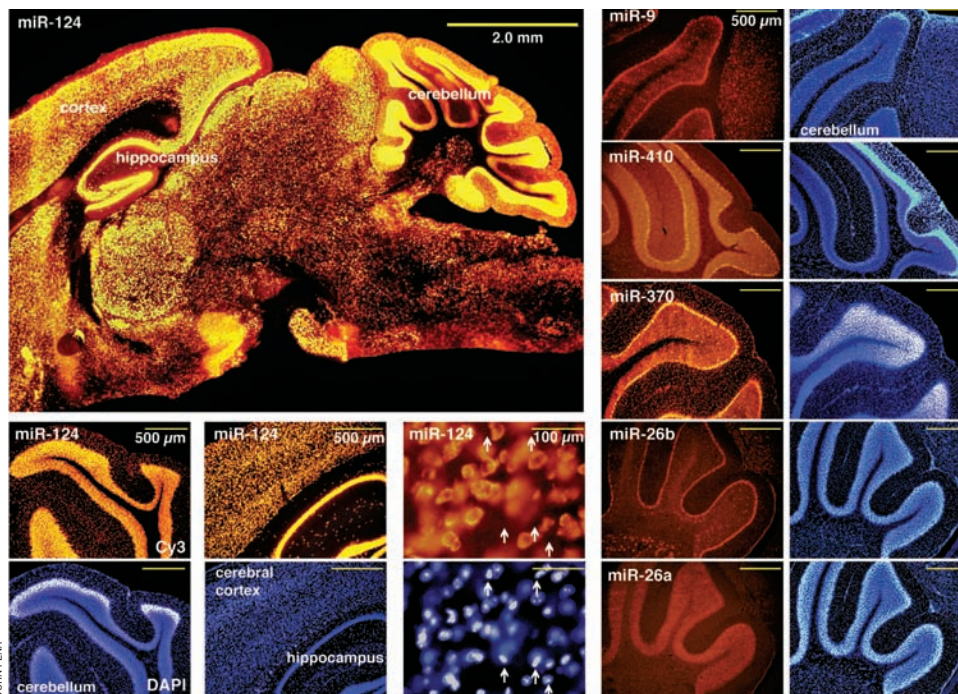
EDITORIAL AND BUSINESS OFFICES

401 E. State St., Suite 301
Ithaca, NY 14850
(607) 272-8530; FAX (607) 272-8532



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Cover photograph by
John Abbott

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Light Box



Personal growth: Women tend the formal gardens at the Bloomingdale Asylum, circa 1900. For a history of the Westchester campus, see page 22.

MEDICINE ON THE

CONSIDER ALL WE'VE DONE.

Think of all we can accomplish.

- **World's first gene therapy** for Parkinson's disease
 - First successful **embryo-biopsy pregnancy** and birth in the U.S.
 - First indication of bone marrow's critical contribution to tumor growth
 - Pioneering role in world's first successful use of deep brain stimulation to treat a minimally conscious brain-injured patient
 - Breakthrough in understanding **how neurons in the brain pass chemical signals to another cell**, which should prove useful for understanding the root of Alzheimer's and other diseases
 - Pioneer in innovative surgery to deliver cancer-fighting drugs directly into brain tumors without exposing the rest of the brain to the drug and its side effects
 - Identified a key molecule involved in the metabolism of the tuberculosis bacterium that can prevent sustained infection
 - Breakthrough research that reveals how blood vessel cells program themselves to grow adult stem cells, which has **potential application for regeneration of organs** and inhibition of cancer cell growth
- Identified how a protein transforms its shape to transport substances across cell membranes, which may help in developing more targeted therapies for anxiety, depression, schizophrenia, and substance abuse
- Among the **leaders in effective use of larger-than-life 3D imaging of cells**, blood vessels, and organs to get a whole new look at disease genesis and progression from cancer to degenerative eye disease

MOVE

Advancing Science, Enhancing Health

THE COSTS OF CURES



Recruitment of at least thirty additional top researchers is a priority of the *Discoveries* Campaign.

This is the essential next step for expanding Weill Cornell's translational bench-to-bedside research enterprise, a collaborative approach to biomedical science designed to speed discoveries from the lab bench to patient cures.

It is also an expensive step. A goal of \$125 million will help bring these researchers on board and provide start-up and related support at a level competitive with our peer institutions. The average investment per new scientist will be approximately \$4 million. Recruitment and start-up costs are high because we are focusing on attracting senior-level scientists with

established research programs, teams, and advanced biomedical technologies, among other factors.

Fortunately, Weill Cornell has a track record of making investments like this pay off.

In the first phase of its long-term strategic plan, which ended in 1999, the Medical College fundraising goal for scientist recruitment was \$29 million. In that phase, the average recruitment and start-up cost per scientist was approximately \$1 million. Costs were much lower due in part to the focus on hiring junior-level rising star scientists.

The return on investment has been impressive. The twenty-eight scientists recruited have an outstanding history of grant support. **In fact, five of them alone have generated a total of \$95 million—an average of \$19 million each—in research grants.** In other words, these five alone have brought in more than three times the initial recruitment expenditure.

But in the research laboratory the return on investment goes far beyond the numbers. It is, above all, about improving human health and longevity.

For more information and a detailed list of gift opportunities, please contact Lucille Ferraro, Campaign Director, at 646-317-7387 or luf2003@med.cornell.edu. Please visit our website at: weill.cornell.edu/campaign



Weill Cornell Medical College

Making a Difference

**Antonio M. Gotto Jr., MD, DPhil,
Dean of the Medical College**

In addition to the vital work we do in improving health care and advancing medical science, Weill Cornell Medical College plays an important role in the New York State economy. In 2008, the Medical College's publicly funded research injected \$839.1 million into the state's economy, and by 2018 it will have contributed another \$1.8 billion. Taken together, New York's academic medical centers constitute 8 percent of the state's economy.

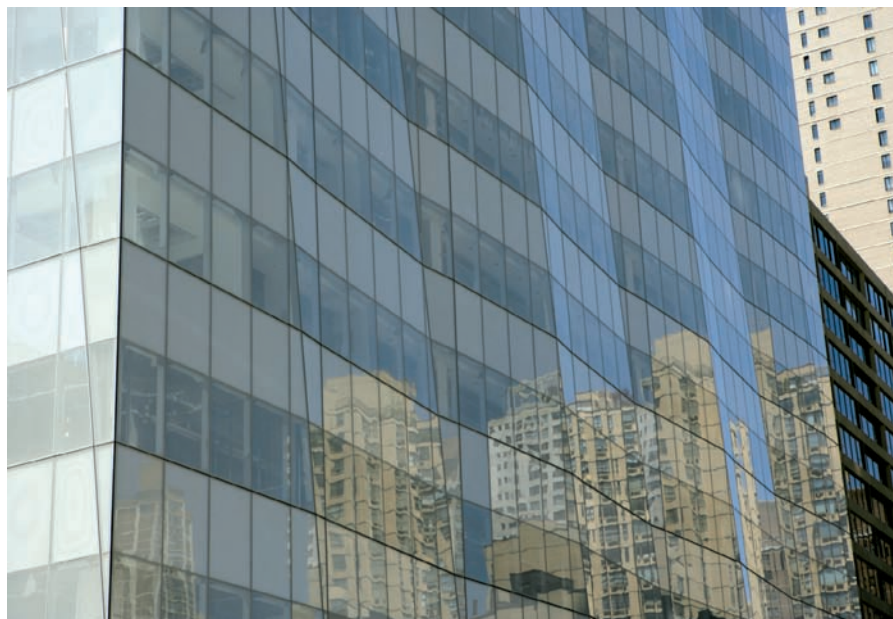
At Weill Cornell, we contribute in a number of ways: as an employer; by making capital

Surgery, Hunter College School of Nursing, Hunter Center for Gene Structure and Function, Memorial Sloan-Kettering Cancer Center, and NewYork-Presbyterian Hospital, the CTSC works to bring basic science discoveries to the bedside and the community. As part of that effort, it has created a number of programs to improve the health of New York City's residents—a population diverse in age, education, ethnicity, and socioeconomic background.

The "Heart to Heart" campaign, funded and supported by the Center, addresses health-care disparities by providing free health screening for diabetes and cardiac health problems, which among other things includes a one-on-one consultation with a physician on staff at the Medical College. Patrons receive blood tests on the spot, and members of our faculty explain the results and offer advice on healthy lifestyle changes. A majority of the participants screened so far earns less than \$20,000 annually.

CTSC also offers informational sessions conducted with panelists in person and with medical experts who participate by means of high-definition videoconferencing technology. In sessions conducted at community centers, senior centers, churches, and malls, community members learn about such issues as diabetes, pain management, nutrition, AIDS prevention, fall prevention, and cardiac health. Half of the people attending so far report making at least one lasting lifestyle change in order to prevent future illness. Several elected officials and the New York City Department of Health have gotten involved and helped promote these events throughout the Bronx, Manhattan, Brooklyn, and Queens.

In this small way, and many others like it, we at Weill Cornell Medical College—as members of this urban community and as physicians sworn to care for those in need—are helping to close the gap in access to quality health care. And while financial analyses can measure the impact we have on the economic well-being of our city and state, the difference we make in the lives of individuals in our community is a contribution that may not be quantifiable but should never be undervalued.



JOHN ABBOTT

investments and purchasing goods and services; and by attracting medical residents, health science students, patients, and visitors. All told, our financial impact is enormous.

But that impact, of course, goes far beyond dollar amounts—as significant as they may be—and it occurs in myriad, immeasurable ways. Take for example the work of the Clinical and Translational Science Center (CTSC) at Weill Cornell. As a consortium that includes Cornell University in Ithaca, Weill Cornell Graduate School of Medical Sciences, Cornell Cooperative Extension in New York City, Hospital for Special

A Productive Partnership

David P. Hajjar, PhD,
Dean of the Graduate
School of Medical Sciences

Since our founding in 1952, the Graduate School of Medical Sciences has worked closely with the Sloan-Kettering Institute (SKI). It is one of two divisions—the other, of course, being the Medical College—that comprise the Graduate School. Our faculty members come from both divisions, and the graduate students in our seven programs are distributed among laboratories in both divisions. We now total more than 600 graduate students, making our student body larger than the Medical College's, where there are 404 medical students. At the Graduate School, we offer our students an extraordinary training ground in biomedical research and access to the top laboratories, faculty mentors, and collaborators in the world. At SKI, for example, eleven scientists are members of the National Academy of Sciences, six are Howard Hughes Medical Institute (HHMI) investigators, and thirteen are members of the Institute of Medicine. At the Medical College, we have one HHMI investigator and twelve faculty are members of the Institute of Medicine.

In November, we welcomed a new colleague when Craig Thompson, MD, became president and CEO of Memorial Sloan-Kettering Cancer Center. An outstanding physician-scientist, educator, and academic leader, he had previously served as director of the University of Pennsylvania's Abramson Cancer Center. He succeeds Harold Varmus, MD, who left Memorial Sloan-Kettering last summer to become director of the National Cancer Institute.

Dr. Thompson arrives at an exciting time. In the last decade, SKI has undergone tremendous growth in basic and translational investigation. Having launched the largest effort in its history to broaden and streamline research, it opened more than fifty new labs and several new programs in areas where SKI investigators have traditionally excelled, such as in developmental biology, molecular genetics, and structural biology, as well as in newer disciplines such as computational biology. SKI broke ground on a new facility, the Mortimer B. Zuckerman Research Center, which opened in 2006 with space for some 300 research and core facility laboratories. The Center nearly doubled the number of laboratories at Sloan-



MSKCC MEDICAL GRAPHICS AND PHOTOGRAPHY

Kettering and helped strengthen ties between basic research and clinical applications.

Laboratories need graduate students, and we at the Graduate School continue to work closely with SKI to retain world-renowned faculty, recruit top students, and design curricula to train the next generation of biomedical researchers. As SKI has grown, the Graduate School has grown as well. In the past decade, the number of PhD candidates has more than doubled, thanks in large part to the addition of several graduate training programs, including one in computational biology and medicine and one in chemical biology.

Such collaborations will continue to flourish as our partnership grows. All of us at the Graduate School welcome Dr. Thompson and look forward to working together to create an unparalleled period of basic science and clinical discoveries.

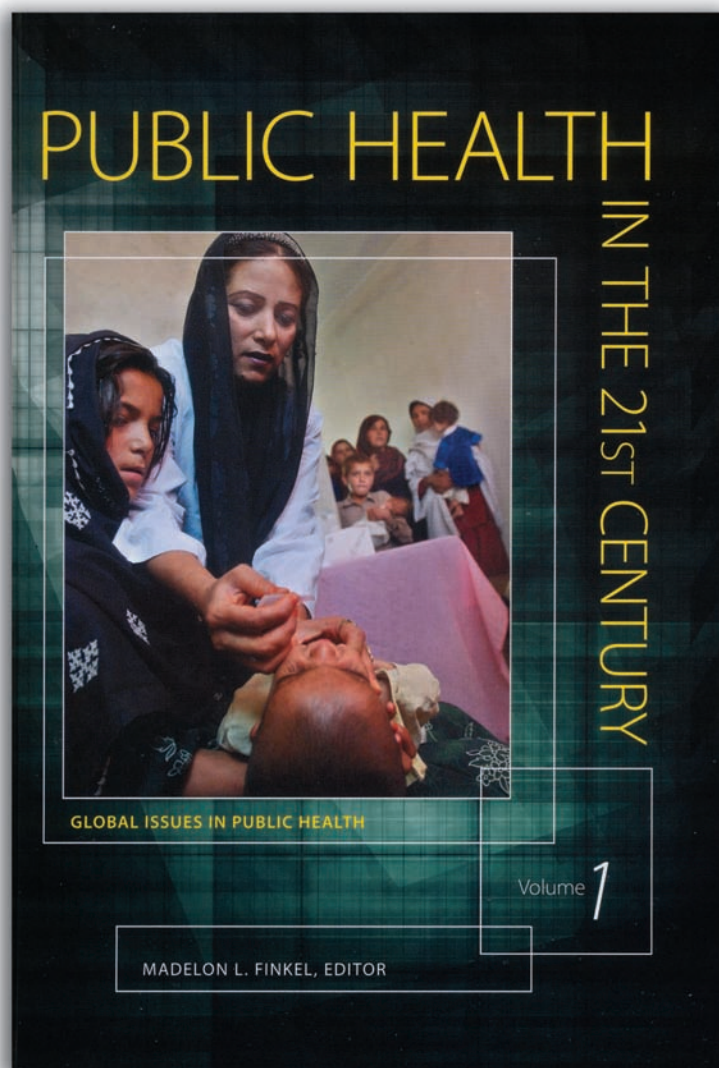
By the Book

A three-volume work explores global public health issues in the new millennium

With fifty-seven chapters by more than a hundred authors, *Public Health in the 21st Century* tackles a wide variety of topics, from STDs to food-borne infections, prostate cancer screening to palliative care. Edited by Madelon Finkel, PhD, professor of clinical public health and director of the Office of Global Health Education, and published by Praeger Publishing Company, the three-volume work runs nearly 1,000 pages and costs \$265. "I tried to include as many important public health topics as possible," Finkel says. "But I wanted to pick those topics that would resonate for anyone interested in public health. I tried to focus on what are perceived to be key issues as we enter the second decade of the twenty-first century."

Published in December, the set includes contributions by more than a dozen Weill Cornell faculty, including pharmacologist Marcus Reidenberg, MD, on the WHO essential medicines program; disaster response expert Nathaniel Hupert, MD, and colleagues on planning for a bioterror attack; ethicist Inmaculada de Melo-Martín, PhD, on genetic testing; psychologist Gilbert Botvin, PhD, and colleagues on preventing adolescent substance abuse; Carla Boutin-Foster, MD, the Nanette Laitman Clinical Scholar in Public Health, on racial and ethnic diversity in academic medicine; cardiologists William Borden, MD, MBA, and Helina Kassahun, MD, on global cardiovascular disease; endocrinologist John Baker, MD, on the global burden of diabetes; and Ronald Adelman, MD, and colleagues on aging.

"Dr. Finkel has achieved a substantial feat in compiling this valuable three-volume set, with chapters written by leading scientists and thinkers in public health, both at Weill Cornell and elsewhere," says Alvin Mushlin, MD, chairman of the Department of Public



Health. "As we enter this new century, it is crucially important to understand the role that public health approaches can and should play to enhance health and well-being."

Finkel herself contributed chapters on prison health care and comparative health systems. Ithaca-based faculty also participated, including atmospheric scientists writing on climate change and researchers from the School of Industrial and Labor Relations' Employment and Disabilities Institute pondering public health considerations of people with disabilities. "I think the lay person could find individual chapters interesting," says Finkel, "but it's more for the trade—physicians, nurses, policymakers, public health workers."

Each of the book's three volumes has a theme: global population health (featuring such topics as climate change, urbanization, and nutrition in the developing world); disease management (HIV/AIDS, obesity, diabetes); and current issues in public health policy (human rights, palliative care, electronic medical records). Cornell President David Skorton, MD, contributed an introduction, writing that the book "succeeds admirably in bringing together much of the broad field into one work." Writes Skorton: "Readers from across the spectrum of public health concerns will find thought-provoking material of great value."

Dean David Hajjar Wins Fulbright Grant

David Hajjar, PhD, dean of the Graduate School of Medical Sciences, has been named a scholar through the Fulbright Specialist Program, one of the Fulbright Commission's premier awards for senior scholars. Hajjar—only the second Weill Cornell faculty member to receive the honor—will work to strengthen biomedical research and education at Qatar University as well as promote collaborations between the university and Weill Cornell's Qatar campus. He will also aid in identifying Qatari students qualified for admission to WCMC-Q. "Through his leadership in building our own research and education enterprise at Weill Cornell, and as an accomplished, brilliant scientist himself, Dr. Hajjar is uniquely qualified to offer expert guidance to our friends and colleagues in Qatar," says President David Skorton, MD. The longest-serving dean in the history of the Graduate School, Hajjar is the Frank H. T. Rhodes Distinguished Professor of Cardiovascular Biology and Genetics.



Dean David Hajjar, PhD

WCMC Joins Pfizer Research Collaboration

Weill Cornell is one of seven medical centers in the metro area that have joined a Pfizer Inc. research initiative, called the Centers for Therapeutic Innovation, aimed at spurring new drug discovery. The collaboration, which mimics a venture capital-funded biotechnology start-up, also includes Memorial Sloan-Kettering Cancer Center, Mount Sinai, Columbia, and Albert Einstein College of Medicine. "In addition to funding pre-clinical and clinical development programs, Pfizer will offer its partners equitable intellectual property and ownership rights to support continued experimentation and exploration, as well as broad rights to publication," the company said in a statement. Governor Andrew Cuomo called the arrangement "a model for collaboration that will enhance New York's status as a global center of the life sciences industry."

Two Otolaryngologists Publish Standard Clinical Text

Two Weill Cornell otolaryngologists have published a textbook that could become a standard resource for clinicians, fellows, and students in the field. *Differential Diagnosis in Otolaryngology: Head and Neck Surgery* was a collaborative effort by Michael Stewart, MD, chairman of otorhinolaryngology and senior associate dean for clinical affairs, and Samuel Selesnick, MD, vice chairman of otorhinolaryngology and professor of otolaryngology in neurological surgery. "We think this book will be very helpful for all clinicians, but particularly for two groups," Stewart says. "First, those in

training or starting out, when they do not have a lot of clinical experience; and second, practitioners with subspecialty expertise and focus who occasionally see patients with other problems."

Remembering Patient Advocate Myra Mahon

Myra Mahon, a champion of high-quality health care and health education for women and former co-chair of the Women's Health Symposium at NYP/Weill Cornell, died January 29. She was seventy-three. The wife of Arthur Mahon, a member of the NewYork-Presbyterian Hospital Board of Trustees and vice chair of the Medical College's Board of Overseers, Mahon was a trained social worker who, in the words of NYP leaders, "directed her considerable abilities in the service of others." The Myra Mahon Patient Resource Center, a reading room and library in the Weill Greenberg Center at 1305 York Avenue, was named in her honor; at its opening, she dedicated it "to those who serve unseen." In addition to her husband, she is survived by four children and two grandchildren.



Myra Mahon

TIP OF THE CAP TO...

Eugene Cha, MD (urology), **Francis Gamache, MD '72** (neurosurgery), **Amos Grunebaum, MD** (ob/gyn), **Sandra Hall-Ross, MD '92** (medicine), **Ralph Slepian, MD** (anesthesiology), and **Michael Walton, MD '05** (psychiatry), winners of 2010 Physician of the Year Awards from the Department of Nursing at NewYork-Presbyterian Hospital.

Michael Chizner, MD '74, elected chairman of the Florida Board of Medicine.

Peter Hotez, MD '87, chairman of the Sabin Vaccine Institute, appointed president of the American Society of Tropical Medicine and Hygiene.

Pharmacology professor **Charles Inturrisi, PhD**, named to the Institute of Medicine's Committee on Advancing Pain Research.

Surgery chairman **Fabrizio Michelassi, MD**, president of the Society of Surgical Chairs, named president-elect of the New York Surgical Society.

Marcus Reidenberg, MD, professor of pharmacology, medicine, and public

health, given the American Society for Pharmacology and Experimental Therapeutics' Torald Sollmann Award.

William Schaffner, MD '62, chairman of the Department of Preventive Medicine at Vanderbilt University, awarded the Sedgwick Memorial Medal for Distinguished Service in Public Health from the American Public Health Association.

David Schottenfeld, MD '56, professor emeritus of internal medicine at the University of Michigan, winner of the James D. Bruce Memorial Award for Distinguished Contributions in Preventive Medicine from the American College of Physicians.

Assistant professor of emergency medicine **Rahul Sharma, MD**, winner of the National Emergency Medicine Faculty Teaching Award from the American College of Emergency Physicians.

President **David Skorton, MD**, named to a two-year team on the board of directors of the American Association of Medical Colleges.

FROM THE BENCH

Could Gene Therapy Treat Major Depression?

In a sequel to their pioneering work on Parkinson's disease, researchers at Weill Cornell have found that gene therapy may offer a powerful treatment for major depression. Animal and human data indicate that a brain protein called p11 plays a critical role in feelings of reward and pleasure—and that restoring p11 levels may effectively treat depression.

"Applying molecular neurobiology and gene therapy to depression could dramatically alter the approach to psychiatric diseases," says vice chairman for research of neurological surgery Michael Kaplitt, MD '95, PhD, the study's senior investigator. Kaplitt's team recently concluded a forty-five-patient Phase II clinical trial on using gene therapy to treat Parkinson's, with the results currently being readied for publication.

New Ammunition Against Two Lethal Viruses

Researchers have identified a potential new treatment for Nipah and Hendra, two lethal emerging viruses for which there is currently no vaccine or treatment. Building on previous work, assistant professor of microbiology in pediatrics Matteo Porotto, PhD, vice chair of pediatrics for research Anne Moscona, PhD, and colleagues discovered that cholesterol-tagged peptides can be useful in disrupting the viruses' ability to initiate infection. "These viruses are of great concern," says Porotto, the study's lead author. Hendra is a potential bioterror agent that also threatens livestock and humans in Australia, while Nipah—which causes fatal encephalitis in up to 70 percent of human cases—has caused seasonal outbreaks in Asia. The work, published in *PloS Pathogens*, could also lead to new therapies for measles, mumps, and the flu.

Exploring Prostate Cancer

Prostate cancer isn't just one disease but has several variations with differing levels of lethality, Weill Cornell researchers report. In work published in *Genome Research*, a team led by Mark Rubin, MD, the Homer T. Hirst Professor of Oncology in Pathology, identified secondary mutations that cause some types of prostate cancer cells to be deadly. The discovery could lead to better tests, sparing thousands of men

from unnecessary biopsies and leading to more individualized therapies. In February, *Nature* published Rubin's work on sequencing the genomes of prostate tumors—the first time researchers have mapped the tumors' full genetic blueprint. Rubin compares the effort to looking not just for spelling errors in the genome, but also for whole paragraphs or sections that have been rearranged. "One of the big surprises is the fact that prostate cancer doesn't have a large number of misspellings," he says, "but instead has a large, significant number of rearrangements."

MDs' Efforts Save Money for Patients and System

While coordinating patient care outside of office visits takes up a considerable amount of a physician's time, it may cut down on unnecessary trips to the doctor and emergency department. In the *Journal of General Internal Medicine*, lead investigator Melinda Chen, MD, MS '10, clinical assistant professor of public health, and colleagues argue that physicians should be compensated for such efforts, because they save money both for patients and the health-care system. "This study confirms what good primary care physicians know—they spend a great deal of time doing things for patients outside of office visits," says senior investigator Lawrence Casalino, MD, PhD, chief of the Division of Outcomes and Effectiveness Research. The researchers observed thirty-three internists in twenty practices in the metro area for a full workday. They found that, on average, the physicians spent 20 percent of their office time (1.6 hours per day) on non-reimbursed activities like filling out charts, writing e-mails, or arranging care plans.



Lawrence Casalino, MD, PhD

How Does the Liver Regenerate Itself?

Scientists at the Ansary Stem Cell Institute have taken a step toward understanding how the liver, unique among organs, is able to regenerate itself.

"We have found that specialized blood vessel cells in the liver—a specific type of sinusoidal endothelial cell—initiate and sustain liver regeneration by producing growth factors that we have identified," says Shahin Rafii, MD, the Arthur B. Belfer Professor in Genetic Medicine and the Institute's co-director. "This finding will open the door for designing new therapies to treat damaged livers." The study marks the first time that the molecular and cellular pathways initiating liver regeneration have been pinpointed. The work was published in *Nature* and in *Nature Cell Biology*.

Hormone May Help Treat Blood Disorders

The naturally occurring hormone hepcidin plays a crucial role in two anemic blood disorders—beta-thalassemia (also known as Cooley's anemia) and hemochromatosis—and may offer a promising treatment. In *Blood* and the *Journal of Clinical Investigation*, associate professor of genetic medicine Stefano Rivella, PhD, and colleagues report that patients with the anemias have low levels of the hormone; as a therapy, it could help reduce the iron overload inherent in both conditions. According to Rivella, the major consequence of iron overload is that it halves the lifespan of red blood cells. "These blood cells are not properly formed, are not as healthy as normal blood cells, and therefore cannot properly function," he says. Current treatments include regular blood transfusions—which are often ineffective—and bone marrow transplants.

Research Offers Hope for Leukemia Patients

A discovery by researchers at Weill Cornell and Memorial Sloan-Kettering Cancer Center offers new hope for patients with acute myelogenous leukemia (AML). One of the most common leukemias diagnosed in adults, AML is responsible for some 9,000 deaths each year. Medicine professor Ari Melnick, MD, director of the Sackler Center for Biomedical and Physical Sciences, and Sloan-Kettering's Craig Thompson, MD, and Ross Levine, MD, have found that mutant enzymes cause AML by creating a chemical poison. The discovery may provide a molecular target for new drug therapies. Says Melnick: "Our study shows for the first time that metabolic enzymes not only help to fuel tumor growth but when mutated can also directly 'rewrite' the instructions that govern the genome." The work was published in *Cancer Cell*.

Show & Tell

Student Ximena Levander takes a year off to do research for TV's 'Dr. Oz'



JOHN ABBOTT

When rising fourth-year medical student Ximena Levander was an undergrad at Vanderbilt, she double-majored in chemistry and communication of science and technology, wrote for the school paper, and DJ'ed for the campus radio station. These days, that varied experience is coming in handy: taking a year's leave before completing her MD, Levander is

working as a researcher for "The Dr. Oz Show," the syndicated medical-affairs program hosted by NewYork-Presbyterian/Columbia cardiac surgeon and frequent "Oprah" guest Mehmet Oz, MD.

One of Levander's professors summed it up as a "second intern year." She works long, intense hours in the show's offices in Rockefeller Center, where "Dr. Oz" tapes in Conan O'Brien's old studio, across the hall from Jimmy Fallon's "Late

Media maven: Ximena Levander '12 on the set of "The Dr. Oz Show"

Night.” “In this job, you have to be ‘on’ all the time,” says Levander, who grew up in Silver Spring, Maryland. “You’re doing a hundred things at once. When we’re in the middle of a taping cycle, I’m reviewing transcripts of shows that have already taped, medically clearing scripts that have just been written, and doing research for shows that haven’t been written yet. You have to be ready for anything.”

“Dr. Oz” tapes in three-week cycles, six episodes a week, with a week’s break in between. As one of three student researchers working on the show’s second season (the others are rising fourth-years at Columbia and NYU), Levander has delved into topics from constipation to back pain, Alzheimer’s to alternative medicine. “This year has made me realize that I really do want to practice medicine—it has rejuvenated my drive to move forward,” Levander says. “I’ve also learned a lot and become more well-rounded.” She has even appeared on the program a few times, including one episode in which she administered a glucose/cholesterol finger-prick test to an audience volunteer, and another in which she delivered a “secret ingredient” (cranberries) to a family participating in Oz’s “Just 10” weight-loss challenge. “I’ve come to appreciate TV so much more,” says Levander. “Someone is responsible for every step of the process; people don’t realize that every prop that they see on a show, someone had to make or find. A two-minute video clip takes hours and hours of work.”



Won't hurt a bit: Levander does a finger-prick test on an audience volunteer.

Levander heard about the “Dr. Oz” gig from a mass e-mail to Weill Cornell students, and she jumped on it. Applicants had to send in an example showing their research skills, and after making it to the final round she was interviewed by Dr. Oz himself. In addition to working on the TV program, she does research and books guests for “The Dr. Oz Radio Show” on Oprah Radio, which is recorded across the street at the Sirius XM studios. Both jobs have offered some celebrity sightings. On her first day at Sirius XM, she ran into Howard Stern; in Rockefeller Center—also home to “Saturday Night Live” and the “Today” show—Levander has seen (or heard) musicians Katy Perry, Taylor Swift, and Susan Boyle. “In some ways it’s similar to the hospital, and in some ways it’s different,” Levander says of the atmosphere in the production offices. “You have lots of last-minute changes and hours that can vary. It’s fun to be in an environment that’s creative, where everyone is pushing for the latest medical breakthrough, and I’m learning a lot about what the American public wants to know in terms of medicine and health.”

With her TV job ending in May, Levander will return to Weill Cornell this summer. While still unsure of her specialty choice, she pictures herself incorporating some media involvement into her future practice, be it in TV, radio, books, or magazines. “Putting yourself out there and explaining things to the public is the best way to improve the general health of the country,” she says. “More and more, the medical community is realizing it’s not enough to see patients. You have to reach out to people.”

— Beth Saulnier

Brain Food

A Weill Cornell program aims to reduce obesity in Harlem and the South Bronx, using tips from Ithaca’s ‘mindless eating’ guru

Cornell marketing professor Brian Wansink, PhD, runs the Ithaca-based Food and Brand Lab, the first line of defense against what he has termed “mindless eating.” The author of a widely read book of the same name, Wansink researches the effects of such dietary bad habits as downing snack chips straight from the bag and eating meals in front of the TV. Now, researchers from the Medical College are sharing Wansink’s practical tips with residents of two neighborhoods that have some of the worst health outcomes in New York City.

Under a five-year, \$6 million grant from the National Heart, Lung, and Blood Institute, Mary Charlson, MD, the William T. Foley Distinguished Professor of Medicine, and Erica Phillips-Caesar, MD, assistant professor of medicine, are leading the Cornell Center for Behavior Intervention Development, an initiative to reduce obesity—and related illnesses such as diabetes, hypertension, and heart disease—among African American and Latino residents of Harlem and the South Bronx. “These are two of the five communities with the city’s highest rates of obesity, which is linked to the fact that they have the lowest physical activity levels and the



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lowest fruit and vegetable intake, and are two of the poorest communities in New York City,” says Phillips-Caesar. “All of those things lead to a horrible set-up not only for adult obesity, but childhood obesity as well.”

In recent years, the medical community has expressed increasing concern about how the preponderance of fast food outlets and the dearth of fresh produce in the city’s poor, minority neighborhoods contribute to overweight and obesity. On top of those environmental influences, add the difficulty of sticking to a weight-loss regimen—a problem that’s common to dieters everywhere. “Most obesity interventions focus on dieting, but on the whole they don’t work,” notes Charlson, who is executive director of Weill Cornell’s Center for Integrative Medicine. “People may lose weight, but they regain it within a short period of time. The other problem is that dieting involves a sense of sacrifice that’s

hard for people to maintain with the stress of their busy lives.”

Dieting requires eternal vigilance, the constant weighing of food choices—with success dependant on making the right calls day after day. But in *Mindless Eating*, Wansink’s central thesis is that of the some 250 decisions about food that the average person makes daily, the majority defy explanation. His tactics take advantage of that notion, making our mindless choices work to our benefit. In his research, for example, he has shown that by putting a candy jar a few steps away rather than on your desk, you’ll automatically eat fewer sweets. So the trick isn’t to constantly resist temptation—it’s simply to make the initial choice to put the jar a bit out of reach. In partnership with clinics, churches, and community groups in Harlem and the South Bronx, the Weill Cornell researchers aim to study how such relatively minor shifts in dietary habits might



AMELIA PANICO

Mary Charlson, MD

work where other regimes have failed. Says Charlson: “The strategies that we’ve refined based on Dr. Wansink’s work are designed to introduce small, sustainable changes in eating.”

One of Wansink’s best-known tactics seems almost laughably simple: switch from a standard twelve-inch dinner plate to one that is ten inches wide, which holds less food but is not small enough to make the difference visually noticeable. “Once adopted, you don’t have to decide every time you have a meal—you just use the smaller plates,” Charlson says. “Dr. Wansink has found that this reduces caloric consumption in a sustainable way.” And it’s not a negligible amount; his research has found that those two inches can cut 200 calories from each meal.

Starting with focus groups totaling about seventy people—all of whom were overweight or obese and had multiple failed attempts at dieting—the researchers narrowed a list of thirteen strategies down to six that the participants found most appealing. One of Wansink’s standards—turning off the TV during meals—fell by the wayside. “First of all, people didn’t really believe they ate more in front of the TV, and these things have to have validity for the population,” Charlson says. “Secondly, the TV was used every day to quiet down the kids around dinner time, so none of the focus groups voted for it. You could say it’s an ideal strategy—but if no one is going to use it, then it’s useless.”

The final list of strategies: using smaller plates; eschewing calorie-dense beverages like juice and soda in favor of water; having vegetables comprise half of your main meal; keeping snack foods out of sight; eating breakfast every day; and eating a home-cooked dinner at least six days a week. The researchers stress that participants don’t have to sign on for all six, but rather one or two that seem viable. “The goal is that there’s something where you say, ‘I have confidence that I could do it,’” says Phillips-Caesar. “We’re not telling you which one to select. We’re telling you, ‘Think about these things and put them in perspective in your own life.’”

One member of the original focus groups who has found the strategies immensely helpful is Deloris Jordan. The sixty-five-year-old home health aide, who lives just blocks from Harlem’s famed Apollo Theater, carried 205 pounds on her five-foot-six-inch frame about a year and a half ago. Jordan, who was already implementing changes in her eating behaviors, began increasing her intake of vegetables, using smaller plates, and reducing carbs (“I started taking two tablespoons instead of the whole plate”). She has lost weight and now feels much more energized; a diabetic, she no longer needs to inject insulin.

Before, she says, “I was having my grits, eggs, and bacon every day—I was eating whatever I wanted, if you want to know the truth.” These days, Jordan has swapped fried foods for lean protein cooked on her George Foreman Grill; for breakfast, she enjoys cold cereal with blueberries, and she blends fresh fruit—or even garlic and bell peppers—into her nutritional shake for diabetics. She has become such an evangelist for the wonders of healthy eating that she’s now the volunteer nutritionist at her church, First Baptist, where she holds a monthly class—offering lessons on, say, the dietary value of the sweet potato. “We are told by our pastor that our body is our temple,” Jordan says. “If you take care of your body, your body will take care of you.”

—Beth Saulnier

Safe and Sound

At the New York City Elder Abuse Center, Weill Cornell geriatricians protect the city’s seniors

Mr. D is a seventy-year-old man of Greek heritage who lives in Brooklyn. He was recently admitted to the hospital, vomiting after a fall in the home he has shared for a decade with a woman who may or may not be his wife. The couple co-owns ten city buildings; her two sons oversee his finances.

Mr. D has Alzheimer’s—it is unclear how advanced—as well as Stage III lung cancer. During his inpatient stay, his only child visited from Los Angeles. Upon returning to California, she phoned the hospital only to learn that her father had left against medical advice. She then received a call from someone who had seen him wandering around the neighborhood at night, dazed and in soiled clothes. She called the city for help.

The case came to the attention of Brooklyn’s Adult Protective Services (APS), which brought it to the New York City Elder Abuse Center, a Weill Cornell-affiliated initiative, in partnership with NewYork-Presbyterian Hospital, that is the first of its kind in the metropolitan area. About a dozen members of its multidisciplinary team are discussing Mr. D, including social workers from APS and the New York City Department for the Aging, as well as staff members from the non-profit Weinberg Center for Elder Abuse Prevention and Jewish Association for Services for the Aged, lawyers from the Brooklyn district attorney’s elder abuse unit, and geriatric medicine personnel from NYP/Weill Cornell. A full-time coordinator, Robin Roberts, facilitates the discussion.

In assessing this case of possible abuse, neglect, and financial exploitation, the team seeks medical advice from Mark Lachs, MD, co-chief of the Division of Geriatrics and Gerontology at Weill Cornell. He briefs them on the prognosis, treatment, and course of the cancer, potential level of pain, issues of mental capacity, and ways of approaching medical and psychiatric assessments given the family’s reluctance to turn over records. Says Lachs, the Irene and Roy Psaty Distinguished Professor of



Risa Breckman, LCSW

JOHN ABBOTT

Clinical Medicine: “All the complicated issues of health care, superimposed on an abusive environment, is a recipe for disaster.”

Mr. D is fictional. But the people discussing him are members of the Elder Abuse Center’s real-life team, participating in a videotaped training scenario that demonstrates the challenges that staff face every day. Founded in 2009, the Center combines partners from numerous agencies and nonprofits, gathering experts from across disciplines to address individual cases of abuse more effectively and efficiently. The Brooklyn team meets three times a month (another in Manhattan operates under a different schedule); it started reviewing cases in October, after nearly a year of planning, preparation, and testing. “Medical expertise on teams is so critical,” says Risa Breckman, LCSW, assistant professor of gerontological social work in medicine. “Physicians assess the medical needs of victims, explain diagnoses and medications to team members, and then help team members successfully integrate these health findings into the overall abuse intervention plans.”

To develop the model, planners visited elder abuse centers in California and also looked at centers for child abuse, which have long-standing and well-established systems for research, education, treatment, and prevention. “Elder abuse has a series of similar, but different, issues,” Lachs says. “For example, who is the responsible caregiver? In child abuse, it’s usually clear. But if you’re an adult son or daughter, what is your responsibility, particularly if that person was a difficult parent? It can be quite complex.” Even without

the emotional factors, the medical approach is different. “There are certain injuries in children that have to be child abuse,” Lachs continues. “We don’t know that for elder abuse. Because of the burden of chronic disease, there’s no X-ray that we can look at and say, ‘This can only be elder abuse.’ ”

With the need to answer such questions and establish norms, the Elder Abuse Center offers enormous opportunities for research. “The Center is a clinical outfit, no doubt about it, but we plan a significant research evaluation of our processes,” says Lachs, who is currently conducting a large study on violence among nursing home residents. And in light of what Breckman calls the “demographic reality” that medical infrastructure is insufficient to meet the needs of the exploding population of older adults, the Center has a key role to play in education and training. “It’s an available resource for teaching, and people are already making use of it,” she says. “There’s nothing like coming out into the field and seeing people grapple with real-life situations.”

But most critically, the Elder Abuse Center offers an urgent service to the community. As an example, Breckman cites a situation that occurred in the first month of the Center’s operation. “The case was presented at nine a.m., and everyone on the team was really concerned,” she says. “By the afternoon, the person was hospitalized. They saved her life. This woman was extricated from the house where she would have met a fate of true suffering.”

— Andrea Crawford

Just Deserts

In a collaboration with the Ithaca campus, WCMC-Q researchers search for life amid Qatar's sand dunes

Sand castles: Researcher Renee Richer, PhD, and colleagues do field work in the Qatari desert.

Weill Cornell Medical College in Qatar faculty member Chris Ogden, PhD, senior lecturer in biology, earned his doctorate in soil science from the Ithaca campus, and he got pretty used to the climate in Upstate New York. Now he's doing a research project a world away and at the opposite end of the thermometer: with WCMC-Q plant ecologist Renee Richer, PhD, and two Ithaca-based colleagues, he's studying the potential for life in Qatar's ubiquitous sand dunes, aiming to develop ways to stem desertification in the Middle East and beyond. "This time of year, it's

not bad—the weather is pretty nice," Ogden says of the temperatures, which are relatively moderate in winter but can reach 50 degrees Celsius (upwards of 120 degrees Fahrenheit) in the warmer months. "If you have to go out there in the summer, for somebody who is accustomed to Ithaca, it's pretty hot."

Under a three-year, \$1 million grant from the Qatar National Research Fund, Ogden and his colleagues are testing their hypothesis that the dunes are rife with microbes that secrete sugars that congeal water and sand to form a crust—known as a biofilm—that helps keep dunes from eroding. In March 2009, the team—which is led by Ithaca-based mechanical engineer and principal investigator Michel Louge, PhD, along with co-investigator and microbiologist Anthony Hay, PhD—conducted a pilot study, gathering samples in southeastern Qatar. Using Google Earth, the researchers identified relatively pristine examples of barchan dunes, mobile sand structures that are constantly on the march. While they're still studying the samples as they launch into the full project, the initial findings seem promising. "Based on our preliminary results in Doha, we definitely saw microbial activity and were able to extract a lot of DNA," says Hay. "We're interested in asking, What microbes are out there? What are they doing? Are they contributing to the stability of the dunes, and is there a way that we could harness them to stabilize the dunes even more?"



WCMC-Q

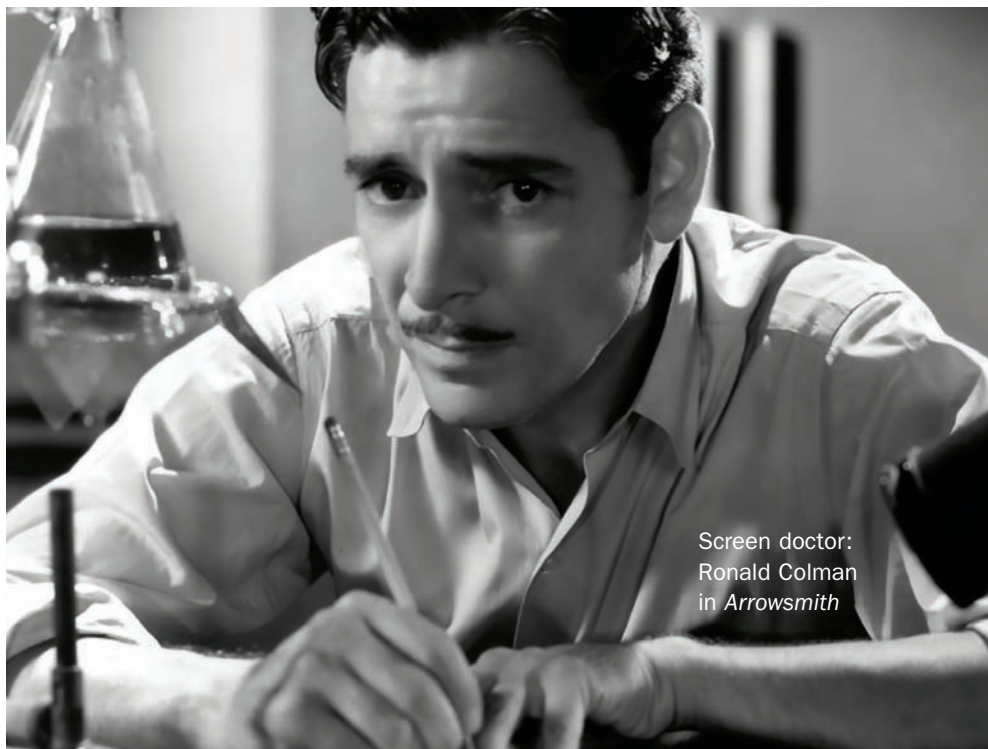
Those questions are hardly academic. Arid regions currently make up 41 percent of the Earth's land area, and desertification imperils two billion of the world's poorest people. "Sand dunes are of interest globally because desertification causes the loss of arable land," Richer says. "So there has been a lot of work looking at how we can protect these arid areas from this devastating erosion."

As Louge puts it, "Deserts are on the march worldwide"—not only in Africa and the Middle East but also China, South America, India, Australia, and the U.S. In addition to threatening industry—from solar power projects in the Sahara to oil refineries in Qatar—the encroaching desert can pose health risks. "Mobile sands are not just a physical problem in that they block roadways or clog shipping lanes, but they become a reservoir for airborne particulates," Hay notes. "We know there are cyanotoxins in these sands, and that other inhalation risks contribute to pulmonary distress. So it's both an environmental and a human health issue." But if those sticky microbes are already the first line of defense against erosion, one tactic would be to help them do their work. "If you could increase their biomass, it would help stabilize the dunes," Ogden says. "It's speculation, but it's possible—and it would certainly be cheaper to spray some nutrient solution a couple of times a year than to use an engineering approach."

While field work in Qatar is far more pleasant than the forays Louge has taken to North Africa—where he has camped out on the dunes for days at a time—it's no walk in the park. To gather samples even during milder times of the year, the researchers must take precautions to avoid dehydration and heat stroke. Their pilot research site is about ninety minutes from Doha—an hour's drive over roads and another thirty minutes off-road into the desert, guided by GPS. "The environmental conditions are always an issue," says Richer. "We're out in a four-wheel-drive vehicle. Of course you always have to make sure you have enough water, and hopefully you're within cell phone range. People would think that in the desert you don't wear much clothing, but in fact you cover up as much as possible to maintain your body temperature, which is much cooler than the environment, as well as to protect yourself from the sun."

Despite the inherent discomforts, Richer says, those desert forays are priceless—both scientifically and aesthetically. "It is absolutely beautiful," she says. "You have these large, horseshoe-shaped dunes that can be quite steep and tall, and it's just spectacular. The landscape is stunning because it's so stark. If there's any place that's interesting to a biologist, it's these extreme environments."

— Beth Saulnier



Screen doctor:
Ronald Colman
in *Arrowsmith*

Movie Nights

Student group offers a cinematic respite
from the demands of med school

When Weill Cornell students aren't studying, eating, or sleeping, some get together to share the pleasures of popcorn and a good flick. The Film Appreciation Society is a student group that meets a few times a semester to "veg out" and get lost in the plot of a movie for a few hours. Movie nights are held in Olin Lounge, which boasts comfortable chairs and a large high-definition flat-screen TV. The group also throws a popular annual Oscar party, with prizes for those who pick the winners.

Member and former club head Matt McConnell '12 sees the film breaks as a way for students to freshen their minds and learn about the world outside of medicine. "In medical school, we're working so hard, it can be tough to step outside your small, few-block radius," McConnell says. Since many first-year students don't know much about New York City, during McConnell's tenure as director he planned a series that included such films as *Manhattan*, *Working Girl*, and *Coming to America*. The previous year's offerings were centered around the theme of road trips, including *Drugstore Cowboy* and *Y Tu Mamá Tambien*.

When Matt Goodwin '13 took over leadership of the group last year, he showed a film based on one of his favorite books, Sinclair Lewis's *Arrowsmith*. The 1931 John Ford film stars Ronald Colman as a medical researcher who must decide who gets a vaccine during a plague outbreak. But Goodwin—who also passed out copies of the book to filmgoers—stresses that the club doesn't have a serious bent; its meetings are more about having fun than analyzing cinema. Says Goodwin: "What I don't want to do is show a movie, have a bunch of people have a good time, and then say, 'Here, everyone, discussion time.'"

— Laura Gallup

Gender Equity

The Office of Faculty Diversity in Medicine and Science aims to help more women—especially minority women—advance to the highest professorial ranks



Debra Leonard, MD, PhD

JOHN ABBOTT

Surgery professor Rache Simmons, MD, had a dilemma. Her childcare provider needed the day off to attend a funeral, but the breast surgeon had a full schedule of appointments during the day and an important talk at a Weill Cornell event that evening. Rescheduling her patients was an option, though a poor one; missing the talk was out of the question.

Fortunately, Simmons was able to use a new emergency childcare service the Medical College has established to address such situations. With one phone call, Simmons engaged the services of Bright Horizons, a nationwide childcare company with offices in Manhattan—right across the street from Weill Cornell. “They sent a wonderful woman who took incredibly good care of my four-year-old,” says Simmons. “When I got home that evening, my son was well fed, bathed, happy, in his pajamas, and ready for bed.”

The childcare service is a joint effort of Weill Cornell Human Resources and the Office of Faculty Diversity in Medicine and Science, a program established in 2009 to increase the diversity of the Medical College’s faculty and leadership. Headed by pathology and laboratory medicine professor Debra Leonard, MD, PhD, the office aims to cultivate and sustain a diverse faculty through recruitment, mentoring, promotion, and retention. Simmons serves as Director of Gender Diversity; associate professor of medi-

cine and public health Carla Boutin-Foster, MD, is Director of Cultural Diversity. “We are working to recruit, develop, and retain a faculty that reflects the cultural diversity in our medical student and patient population,” says Boutin-Foster, who is currently organizing a spring conference that will include workshops with multicultural faculty and researchers from Rockefeller University and Memorial Sloan-Kettering. “Our faculty members see patients of all racial, ethnic, and age groups. The demographics of the country are changing, and the job of our office is to see that the Medical College faculty and leadership mirror that change.”

Leonard notes that plenty of women start in medicine, but there are factors that often keep them from advancing into leadership positions and growing in their careers at the same pace as men. Getting to the bottom of the problem requires raising awareness of societal biases that keep women from moving up on their career paths—and establishing viable programs to address these biases. In 2010, the office sponsored a series of workshops on success strategies for medical students, postdocs, fellows, and junior faculty, as well as holding focus group meetings on racial, ethnic, gender, and LGBT (lesbian, gay, bisexual, and transgender) issues. Individual events have explored such topics as mentorship in academic medicine, the work/life balance, and obstacles for women who wish to advance in the workplace.

The diversity office also conducted a faculty climate survey in which access to a childcare facility (as well as backup childcare) emerged as a priority for both genders. Currently, Weill Cornell has no daycare facility. As a first step toward addressing childcare needs, the contract with Bright Horizons for emergency childcare was established. More than 600 faculty and staff have registered with the emergency childcare program since it was created. “And it’s not just women,” says Leonard. “Many men have signed up as well.” But the fact remains that even in 2011, women still tend to be the primary caretakers for children and aging parents, says Leonard. “Even though more men are taking on child and elder care roles,” she says, “there is a strong societal norm that it’s a woman’s job.”

For many women, another obstacle to advancement—and the subject of a fall 2010 workshop—is hesitancy to be tough negotiators. Both Leonard and Simmons say that most women don’t feel as comfortable as men in negotiating matters like salary, promotion, and the assignment of laboratory and clinical space. “Our entire professional lives are about negotiating,” says Simmons. “But women simply do not feel that the playing field is level for them. Women are sometimes perceived as overly aggressive or self-promoting when a man with similar behavior would not be seen that way. Women have to walk a finer line than men when it comes to their careers.”

But change is coming. The Liaison Committee on Medical Education, the national accrediting body for medical schools, has put racial and gender diversity among students and faculty among its accreditation criteria. To address that challenge, Leonard, Simmons, and Boutin-Foster have outlined nine major priorities for their office and Weill Cornell in a five-year faculty diversity strategic plan. Included in the plan is establishment of a database for annual reporting of faculty diversity statistics; exploring options for an employee childcare facility; the revision of parental leave policies; and the creation of Weill Cornell’s first Faculty Diversity Annual Report. “Diversity is not just a nice option or the right thing to do,” says Leonard. “It’s a requirement for accreditation—and the Medical College recognizes that requirement as a positive motivator for implementing long-needed change in our professional culture.”

— Franklin Crawford

Facing the Unknown

Through research and clinical care, the Jaffe Center aids patients coping with multiple sclerosis



JOHN ABBOTT

When Jen Stevens first met Timothy Vartanian, MD, PhD, last fall, she had an inkling that he might tell her she had multiple sclerosis. Four months earlier, the twenty-seven-year-old had noticed that three of her fingertips were numb. Then the pins-and-needles sensation spread to her feet. But after visiting numerous doctors and getting back seemingly innocuous test results, Stevens was doubting herself. She was a brand manager who worked and traveled so much that she sometimes forgot what time zone she was in; maybe she was just tired. “You get to the point where you think it’s all in your head,” Stevens remembers. “There was still some chance he could say, ‘Take two Advil and you’ll be fine.’”

But Vartanian, director of the Judith Jaffe Multiple Sclerosis Center, knew Stevens wasn’t imagining her symptoms. “As soon as he looked at my MRIs, he knew instantly what it was,” says Stevens, who asked to be identified by a pseudonym because she hasn’t shared her diagnosis—relapsing-remitting multiple sclerosis (RRMS)—with everyone in her life. In RRMS, symptoms come and go, or only partially resolve; a rarer form, primary progressive MS, causes gradual decline. “It helps to explain what was already going on with me,” she says, “but what does all of this mean for the future?”

At the bedside and in the lab, the Jaffe Center’s experts are working intensely to answer that question. MS is an inflamma-

Center's experts are working intensely to answer that question. MS is an inflammatory, degenerative disease of the central nervous system that can cause everything from numbness to paralysis to blindness, and its course is difficult to foresee. The disease affects an estimated 400,000 Americans, according to the National Multiple Sclerosis Society, and women are diagnosed more often than men. "These are people who are young, often just out of college, and all of a sudden they are facing an unpredictable, chronic disease," Vartanian says. "It's terrifying. They feel like the floor is falling beneath them."

While there is a genetic influence on MS, the disease has a strong environmental component, Vartanian says. Scientists are still trying to sort out what those triggers might be, but they are thought to interact with MS-associated genes involved in the deterioration or lack of production of myelin, the protective sheath that insulates nerve fibers. As myelin wears away—a process called demyelination—those fibers' ability to conduct electrical impulses is compromised, and a patient's condition worsens.

Because medications that block inflammation are only somewhat effective at slowing (but not halting) the disease, scientists ultimately hope to discover a way to remyelinate, or regenerate myelin, to stop MS from progressing. While Vartanian's lab is trying to develop remyelinating compounds, assistant professor of neurology Susan Gauthier, DO, is refining imaging techniques such as MRI and PET that would allow doctors to measure those compounds' effects. "There's real energy in the field of multiple sclerosis to study regeneration and remyelination, because that's probably the ultimate way to protect the nerves and prevent disability," Gauthier says.

The Center recently participated in a Phase III trial of the newly FDA-approved drug Fingolimod, which works by preventing lymphocytes—which in MS patients can migrate to the brain and cause damage—from leaving the lymph nodes. Center scientists are preparing to begin Phase II and III studies of other drug candidates they hope will alter the dysfunctional immune response associated with MS. And they're collaborating with the Department of Ophthalmology to validate whether a decrease in nerve fiber in the retina is an independent marker of MS progression.

In addition to Vartanian, Gauthier, and the Center's two other doctors—Frank Petito, MD, and Nancy Nealon, MD—patients work with radiologists, rehabilitation specialists, an on-site social worker, and two nurses, one of whom focuses on nutrition. (MS patients tend to be vitamin D-deficient.) Patients get checkups every three months, and receive annual or semi-annual MRIs to look for new lesions, or areas of the central nervous system where myelin has degenerated—a sign their disease has progressed. The scans also gauge how well their medications are working. Along with early diagnosis, regular scans are crucial both for keeping patients as free of symptoms as possible and for preventing MS from accelerating, a phase of the disease known as secondary progressive MS.

"Lesions form in the brain probably ten times more frequently than there are flares, so there is a lot of clinically silent disease activity," Vartanian says. "With each lesion, there is some irreversible injury to the nervous system; that cumulative injury is what we think leads to the secondary progressive phase of the illness. Preventing exacerbations from happening, and new

lesions from forming, is essential to limiting long-term disability. Getting patients diagnosed early allows us to treat them when they have a very low lesion burden, and we have the best chance of keeping them healthy during their lifetime."

Stevens is still trying to get her bearings. For three days after she was diagnosed, she received intravenous steroids to speed her recovery from the disease's initial attack. She now gives herself daily injections of an anti-inflammatory drug, Copaxone, to control her MS. As a newly diagnosed patient, Stevens is hyper-aware of her body and working with Vartanian to distinguish bona fide symptoms from fleeting sensations. Frequent follow-up appointments, support groups, and a lot of reading about MS are helping her cope—along with what she describes as "just enough denial" to allow her to function. "Every day that there's a new symptom, it brings up, 'I could wake up and not see out of one of my eyes, or wake up and not be able to walk,' and there's no good way to wrap your head around that," Stevens says. "The worst thing about MS is the unknown."

— Jordan Lite

Eyes on the Prize

MD-PhD student John Pena aims to prevent blindness by exploring the role of small RNAs in diabetic retinopathy

Like many people in and around Detroit, John T. G. Pena grew up with a passion for cars. As a teenager in Oak Park, Michigan, a suburb of the automotive capital, he spent \$50 on a broken-down British roadster, and, with his father, embarked on a years-long effort to restore it. "My Dad owned an MGB sports car from the Seventies, when they were no longer being made," Pena recalls. "We rebuilt it from top to bottom, a real labor of love. Our family's garage was my first lab, and my father was my first science mentor."

It has been a long journey for Pena from that Michigan garage to the laboratory he is now setting up at Weill Cornell to study diabetic retinopathy, a vision-robbing byproduct of diabetes. Almost a decade ago, Pena enrolled as a medical student at Weill Cornell, then became so captivated by research that he took a five-year detour to earn his PhD at Rockefeller University. He returned to Weill Cornell two years ago and will receive his MD in May; after graduation, he'll stay on campus to continue his research under the mentorship of an expert in diabetic retinopathy and ophthalmology chairman Donald J. D'Amico, MD. His near-term plans also include a residency in either ophthalmology or ocular pathology.

Pena was the youngest of five children and the only boy; his father worked in management for a supermarket chain, and his mother was a social worker. His was not the kind of



John T. G. Pena (left) and Donald J. D'Amico, MD

neighborhood in which a young person could easily envision a life in medicine or science. "A third of my peers went to prison, some for violent crimes," says the thirty-three-year-old, who describes himself as being a blend of American Indian, African American, Mexican, and Portuguese descent. "There were choices to be made, and a lot of the kids I knew didn't have the support to help them make the right ones." Pena worked his way through Oakland University in Rochester, Michigan, partly by tending bar. His interest in science began in earnest at Oakland, where he majored in biochemistry and spent hours each week studying cataracts under a Howard Hughes Medical Institute (HHMI) fellowship. HHMI and NSF grants allowed him to study cystic fibrosis at Yale during undergraduate and postgraduate summers.

In 2004, Pena took a leave from medical school to enter the doctoral program as a Tri-Institutional MD-PhD Biomedical Fellow in the lab of Rockefeller's Thomas Tuschl, PhD, who works on the cutting edge of RNA interference research. In collaboration with Tuschl, Pena developed a breakthrough technique to identify microRNAs, which regulate gene expression; previously, it was difficult to detect and measure microRNAs because they're so small they simply slip through molecular constraints. Pena and Tuschl discovered that by adding the chemical EDC to the fixative, formaldehyde, more microRNAs are retained in tissue and can be more easily detected. This method can be applied to several pathology applications for disease diagnosis, including cancer.

Pena worked in the lab for five years, somewhat longer than most students in the PhD portion of the MD-PhD program, because he was deeply involved in his project and wanted to see it to completion. "John is a gifted student who possesses a rare combination of rigorous scientific and editorial training, intelligence, creativity, and entrepreneurial spirit," says Tuschl. "His approach has opened our eyes to

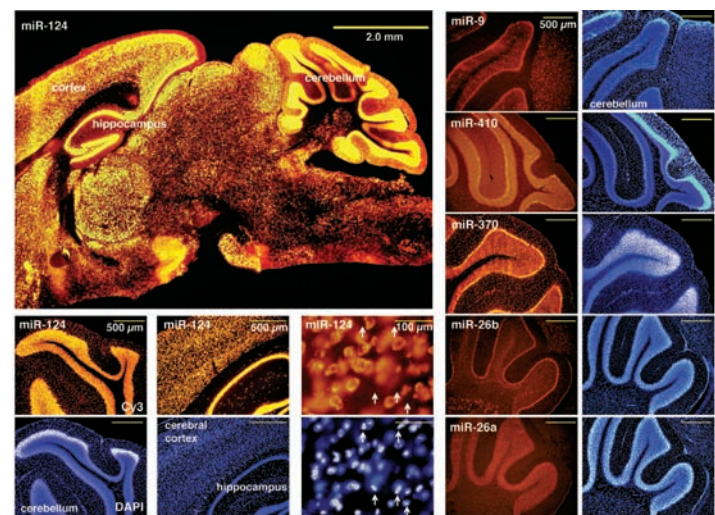


IMAGE ADAPTED FROM NATURE METHODS, PENNA ET. AL., 2009

Visualization of small RNAs (microRNAs) expressed in the brain

the possibilities of further methodological developments to bring RNA analysis to the forefront of modern molecular pathology."

Now, Pena will apply microRNA technology to the study of diabetic retinopathy, in the hope of stemming the destruction of eye tissue and preventing blindness. As a physician-scientist, Pena is intrigued by the idea of working both bench-to-bedside and bedside-to-bench. "There's no question that basic science questions need to be answered, but it's also critical to observe disease processes in patients and go into the lab to try to figure out what's happening," Pena says. "In both cases, the bottom line is trying to find treatments and cures. It's a one-two punch."

— Anna Sobkowski

Forward Thinking

By Beth Saulnier

More than a century ago, the Westchester campus was built as a restorative haven on a hill, heralding a new era of humane psychiatric treatment

In 1808, New York Hospital opened the state's first free-standing asylum for the mentally ill, a building on lower Broadway across the street from what's now City Hall. The neighborhood was then in the heart of Manhattan, and just over a decade later the hospital decided that patients suffering from mental illness needed a quieter, more bucolic setting. So it moved up to the country—to Bloomingdale, a village on the city's northern outskirts that took its name from the old Dutch term for the area. "It was rural up there and far from southern Manhattan, which was already very developed," says Rita Golden, a longtime employee who is an expert on the facility's history. "We have sketches from that time that show pretty walks, trees, and gardens. It was thought to provide a much more serene environment for the mentally ill."



Gracious living: Nurses at tea time on the lawn of Brown Villa in 1925





Then and now: The main building in its original form (above left), including chimneys and water towers, and today. Opposite: Badminton in the Taylor Recreational Building circa 1927 (top). Bottom: Cars have long been the principal mode of transport to and from campus.



It was the era of “moral treatment,” a forward-thinking movement in mental health care that had made its way across the Atlantic from England and France in the early decades of the nineteenth century. It called for lunatics—as they were then known, in a term less pejorative than descriptive—to be treated with kindness and compassion instead of being chained, abused, vilified, and locked away. “Rather than looking at the mentally ill as people who were demonically possessed, or sinners who were paying the wages of sin, they were seen as unfortunates who needed to be treated in a humane manner,” says Virginia Susman, MD, associate professor of clinical psychiatry and associate medical director of the Westchester campus. The philosophy found willing adherents at New York Hospital, where a tradition of treating—rather than merely confining—the mentally ill harkened back to its original charter from King George III. “Our charter says we take in everybody, including lunatics,” says Peter Wilson, MD, professor of clinical psychiatry. “Of the first two patients who were admitted to New York Hospital, one was a lunatic. We believed we could cure them, and we treated them with respect.”

The Bloomingdale Asylum opened in 1821, offering state-of-the-art care for the mentally ill. Eventually, though, the city encroached from the south; the village was absorbed into Manhattan, and the site of the asylum, just north of 116th Street, became Columbia University. “As New York City continued to move northward, not only was there concern that the asylum would be crowded out, but there was a lot of pressure to move because of prejudice against psychiatric patients,” says Steven Roth, MD, JD, associate professor of clinical psychiatry. “This was an area that developers really wanted, in anticipation of the subway coming up north.”

So the asylum moved yet again, to farmland the hospital had purchased in Westchester County in the 1860s. Prominent architect James Brown Lord was engaged to design the struc-



NYPH/WCMC

'Rather than looking at the mentally ill as people who were demonically possessed, they were seen as unfortunates who needed to be treated in a humane manner.'



NYPH/WCMC



Recreational therapy: The campus once boasted bowling facilities. Opposite: The modern campus in fall.

In 1894, the *New York Times* reported that ‘the buildings and their admirable arrangement were praised by every one.’

tures; the office of Frederick Law Olmsted, the designer of Central Park, planned the landscaping and roadways. In 1894, a new facility opened on 296 acres atop a hill overlooking the community of White Plains. “Everything was found in the best of order, and the buildings and their admirable arrangement were praised by every one,” the *New York Times* said in a story on the public unveiling of the Bloomingdale Hospital for Nervous and Mental Diseases, on October 17 of that year. The main structure, the writer noted, was designed in the “pavilion” style, with thirteen wings connected by corridors. “All the buildings are a sufficient distance from each other to allow free access to all parts of light and air,” the paper reported, “so that there is scarcely a dark corner in the group.”

Chasing out the darkness, letting in the light; literally and metaphorically, those aims have long underpinned Weill Cornell’s Westchester campus. For more than a century, the facility has been at the forefront of enlightened thought in mental health care, from the moral treatment of the nineteenth century to the Planetree movement of the late twentieth. “There is a sense of respite when you come onto the campus,” says Philip Wilner, MD, associate

professor of clinical psychiatry and medical director of the Westchester campus. “The physical beauty creates a warm, inviting atmosphere. There is a sense of calm; people have said there’s a tranquility that permeates the campus.”

Today, the Westchester campus is on the New York State Register of Historic Places—meaning that the buildings’ exteriors cannot be meaningfully altered. “When you look at pictures from the time it was opened, it looks quite a bit the same,” Golden notes, “except now we have all these beautiful trees.” But inside the walls, the buildings have been adapted over the decades to house groundbreaking programs in fields from eating disorders to substance abuse, borderline personality disorder to geriatric psychiatry. In October, Weill Cornell announced the campus’s newest initiative: a major center for the study and treatment of autism spectrum disorders. To open in 2012, the Institute for Brain Development will be housed in a Tudor-style building formerly home to a men’s gymnasium.

In short, much has stayed the same since the second Bloomingdale Asylum opened 116 years ago—but much has changed as well. The most significant shifts, of course, have come in how mental disorders are treated, and how that treatment is funded. When the hospital was found-

ed, no psychopharmacological interventions existed; in large part, the campus *was* the treatment. “The whole grounds were seen as part of the therapeutic environment,” says Susman, who has researched the history of the moral treatment movement. “The thought was that people should be outside getting fresh air, engaging in physical activity and exercise. Rather than having people chained up in claustrophobic cells, they should be in a beautiful setting because the sheer beauty would be restorative. They should be doing meaningful work and their minds should be meaningfully engaged.”

Among current Westchester faculty and staff, a favorite building is Sturgis Hall, which opened in 1922 as an occupational therapy center for female patients and is now used as conference space. Decorating the windows are images of women engaged in such activities as painting and basket-weaving; etched into the mantle of the massive stone fireplace is the slogan “Occupation is Nature’s Physician.” In that spirit, patients were encouraged to work in settings like the kitchen and laundry; even up into the Seventies, one long-term resident took meticulous care of the campus baseball diamond. “It was apparently a work of art,” says Roth, “except he’d get upset if anybody used it, because it would mess up his beautiful grounds.”

For decades, a stretch of land near Bryant Avenue housed vast formal gardens—as longtime facilities director Doug McGrath describes it, “rows and rows and rows of flowers,” primarily tended by patients as a sort of horticultural therapy. The campus also featured such amenities as bowling lanes, tennis courts, and a nine-hole, par-three golf course (all but the bowling lanes are still in operation); patients put on pageants and mounted dramatic tableaux. The large recreational staff led lessons in squash, badminton, cycling, tobogganing, hiking, and more. “You wanted to keep them engaged, and there was a therapeutic focus to all the activities,” Wilner says. “It taught you how to relate to others, how to contain your behavior.”

From early on, the Westchester campus had what today would be called amenities units: there were separate buildings for wealthier patients who came equipped with valets or ladies’ maids. But even those in the main facility—who, from the beginning, included some charity cases treated at no expense—enjoyed tastes of genteel living. In the afternoon, patients dressed for high tea, poured from silver pots into china cups. Each unit had its own Steinway piano, billiard table, and grandfather clock. Until 1982, the hospital even owned a waterside cottage, located on Orienta Point in Mamaroneck, for patients and staff to enjoy beachfront getaways. “All these things were designed to give



JOHN ABBOTT



JOHN ABBOTT

Modern touches: Recent additions to the campus include a chapel inside the main entrance (above) and a brick labyrinth, located in an interior courtyard, funded by benefactor Ilona Swaring (right).



PROVIDED

patients a sense of normality, well-being, and humane treatment—they weren't just relegated to their beds," says Golden, who researched the campus's history for its centennial celebration in 1994. "The idea was to provide them with gracious living and comfortable accommodations in a bucolic setting, and those things would aid in restoring their mental health."

But as the practice of psychiatry has changed, so has the patient experience. Most saliently, the development of drug therapy and the advent of managed care have dramatically shortened lengths of stay. "This place was originally designed for long-term care and long-term stays; patients were here for a significant amount of time," Golden says. "Now, the goal is to stabilize them in inpatient treatment and then move them toward a less restrictive level of care. Whereas when this place was built, you stayed here until you got better and then you went home." Once upon a time, patients lived at the hospital for months or even years; now, as Susman notes, in terms of days, the average length of stay is in the teens. "If people were staying here for months, their illness would stabilize to the point that, say, they would be safe to go out on the grounds and play golf," she says. "Now, if someone is well enough to walk across campus to go to the activities building, a managed care company might say, 'They're obviously safe and you can discharge them.' So we aren't able to use those facilities as much." There are, however, several enclosed interior courtyards where staff often bring patients to enjoy fresh air and nature. "Through the aesthetic vision and financial support of Ms. Ilona Swaring, these courtyards have been attractively restored and redesigned," Susman says. "In October 2010, a labyrinth was opened in the South Courtyard—its design and construction were personally overseen by Ms. Swaring, whose generosity made it possible."

The shift in length of stay, Susman points out, has fundamentally altered the make-up of the patient population. "Today, most of the patients in the hospital at any given time are fairly acutely ill," she says—so items like billiard cues, china plates, and glass-faced clocks, for all their gentility, present obvious safety hazards. In earlier days, though, perhaps "only one or two patients would be that acutely ill; the rest would be improving, and you could use those finer things without as much risk of harm. Now most of our patients are recently admitted and therefore more potentially agitated or unsafe."

The campus's relationship to the outside world has evolved as well. When the Westchester facility opened, Golden says, "it was a self-contained village." The asylum had its own laundry and bakeshop; some of its food was grown on-site; it employed its own tinsmiths,

mechanics, seamstresses, dentists, and barbers. Since there were no outpatients and relatively few members of the public came and went, there was no central reception area. (Only in recent years has the main entrance been renovated to include a welcome desk, seating area, chapel, resource library, and small café.) At the time of the hospital's founding, its enlightened ideals didn't include integrating the mentally ill into the community, a concept that would emerge decades later. "We were a destination that was meant to remove people from the community, so they were out of sight and out of mind," Wilner says. "There were people in White Plains who did not know the hospital was here, in their backyard." Even today, he says, with the campus located behind stately iron gates and up a winding road, "we have many visitors who come late to appointments because they drive right by."

Since the White Plains facility was founded, its nearly 300 acres have been reduced to 230; some of the land went to the nearby Burke Rehabilitation Center, some to a Bloomingdale's department store, some to an access ramp for I-287, the Cross Westchester Expressway. Now, the campus's most visible neighbor is The Westchester, a large, high-end shopping mall located directly across from the main entrance. "When I got here, there was no Neiman Marcus or Bloomingdale's," says Wilson, who joined the clinical faculty in 1957. "It felt more like the country. White Plains was already a city, but there was not a mall across the street."

Still, inside the wrought-iron fencing—painted green if it's original, black to denote a modern replacement—the campus feels a world away from the bustle of traffic and commerce. And though the days of valets and silver teapots may be mere memories, much of the genteel atmosphere remains, from the restored clock tower and rose window over the main entrance to the antique furniture in the hallways. Today, arguably, the Westchester campus represents the best of both worlds—modern psychiatric treatment in the elegant setting of a bygone era. "There is a sterility now to how a lot of health care is delivered, including psychiatric services in most hospitals," Wilner says. "A facility such as ours is the only place where patients can step away from the hectic pace of life, focus on themselves, and get their issues attended to in a warm, welcoming environment."

In late eighteenth-century England, the moral treatment movement was begun by Quakers in response to a tragedy within their community: a young Quaker woman named Hannah Mills died from mistreatment in a public mental hospital. Wilner notes that as the movement emerged, one of its tenets was

that the ideal asylum should be located on a hilltop. That belief heavily influenced the siting of the Westchester campus—and its benefits endure. "The idea was that it should have open vistas, so patients could see far horizons and limitless possibilities," he says. "It was meant to inspire hope." ●

Venerable venue: Sturgis Hall, once an occupational therapy building, now serves as meeting and conference space.



Doctor of Discovery

By Anna Sobkowski

Physician-in-Chief Andrew Schafer, MD, leads a movement to preserve a vanishing breed: the physician-scientist

Forty years have passed, yet Andrew Schafer, MD, still vividly remembers the day he began to think he might become a scientist as well as a doctor. “I had just finished the first day of my hematology rotation,” recalls Schafer, now chair of the Department of Medicine at Weill Cornell and physician-in-chief at NewYork-Presbyterian Hospital/Weill Cornell Medical Center. “I had to present my case to our attending, Dr. Frank Gardner—a tall, intimidating, larger-than-life Texan who was then a professor of medicine at the University of Pennsylvania, where I was a medical student.” As students and residents gathered at the nurses’ station to present their cases, Schafer began to speak about his patient, a boy with sickle cell anemia who had spent most of his life in and out of hospitals with one infection or another. “After I finished, Dr. Gardner asked if I had any questions about the patient’s condition,” says Schafer. “‘Well, yes,’ I replied, rather timidly. ‘I’ve read about sickle cell and I know these patients are prone to infections, but this boy’s case seems extraordinary. I don’t understand why he gets so many.’” To which Gardner responded in a booming voice that seemed to ricochet off the hospital walls, ‘Damn it, Schafer, why don’t you go into the lab and find out!’”



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ANDREW SCHAFFER, MD
PHYSICIAN-IN-CHIEF

Andrew Schafer, MD

It was, Schafer recalls, his “Aha!” moment. “Later that day, Dr. Gardner brought me into his lab,” he says. “We developed a hypothesis, and over the next few weeks he guided me through the rudiments of experimentation.” Ultimately, Schafer discovered that his patient had a defect in his white blood cells that interfered with his ability to absorb bacteria. “It was exhilarating to take a clinical problem into the lab and find an answer,” says Schafer. “That experience helped me decide not only to become a hematologist, but also a scientist.”

Throughout history, the physician-scientist—the person who has made observations about an illness or disease during the course of treating a patient and then brought that observation into the laboratory for study—has been at the epicenter of most great medical breakthroughs. Since 1901, the year the first Nobel Prizes were awarded, 103 of the 189 laureates in physiology or medicine have been physicians. Interestingly, it is not only physicians who devoted themselves to research who have made an impact. “History is replete with examples of practicing clinicians, untrained in research, who have made astute observations of patients that led to important discoveries,” Schafer says. Scores of physicians—starting with those greats of antiquity, Hippocrates and Galen—have made discoveries that have greatly improved human health. The course of medical history has been altered by Andreas Vesalius, the brilliant anatomist of the Middle Ages; Alexander Fleming, the discoverer of penicillin; and Frederick Banting, the co-discoverer of insulin—to name just a few.

Although Schafer caught the research bug early and was able to successfully combine scientific inquiry with a medical practice, many current physicians are finding the path more challenging. It’s an issue close to Schafer’s heart. In 2009, he explored the topic in *The Vanishing Physician-Scientist?*, a book he edited that was published by Cornell University Press. In it, essays by leading physician-scientists and academic scientists describe the difficulties facing MDs who want to incorporate scientific research into their careers.

Schafer notes that as far back as 1979, the director of the NIH called attention to the fact that the number of MD applicants for research grants was decreasing, while those of PhD applicants were rapidly rising. (Such applications are a good reflection of the number of physician-scientists working in the field, since the NIH is the nation’s largest research funder.) Actually, that number had begun to decline even earlier. Under the leadership of President Franklin D. Roosevelt’s influential wartime sci-

tific adviser, Vannevar Bush, the NIH philosophy moved toward awarding grants preferentially to basic science researchers. “Bush, who drove the expansion of the NIH and the explosion of federal funding for medical research, was a great proponent of the idea that finding disease cures needs to start at the molecular level,” Schafer says. “With the NIH’s financial backing, PhDs, who work at the molecular level, began to pour into biomedical research in great numbers. They were better able to keep up with the dizzying, almost blinding pace of basic science knowledge coming out of laboratories in the second half of the twentieth century.”

In an attempt to revitalize the physician-scientist workforce, the NIH and funding organizations such as the Doris Duke Charitable Foundation and the Howard Hughes Medical Institute have in recent years instituted career development awards for physician-scientists, but these steps have not stemmed the slide. From 1998 to 2003—a period when the NIH budget doubled from about \$14 billion to about \$28 billion—first-time applications for prestigious R01 grants with PhDs as principal investigators increased by 43 percent, while the number of applications from those with MDs declined by 4 percent. Attrition has been a major issue too, as MD applicants who are unsuccessful in attaining a first R01 grant are less likely than their PhD counterparts to try again—and MD applicants who have an existing R01 grant are less likely than their PhD counterparts to apply for a subsequent one.

Schafer and a dozen other contributors to the book—including Barry Collier, MD, physician-in-chief at Rockefeller University Hospital; Nancy Tarbell, MD, dean of academic and clinical affairs at Harvard Medical School; Reshma Jagsi, MD, assistant professor in the Department of Radiation Oncology at the University of Michigan Health System; and David Nathan, MD, former chief of Children’s Hospital of Boston—offer a range of reasons for the decrease. The authors say that uncertainty about the sustainability of funding has discouraged physicians from entering or staying in research careers when they have other, more secure options. In addition, dramatic generational changes are occurring among recent MD graduates, many of whom desire more controllable lifestyles. And the tenure system in academic medical centers, which emphasizes reaching benchmarks within a certain time period, does not encourage taking on an extra workload. “In short,” Schafer says, “more physicians are choosing not to take on the burden of research when they see little reward in it, and when their plates are already overflowing with clinical responsibilities and teaching.”

The Vanishing Physician-Scientist?

Edited by
ANDREW I. SCHAFER, MD



Women physicians, especially, find that adding research to an already full patient load is less appealing as they juggle the responsibilities of raising a family. In their chapter, Jaggi and Tarbell address the situation of female physician-scientists. “Women constitute an increasingly substantial proportion of the medical workforce,” they write, “so the continued vitality of the physician-scientist workforce depends critically on the ability of this career to attract the best and brightest minds in medicine, regardless of gender.” In short, they write, “those concerned with ensuring a high-quality physician-scientist community must be concerned with issues of gender equity.”

Academic medical centers, however, have been slower than other institutions and businesses to accommodate the needs of women. As Schafer notes, medical schools are still organized around a system created in the early part of the twentieth century. “Most students were men who had wives at home taking care of their lives, so they were free to devote themselves to work,” says Schafer. “Women now comprise about half of medical school graduates, and it seems likely that they will soon become the majority—yet for the most part, academic medical centers have not kept up with their priorities and ambitions.” During their childbearing years, many women are unwilling to sacrifice their personal lives to the lab, especially since it may not help achieve promotions and tenure, the bulwarks of the system. “And it’s not just women,” Schafer says. “Today, both sexes have different priorities and expectations of life. They want a better work/life balance and controllable lifestyles. They are willing to work hard, but there’s greater recognition of the sacrifices that had to be made by previous generations and less willingness to make those sacrifices.”

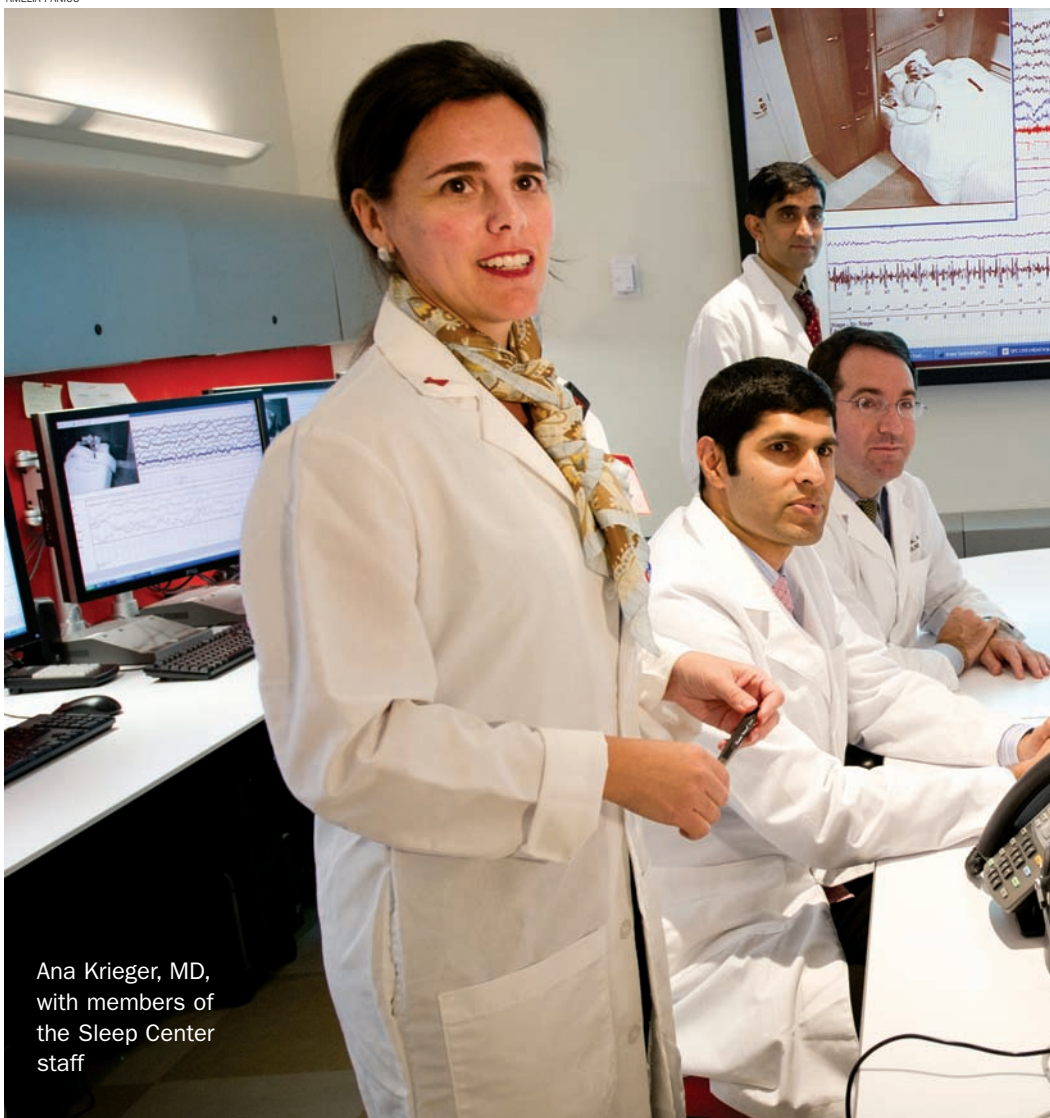
The career of physician-scientist Ana Krieger, MD, assistant professor of medicine, epitomizes the kinds of challenges and sacrifices that some women just starting out are reluctant to make. In 2002, Krieger—who practices pulmonology, sleep medicine, and internal medicine—already had a successful practice with a full roster of patients when she received a Scientist Development Award from the American Heart Association. The award would help her evaluate oxidative stress in patients with Cheyne-Stokes respiration, an abnormal breathing pattern that leads to sleep apnea and may be a risk factor for congestive heart failure.

Today, Krieger is co-director of Weill Cornell’s Center for Sleep Medicine, a multidis-

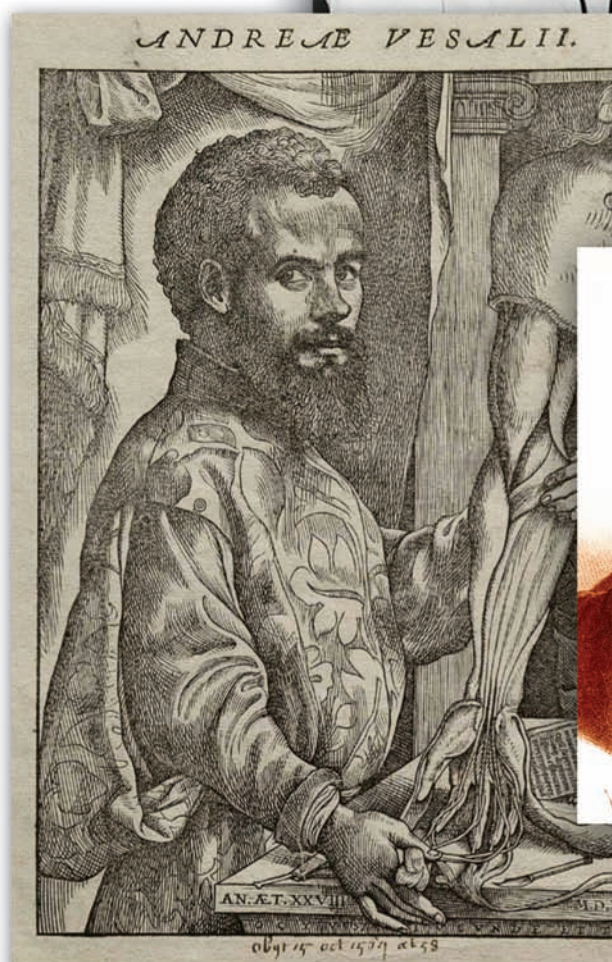
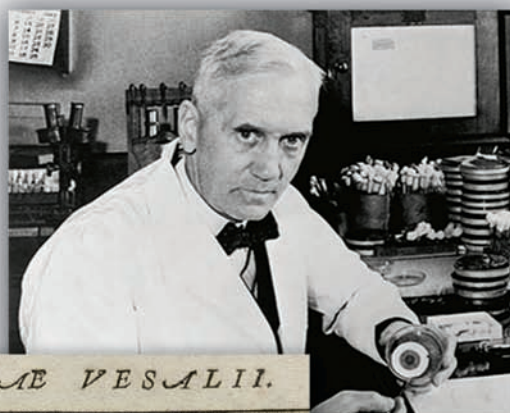
ciplinary research, education, and treatment center that cares for patients with a wide variety of sleep disorders. Her work on vascular thrombosis and stroke in sleep apnea is currently funded by the NIH. “I went into medicine, fundamentally, to help people,” says the forty-one-year-old Krieger, who also holds an MPH in global health (which she earned by going to NYU five nights per week after seeing patients all day, because she craved a better understanding of health-care infrastructures). “When a patient with a sleep disorder comes into my office—and I know that, in some cases, their sleep problems might contribute to shortening their life span by increasing their risk for heart disease or stroke—it’s not enough for me to make a diagnosis and write a prescription. I want to know why this is the case, why A leads to B. Being part of an academic center for sleep medicine allows me to make clinical observations and test hypotheses that, I hope, may one day lead to cures.”

‘More physicians are choosing not to take on the burden of research when their plates are already overflowing with clinical responsibilities.’

AMELIA PANICO



Ana Krieger, MD, with members of the Sleep Center staff



Bedside to bench: Physician-scientists (clockwise from top)
Alexander Fleming, Galen, and Andreas Vesalius

Krieger, whose enthusiasm for science began young, started medical school at seventeen in her native Brazil and was a doctor by twenty-two. Every morning, she commutes ninety minutes from her home in Westchester—where she and her husband moved for good schools for their seven-year-old son—to Manhattan, rarely returning home before 7 p.m. “When people talk about working a regular forty-hour week, I don’t know what they mean,” Krieger says. When she adds teaching, administrative duties, and committee work, Krieger estimates that she puts in seventy to eighty hours a week. “There have been many times over the course of my transition to becoming a physician-scientist when colleagues have said to me, ‘You are a successful doctor, you have a secure position, why do you need to add on research, which takes up so much of your time? Are you crazy?’ My answer is always the same: ‘This is who I am. This is what I feel driven to do and what I love to do. I strongly believe that research will lead to my becoming a better doctor.’ ”

In a chapter in Schafer’s book entitled “Generation X and the Millennials,” Ann Brown, MD, associate professor of medicine at Duke University School of Medicine, writes that institutions that do not meet the demands of new generations of both men and women—in terms of competitive salaries, more flexible work options, and controllable lifestyles—contribute to the leaky pipeline of physicians dropping out of research. “Institutions must champion deliberate efforts to provide faculty support in a systematic way,” Brown writes. “These efforts should include policies that support work/life balance, faculty development programs that teach skills and use creative mentoring strategies, and management training for leaders. Such initiatives would be geared to helping faculty navigate their institution and build successful and rewarding careers. By being highly accessible to all faculty, particularly the growing number of women and minorities in the next generations, such efforts will help academic medical centers engage the full pool of available talent.”

In 2009, Weill Cornell established the Office of Faculty Diversity in Medicine and Science to overcome just those hurdles. With programs such as an emergency childcare service and panel discussions on topics like mentorship in academic medicine, the office aims to address many of the lifestyle and gender issues confronting the new generation of physician-scientists in the hopes of increasing the number of women—especially minority women—in teaching and research. (See story on page 18.) Says Krieger: “Although it is not an easy road, I still advise women who seek my advice to pur-

sue research—but only if the passion is there. They will need that to sustain them.”

In recent years, the NIH has sought to break down the barriers that impede the movement of knowledge from the lab to the clinic and back to the bench by launching the Clinical and Translational Science Awards (CTSA) Consortium. The consortium began in 2006 with twelve academic health centers, including Weill Cornell; when fully implemented in 2012, about sixty institutions will be involved. “The decades after World War II were the era of reductionist science—the idea that, to understand disease, you need to drill down to small molecular systems and study them in isolation,” Schafer says. “This idea was supported and encouraged by the longtime director of the NIH and led to the primacy of basic science research performed mostly by PhDs. The CTSA network, as well as a general expansiveness in thinking about the contributions of doctors, is the most potent manifestation of the change in this thinking that has taken place.”

In *The Vanishing Physician-Scientist?*, Barry Collier says that the CTSA program has helped bring translational science to the forefront of today’s research enterprise. But, he adds, “there remains confusion as to whether translational research is simply the name of something that has been done by physician-scientists for decades or whether it truly represents a new discipline.” He argues that it is a new discipline—and he has launched the Society for Clinical and Translational Science (SCTS) to enhance clinical and translational investigation.

Collier makes the point that science is not a zero-sum game—that the increase in PhD researchers does not mean fewer MD scientists are required. There should be room for everyone, he says; and indeed, the perspectives of both MDs and PhDs are needed, because they come at research from different vantage points. Clinicians are trained to take quick action, while scientists are told to reserve judgment until all evidence is carefully evaluated. Physicians are taught to adhere to accepted methods of diagnosis and practice, while scientists are encouraged to challenge existing paradigms. To physicians, errors can be fatal—but for scientists, they’re an inherent part of the discovery process.

Given all the stresses and pressures, are physician-scientists destined to vanish? In a review of Schafer’s book published in *Nature Medicine* last year, Kenneth Chien, MD, PhD, of the Harvard Stem Cell Institute said it is a “fascinating must-read for those of us with a deep interest in the subject that goes beyond conjecture and anecdotal personal experience” and “as

‘Although it is not an easy road, I still advise women who seek my advice to pursue research—but only if the passion is there.’

the last page is turned, a more sanguine view of the problem emerges, along with a few surprises.” Schafer concludes that physician-scientists should be considered “endangered,” but not on the way to extinction. What is vanishing—if it ever really existed—is a critical mass of physician-scientists matching an earlier generation’s idealized concept of the “triple threat”: the solitary clinical investigator who could move effortlessly between bedside and bench, managing a busy clinical practice and a productive research laboratory while devoting significant time to teaching and mentoring. “It may be possible for very few to do all of these things,” Schafer says, “but it certainly takes tremendous effort.”

He counsels young physician-scientists that it will take some time for academic systems to catch up to contemporary realities. In the meantime, they must carve out their own career paths by cultivating mentors and champions, learning good time-management skills, and understanding that medical research today demands collaboration, particularly with PhDs who offer complementary expertise. Insisting on being the sole principal investigator on every project, or even most projects, is counterproductive; even the greatest sports stars depend on teamwork to win championships.

Despite the difficulties physician-scientists face pursuing their research goals, there may never have been a more exciting time for clinical study, which is being enhanced by factors like digital medical records, stem cell biology, and expanding global disease databases. The goal, Schafer says, is to incite the passion to research and to be as inclusive as possible. “As medicine moves increasingly into a time when treatment modalities will be more targeted and personalized, the observations and insights doctors make while caring for patients will become more invaluable than ever,” Schafer says. “But if we don’t face up to the fact that physicians are dropping out of the pipeline and that we must make contemporary accommodations to encourage the next generation, we will lose large numbers of people—especially women—along with the unbelievable intellectual firepower they represent. That would be a terrible loss for human health.” ●



A century after the groundbreaking report that transformed medical education, a new study may point the way toward major curriculum changes at Weill Cornell

Flexner for the Future



By Jordan Lite

Tom McCoy '11 had just begun his third-year medicine clerkship and was on a rotation in the intensive-care unit when he met a patient with ketoacidosis (DKA). DKA is a serious complication of diabetes, and with its roots in metabolism and insulin deficiency, it's a disorder with direct connections to the basic science that students learn in their first two years of medical school. But McCoy, who as an MD-PhD student might have been more tuned in to science than some of his peers, never noticed the link. He was completely focused on the so-called "shelf" exam, the standardized test administered by the National Board of Medical Examiners after each of the core clerkships, and the book he'd need to read to prepare. His instructor on the unit had thoroughly explained the symptoms and treatment of DKA, but its science didn't seem to have a place at the bedside. "You get a sort of tunnel vision," McCoy says. "You're so fixated on, 'I'm here to learn medicine, not biochemistry,' that it's easy to forget that medicine *is* about biochemistry."

It wasn't until fourteen months later, when McCoy was studying for his boards, that the light bulb went on. "This is what I am supposed to be integrating; this is why you 'waste' time in biochemistry, to understand this," McCoy remembers thinking. "It was one of the fundamental moments when that esoteric knowledge from the first two years, that had felt rote and perfunctory, came to life—that over the course of clinical training, we will understand these connections and it will all work out in the end." For McCoy, that epiphany raised a fundamental question: would he have been better off being shown the connection fourteen months earlier, or did figuring it out himself have some inherent benefit? In retrospect, McCoy isn't sure that the independent discovery was worth the delay. "The point of education is to allow you to look at things in the richest possible way," he says. "There was no reason that I couldn't have had the same moment in the ICU during third year that I had fourteen months later."

That lack of integration between basic science and clinical education probably wasn't what Abraham Flexner had in mind when the

Skill Set

It's a key element of curriculum reform: what 'core competencies' should a twenty-first-century doctor have?

While the Accreditation Council for Graduate Medical Education (ACGME) requires that residents meet six core competencies, there is no such equivalent for medical students. Establishing what Carol Storey-Johnson, MD '77, senior associate dean for education, calls "statements of ability" and focusing on effective ways of assessing them are a priority for curriculum reform at Weill Cornell, and central to the Carnegie Foundation's recommendations.

Weill Cornell's Medical Education Council is now identifying what will become the school's core competencies. Some will likely be similar to the ACGME's, says Peter Marzuk, MD, associate dean for curricular affairs, relating to medical knowledge, professionalism, and practice-based learning. Others may refer to the importance of medical scholarship—becoming expert in a special area of interest such as basic science, health-care policy, or global health—and to working collaboratively. Ultimately, those competencies will form the basis not just of students' education, but their future medical practice. "This is how they're going to be judged by licensing boards, as well as probably by recertification and possibly also reimbursement," says Dean Antonio Gotto, MD.

Marzuk says it's most realistic for students to acquire those competencies gradually, learning aspects of each in different courses. "These things are developmental stages that you acquire as you go through medical school," he says. "No one competency will likely be met in a single course. You'll probably have many different types of courses where students will be learning parts of the competencies, so that by the end of the four years they will have mastered them."

How to assess those competencies is another matter. Standardized tests such as the "shelf" and Step 2 of the United States Medical Licensing Examination (USMLE) do a reasonable job of assessing medical knowledge and clinical skills, says Carnegie report co-author Bridget O'Brien, PhD. It is in the areas of professionalism, interpersonal and communications skills, practice-based learning and improvement, and systems-based practice, she says, that assessment is varied and unproven. Weill Cornell might find ways for students to assess themselves as they learn, or use electronically based systems, according to Storey-Johnson. "Yes, there are barriers we have to overcome, but these are challenges that any outstanding medical school should take on," she says.

Even as the Carnegie authors advocate that schools establish official competencies and standardize how they're assessed, they recommend that schools find ways to individualize each student's course of study. That would mean allowing students who demonstrate competency in a given area to move on sooner than classmates who haven't yet achieved that ability. It would also enable them to explore their own passions in depth.

Storey-Johnson's think tank is mulling over how to make individualization happen. The Carnegie report cites "art and science of medicine" courses in the first year of some schools that put science-oriented students in humanities courses and vice versa as helpful for evening out the knowledge base as all students are learning core science and clinical medicine. Some form of that is a possibility, Gotto says. "Some students come in who've already had a lot of biochemistry, and we also like to get students who have delved into other subjects—maybe they've been a history major or an English major, and so biochemistry may sound like a foreign language for a while,"

Carol Storey-Johnson, MD '77, and Peter Marzuk, MD



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AMELIA PANICO

Gotto says. “It would mean they would theoretically go through medical school at different rates.”

To allow students to learn at their own pace and make room for in-depth study in an area of their choice, the core curriculum might also have to be shortened, deans say. Some peer institutions have reduced the length of their core programs considerably, Storey-Johnson notes. At Duke, students complete basic science courses their first year, clerkships the second, and research the third; the fourth is spent in elective rotations. “The length of a course is often viewed by faculty as a sacrosanct limit beyond which you can’t tinker,” Marzuk says. “We’re coming to the realization that you have to adjust the length of courses to how science and medical practice are changing. What is becoming more important with genetics and immunology and neuroscience may require a little bit more time. Other areas may require less.”

While the logistics are up for discussion, students might get dedicated time for individual projects during an intersession, Storey-Johnson says, or for counseling and mentoring (something that would lend itself to another Carnegie recommendation: professional identity formation). “The idea that we’re promoting—and we have not finalized these plans—is that students in our new curriculum may have opportunities to engage in in-depth studies in areas that coincide with the strategic-plan programs at our centers and institutions,” such as neuroscience, cancer, global health, metabolic disease and diabetes, cardiovascular disease, and scientific research, she says.

Still, individualization makes some faculty uneasy. “One of the things I worry about in Flexner 2.0 is the need to have standards and the desire to accommodate individual pathways for students. It’s easier said than done and will require a lot of careful planning to make sure that all students receive the basic quanta of training and professional acculturation,” says Joseph Fins, MD ’86, chief of the Division of Medical Ethics. “Too much specialization or differentiation early on could deprive trainees of some of the DNA they’ll need to practice responsibly.”

Carnegie Foundation published his groundbreaking report, *Medical Education in the United States and Canada*, in 1910. Flexner was an educator focused on innovation and reform, not a physician; the foundation, which commissioned the report at a time when concern over haphazard medical education and shady clinical practice was growing, figured he could be objective in his critique. As it turned out, Flexner’s findings, based on visits to 155 medical schools, were revelatory: medical education was a hodge-podge of proprietary and profit-driven, apprentice-style instruction. Most of the schools were not university-based, were supported almost entirely by student tuition and had no endowments, and did not engage in research or scholarly activities.

Flexner saw Johns Hopkins as a model of excellence amid the mediocrity, and he was also enamored of the strong, lab-based science coming out of Germany’s university-based medical schools, according to a 2006 piece about him in the *New England Journal of Medicine*. North American medical education, Flexner concluded, should adopt Germany’s approach. Medical schools should be housed in research-based universities affiliated with teaching hospitals. Students should spend their first two years learning anatomy, physiology, pathology, and chemistry, and their third and fourth years on the wards with physician-educators who would train them in the practice of medicine. The Flexner model, sometimes called the “two-plus-two” structure, quickly became the gold standard for U.S. medical education and licensing, and in large part it hasn’t budged since.

Cornell University Medical College was founded in 1898, and in many ways it passed muster with Flexner. “The laboratories are in charge of full-time teachers, properly assisted, devoting themselves unreservedly to teaching and research . . . animated by university ideals,” he wrote. Students trained at Bellevue Hospital, then across the street from the College. Still, Flexner criticized Cornell (as well as Columbia and NYU) for a lack of “ideals, policy, or genuinely organized departments” at the hospital, and the cronyism he saw in installing physicians in teaching roles there. “It just happens that some competent teachers find themselves in prominent hospital positions,” he wrote, “but the system is not designed to pick them out.”

In 1996, the Weill Cornell curriculum underwent a major revision, largely in the first two years. Courses that formerly had been taught by departments (e.g., biochemistry, anatomy, physiology, etc.) were reorganized into more integrated scientific disciplines. Thus, a course called Human Structure and Function replaced the former gross anatomy, embryology, and physiology courses. The traditional lecture format was replaced with multiple formats that emphasized more small-group learning, including problem-based learning (PBL), journal clubs, computer labs, discussion groups, patient presentations and panels, and public health field trips. Students also had early clinical exposure to patients through office preceptorships. In the clinical years, there was an increased emphasis on ambulatory care through the development of a primary-care clerkship and new clerkships in end-of-life/palliative care and health-care systems, and a capstone course at the end of the fourth year in translational medicine. Required clerkships could be deferred to the fourth year, allowing students opportunities to take electives earlier in the third year in specialized fields such as radiology or dermatology. Despite the horizontal integration of basic sciences, the traditional immersion clerkships in medicine, surgery, pediatrics, and other specialties have remained largely intact to the present day. Thus, the current Weill Cornell curriculum still largely preserves the Flexnerian model of two years of basic science followed by two years of clinical medicine.

Now, in the wake of a new Carnegie Foundation report, written to coincide with the Flexner centenary, on how medical education should be revamped in the twenty-first century—a report colloquially referred to as “Flexner 2.0”—



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Weill Cornell is considering another round of reforms. “We’ve had enough time to test [the 1996 curriculum] and see what we like about it and what are some of the things that could be improved,” says Dean Antonio Gotto, MD. “Medicine is changing, so we need to adapt to prepare our students for the type of practice they will have. With advances in technology, we don’t want to lose sight of the importance of the patient-physician relationship, and we want to take advantage of new technologies—things like the electronic medical record—that were not available when we introduced the new curriculum. We’re at the centennial of the Flexner report, so that gives additional meaning to doing a review at this time.”

Like Flexner himself, Bridget O’Brien, PhD, is an education specialist—not a doctor. As she and her co-authors of the new Carnegie report, *Educating Physicians: A Call for Reform of Medical School and Residency*, conducted focus groups at eleven schools around the country, she found that third-year students had to make a jarring leap. “What was striking for me, as someone coming from outside of medicine, were the things we were hearing about how difficult the transition was to the clerkships,” says O’Brien, who earned a BS from the Ithaca campus in 2000. “It just seemed like an unusual structure for learning.”

Integration of formal knowledge (i.e., basic science) and clinical experience became one of the report’s official recommendations. O’Brien and her co-authors, Molly Cooke, MD, and

David Irby, PhD, also call for medical schools to standardize the competencies they expect students to graduate with, and to standardize how those skills are assessed. At the same time, they recommend allowing students to acquire knowledge at their own pace, from pedagogies that suit diverse learning styles, and to indulge their particular passions, such as research or policy.

Schools should also instill in students the importance of “habits of inquiry,” as well as the motivation to find ways to improve health-care delivery across the systems they work in, the authors write. And they emphasize professional identity formation, the development of professional values. Other influential bodies, such as the Association of American Medical Colleges (AAMC), the Liaison Committee on Medical Education (LCME), and the Macy Foundation, have also suggested the need for philosophical and practical changes in U.S. medical curricula.

Two of the Carnegie group’s recommendations—integration and individualization-standardization—are generating much of the discussion around curriculum reform at Weill Cornell. Carol Storey-Johnson, MD ’77, senior associate dean for education, has assembled more than 100 faculty and students in a kind of think tank to generate ideas about changes in content and format. They will present them to the College’s Medical Education Council (MEC), which will offer its formal recommendations to Dean Gotto. Curriculum changes could be implemented as soon as 2012, Storey-Johnson says, “but this is a rough timeline. In large part, it depends on how radically we want to change the structure of the program.”

Just what a truly integrated medical curriculum would look like remains unclear. The goal is to create “situated integration,” in which both the clinical and biomedical science aspects of a health condition are addressed in a given session or module, Storey-Johnson says. “Right now, it’s possible a patient might come into the basic science courses, but oftentimes you get a lecture on the pathophysiology and you might not see a patient with cardiovascular disease until the clinical course,” she says. “It’s thought that when material is learned in context, it’s best recalled and remembered.” One way to facilitate integration, many agree, is to offer students continuity of care experiences. “We have never done a good job of promoting what I call ‘authentic patient care activities,’ where the student has a major role in the care of patients and follows them over long periods of time,” Storey-Johnson says. “We’d certainly

like to include some aspect of that in a future curriculum."

Harvard, the University of Minnesota, and the University of California, San Francisco, among others, allow students to follow patients over an extended period of time—anywhere from six months at UCSF to a year at Harvard—as they navigate the health-care system and related social-support programs. "This helps to maintain students' level of engagement in patient care and feel that they're making a difference," O'Brien says. "They learn a lot about systems improvement, 'well systems'—how health-care systems work—and sometimes even see what role they can play in helping change them."

Leslie Delfiner '11 says a continuity of care experience would give students a more realistic picture of what outpatient medicine feels like. She recalls her unease with a system that cut her off from one patient she had treated for cellulitis. The woman had a difficult home situation, and part of Delfiner's responsibility was to coordinate with social workers to make sure she would be discharged to a safe environment and receive nursing care and physical therapy. "When she was finally going to be discharged from the hospital, it almost felt empty: I shook her hand, I wished her luck, and then I had nowhere to go from there. It was as if the relationship was just supposed to end," says Delfiner, who earned a BS from the Ithaca campus in 2007. "You're taught to care about these people and to be accountable for your relationship with them, and in the real world, that's often not how medicine works."

The logistics of creating such a continuous experience may be the biggest headache to overcome, says Peter Marzuk, MD, associate dean for curricular affairs. While electronic medical records and other new technologies make it easier to track patients through the health-care system, it may be complicated to sync them up with what students are learning in their clerkships. "Disease doesn't wait around for the opportune time—it happens when it happens," Marzuk says. "So if a student is following a patient who suddenly has an acute myocardial infarction, that student may have to leave whatever he's worrying about in renal diseases at that moment and go be with the patient. It introduces a certain amount of learning disruption, and you have to weigh the pros and cons of that. We want our students to be maximally learning. Whatever we do will most likely have to be

'The teaching of the humanitarian and technical aspects of medical practice must be continually taught simultaneously with its scientific underpinnings. They are inseparable: the "art and science of medicine."'

phased in—maybe on a pilot basis, to see what works."

Integration will likely also include working in formalized teams that include not just physicians but nurses and social workers, Storey-Johnson says. With a \$313,000 grant from the Macy Foundation, Weill Cornell is developing an inter-professional program with Hunter College School of Nursing, Social Work, and Public Health that will allow students to do rotations that involve interdisciplinary work. The program, which could launch later this year, is intended not only to improve outcomes for patients by streamlining their care but to improve communication among health-care providers.

Whatever form integration takes, it cannot come at the expense of a rigorous and comprehensive grounding in the scientific basis of medical practice, says Andrew Schafer, MD, chair of the Department of Medicine. "As we depart from the Flexner model of rigidly segregating the basic science years from the clinical practice years of medical school, there is great concern by many—and certainly for me—that fully integrating the teaching of science with clinical practice in a seamless way could lead to a slippery slope of progressively reducing the scientific content of medical education. This would eventually transform the curriculum into a largely technical, algorithm-based form of clinical practice," Schafer says. "Very early exposure of students to direct patient care, with an emphasis on professionalism, ethics, compassion, and effective communication, is a wonderfully stimulating way to introduce them to medicine. But it inevitably results in reduced time available to learn the basic science of medicine. So, it must be made up in more time provided in the later 'clinical years' of medical school (and graduate medical education) by reinfusing formal study of pathophysiology alongside practical patient care. Thus, the teaching of the humanitarian and technical aspects of medical practice must be continually

taught simultaneously with its scientific underpinnings. They are inseparable: the 'art and science of medicine.'"

Any curriculum changes won't be merely structural; they will also involve some shift in pedagogy. The Carnegie Foundation report's call for "habits of inquiry" in medical school curricula is essentially a recommendation that students engage in lifelong learning, and that means teachers must adjust their expectations of students—and how they interact with them, Marzuk and Schafer say. Not only will students need to become proficient seekers and analysts of rapidly evolving science, Marzuk says, but "solvers of biomedical problems." While that will include understanding how to search for reliable medical literature online, it will also encompass training students to be problem-solvers who can spot weaknesses in health-care delivery and implement innovative solutions, O'Brien says.

More philosophically, lifelong learning also requires ample use of the Socratic and other interactive teaching methods that encourage and reward students for asking questions, Schafer says. "Teachers should be expected to demand inquisitiveness, to teach our medical students not to be afraid to challenge current dogma, and to ask their teachers the big 'why' questions: why is this problem occurring with this patient; why is it different from what occurred in the previous patient with what appears to be the same disease; why are we ordering this test?" Schafer says. "It involves a shift in how we teach teachers how to teach."

Just how completely is Weill Cornell prepared to shift? Storey-Johnson declines to make predictions. "I think there's some leeway there," she says. "You don't have to completely deconstruct your clerkships to meet the call for reform, but the question is whether we want to push the envelope and try something that's really innovative and different. On that, we will have to wait and see." ●

Notebook

News of Medical
College and Graduate
School Alumni

Dear fellow alumni:

Last fall, I completed my orientation for the Weill Cornell Board of Overseers, where I will represent your interests as President of the Alumni Association. It was a humbling experience to learn of the size and breadth of Weill Cornell Medical College and the complex tapestry of administrators, students, physicians, and scientists that make it the stellar institution that it is. The vision and planning of Dean Antonio Gotto, MD, and the Board of Overseers have markedly altered the landscape over the last several years, making Weill Cornell competitive with the top institutions in the country. We now excel in many areas of medical and graduate education, research, and clinical care that were simply not imagined twenty years ago.

Some of you saw these changes firsthand at Reunion 2010, which I wrote about in my last message. We have received many notes from alumni, not only about the great time they had, but also about their pride in what our institution now represents in the world of medicine. Ernest Sosa, MD '78, Reunion chair for 2012, is already working in earnest to develop another memorable event; more details will follow soon.

The Alumni Association was pleased to give the inaugural Special Achievement Award to Jean Pape, MD '75, at Reunion 2010. Dr. Pape, a Weill Cornell professor of medicine, founded the GHESKIO Centers in Port-au-Prince, Haiti, in 1982, and he has not once shut its doors or charged a fee for service. He was honored for his work fighting infectious diseases in Haiti both before and after the devastating earthquake of January 2010.

The construction continues on the new Medical Research Building that has replaced the Livingston Farrand and Kips Bay buildings. The concrete is being poured for the foundation, and soon the structure will begin to rise. Once completed it will offer thirteen floors of research space in areas of current and future medical importance, as well as lounge areas for the students and researchers.

The Phonathon was a big success, with thirty-three students manning the phones to raise money for scholarships. Our generous alumni responded to their calls for help, raising more than \$40,000 over three days. Many thanks to all of you who opened your hearts and wallets for the students.

There is much more going on with your Alumni Association and the Medical College. Check us out online at www.weill.cornell.edu/alumni or on Twitter or Facebook. There is no good reason to not be in contact with your old friends and classmates, and the Alumni Association is there to help you reconnect with them.

As always, please help support our Alumni Association, alma mater, and students either financially or by volunteering in one of our many outreach activities. The students will soon join us as alumni, and we want to make a favorable impression as they leave Weill Cornell and become ambassadors to the medical world.

*Best and warmest wishes,
Michael Alexiades, MD '83
President, WCMC Alumni Association
alexiadasm@hss.edu*

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Michael Alexiades, MD '83

1940s

B. Samuel Lacy Jr., MD '44, retired in 1995 from his position as a psychiatrist at Kansas State University Student Health. "I am busy with a peace and justice group (Manhattan Alliance for Peace and Justice) and any organization working for single-payer national health insurance (such as Physicians for a National Health Program), now favored by the majority of health professionals."

1950s

Marjorie F. Hughes '47, MD '50: "I recently moved into a retirement apartment building. Sold the home that I had lived in for the past 54 years."

Roy H. Lucas, MD '52: "Allyn '52 and I still live in Winter Haven, FL. We spend our summers on Cape Cod, and most of our time is devoted to playing golf and keeping up with our nine active grandchildren. It's great to see them all grow up; they keep us young. E-mail: CapeBoca@aol.com."

Sidney Werkman, MD '52: "Still living in Washington, DC, and going to work each day at Georgetown Medical School. I revel in my grandsons, who, unfortunately, live across the country in Spokane, WA. They play soccer, football, basketball, and baseball, and enjoy St. George's School. I'm still trying to figure out Skype so we can videoconference."

Peter R. Mahrer, MD '53, is still teaching cardiology at USC.

Seneca L. Erman, MD '54: "Since the untimely death of **Dave Law '49, MD '54**, we have not had a class secretary or coordinator. I volunteer to perform those duties. Please send me a class list and addresses, phone numbers, e-mails, etc., so that I may do that."

Ivan Gendzel '52, MD '56: "Fully retired from my psychiatric practice in July. **Gene Segre '53, MD '56**, and I enjoy our weekly walks in Palo Alto. I'm less active with the Boy Scouts but remain a Disaster Mental Health volunteer with the Red Cross."

Ramon R. Joseph, MD '56, married concert pianist Karen Moran-Joseph on February 18, 2009. He is happily retired in Sun City West, AZ.

David Schottenfeld, MD '56, received the American College of Physicians' James D. Bruce Memorial Award for Distinguished Contributions in Preventive Medicine.

Thomas C. Carrier, MD '59: "Anne and I greatly enjoyed our 51st Reunion at Weill Cornell with 16 of our classmates. The Friday evening dinner at the New York Athletic Club was a highlight, with stories and anecdotes from Olin Hall and 1300 York Avenue being shared until the NYAC staff finally decided it was time for us to go

home. We all agreed that we had four great years together."

G. Billie Campbell Lerner '55, MD '59: "In January 2007 I had lung surgery and went on to become a COPD patient with back problems. Attend Cleveland Clinic for current care. My girls have grown up. Each is the mother of two lovely children, so I have four grandchildren. My husband, Bill '55, and I have been married 54 years."

James E. Shepard, MD '59, enjoyed the 51st Reunion dinner.

1960s

Gideon G. Panter '56, MD '60: "What a wonderful reunion we had. The Class of 1960 was well represented by about 87 percent of our living classmates."

C. Anderson Hedberg, MD '61: "Sonia and I are looking forward to our 50th Reunion. We hope to greet all of our Class of 1961 friends who will be with us at that time."

James E. Standefer, MD '61: "I continue to teach how to treat glaucoma in developing countries. For the past several years I have concentrated on the Middle East and North Africa including Yemen, Iraq, Libya, Afghanistan, and Pakistan."

Bryant Barnard, MD '62: "I am active with my fourth pacemaker. Hurrah for modern medicine and Medicare. I fish a lot and go to Montana twice a year. I am not able to do my African urology visits anymore, so I fund a Cornell student each year to go abroad. My family is well, and I look forward to our 50th Reunion. Anyone coming to the Boston area, call me: 978-468-2141."

William R. Hazzard '58, MD '62: "Well, I've finally done it—retired from the VA and the University of Washington (I've been emeritus at Wake Forest since 1999), but will remain in volunteer status as long as they'll have me. At least that way they'll be getting their money's worth."

William Schaffner, MD '62, received the Sedgwick Memorial Medal for Distinguished Service in Public Health from the American Public Health Association at its 138th annual meeting in Denver last November. Dr. Schaffner is chairman of the Department of Preventive Medicine and professor of infectious diseases in the Department of Medicine at Vanderbilt University School of Medicine. He has collaborated with the Tennessee Department of Health on investigations of environmental hazards and disease outbreaks and supervised the training of 21 Epidemic Intelligence Service officers.

John L. Ziegler, MD '64: "Sorry to miss the reunion. I am still working full time as director

'I am active with my fourth pacemaker. Hurrah for modern medicine and Medicare.'

Bryant Barnard, MD '62

'I haven't landed far away. I enjoy practicing psychiatry and psychoanalysis in my office two blocks from the Medical College.'

Brian A. Aslami, MD '93

of UCSF Global Health Sciences Masters Degree Program. I love the challenges of starting a new program, now with 30 students."

Lawrence P. Levitt, MD '65, and John Castaldo have co-authored a book, *Uncommon Wisdom: What Our Lives as Doctors Have Taught Us about Love, Faith, and Healing* (Rodale Books, 2010).

Dean Edell '63, MD '67, an ophthalmologist and surgeon, is retiring as radio host of the "Dr. Dean Edell Show" on KGO-AM.

Robert S. Ennis, MD '67: "I have retired from the clinical practice of orthopaedic surgery, although I am still working as a consultant and teaching part time. Lorelei and I are also busy with various charities and philanthropic boards, and are enjoying our children and grandchildren."

1970s

David F. Harris, MD '70: "I am off to Guam to practice general pathology in the tropics. Sorry I missed the 40th. Still happily married after 40 years."

Henry Masur, MD '72, received the John Phillips Memorial Award for Outstanding Work in Clinical Medicine from the American College of Physicians.

James S. Reilly, MD '72: "I continue as chair of the Department of Surgery at Nemours-duPont Hospital for Children in Delaware. I just returned from the Panama Canal and was inaugurated as president of the Inter-American Assn. of Pediatric Otorhinolaryngology. Grandson Dylan Blake Reilly was born September 2010 to my son Brian and daughter-in-law Gayle."

Benjamin A. Lipsky, MD '73, is a professor of medicine at the University of Washington. He spent 2009 as visiting professor at the University of Oxford, teaching and doing research on bone infections. The highlights of his time there were being elected to Fellowship in the Royal College of Physicians and winning first prize for his book *Diabetic Food Infections* in the British Medical

Association's annual competition.

Michael A. Chizner, MD '74, a cardiologist and chief medical director of the Heart Center of Excellence, was elected chairman of the Florida Board of Medicine. He also serves as a clinical professor of medicine at the University of Florida College of Medicine, the University of Miami Miller School of Medicine, Nova Southeastern University College of Osteopathic Medicine, and Barry University.

John E. Nees '70, MD '74: "After medical education, I moved to Bellevue, WA. I married a Peruvian in 1987 with ceremonies in Miraflores and Seattle. We bought a house in Hunts Point, Bellevue, WA, in 1989. We adopted Daniel in 1999 and moved to Boca Raton, FL, in 2001. I've made recordings of my performances of piano works by Liszt, Brahms, Mozart, Rachmaninoff, and other composers. I also travel to Peru each year."

Thomas M. Anger, MD '75: "I am still singing, playing guitar, and writing songs. Presently working on my sixth CD of original songs. We are living in downtown Chicago and loving it. We have one granddaughter, Maya, 18 months old."

Stuart W. Fox '71, MD '75: "I continue in the full-time practice of neurology in Morristown, NJ. At Morristown Memorial Hospital I'm the chairman of Neurosciences and the stroke director. My professional activities also include lecturing and consulting work with a number of pharmaceutical companies. My wife, Joane, and I travel extensively. My four children are all well and the youngest is in the second year of medical school."

Donald V. Belsito, MD '76, the former director of dermatology at the University of Kansas, will become the Leonard C. Harber Professor of Clinical Dermatology at Columbia University. Don and his family are anxious to return to New York City, but will continue rooting for the Jayhawks basketball teams.

We want to hear from you!
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Stuart Fischer, MD '79: "Stephanie and I are doing well. I am still practicing interventional cardiology in Southern California. Our daughter, Kim, will graduate from WCMC in May and plans to practice geriatric medicine. Our son, Eric, also lives in New York City and works for Lilly."

1980s

Pamela Felder Cantor, MD '81, a practicing child psychiatrist, is the founder, president, and CEO of Turnaround for Children, formerly the Children's Mental Health Alliance. Turnaround works to close the achievement gap in publicly funded schools that serve high-poverty communities. Dr. Cantor and colleagues developed the Turnaround school transformation model after working in the New York City public schools after September 11, 2001. She worked with the US Department of Justice and then-Deputy Attorney General Eric Holder on the Children Exposed to Violence Initiative, which developed an action plan for statewide implementation of prevention programs. Dr. Cantor co-directed the Eastern European Child Abuse and Child Mental Health Project, a venture funded by George Soros and the Open Society Institute. She is married to Richard Cantor and has a large family of children and grandchildren.

Scott D. Hayworth, MD '84, president and CEO of the Mount Kisco Medical Group, is the new chair of the board of directors of the American Medical Group Association.

Robert S. Bachner, MD '86: "I'm living in Atlanta with wife Connie and daughters Allison, Emily, and Jessica. I'm in orthopaedic surgery practice, but doing only office work. Since neck and back surgeries, I have not been doing surgery."

Neil L. Watkins '82, MD '86: "Son Christian Lorenzo is now in his second year of college at Maryland Institute College of Arts in Baltimore. My wife, Desiree, and I are empty-nesters."

Peter Hotez, MD '87, was appointed president of the American Society of Tropical Medicine and Hygiene, a worldwide organization that promotes global health through the prevention and control of infectious diseases that disproportionately afflict the poor. Dr. Hotez was instrumental in creating the Global Network for Neglected Tropical Diseases. He is also president of the Sabin Vaccine Institute and



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professor and chair of the Department of Microbiology, Immunology, and Tropical Medicine at George Washington University.

Stuart J. Rubin, MD '87, and **Lisa Steiner Rubin '85, PhD '93,** have lived in Clarence, NY, for the past 12 years. Their older son, Matthew, is in his freshman year at Georgia Tech, and their younger son, Daniel, is a sophomore at Williamsville East High School.

1990s

Brian A. Aslami, MD '93: "I haven't landed far away. I enjoy practicing psychiatry and psychoanalysis in my office two blocks from the Medical College. I live in New Jersey with my wife and three daughters—coaching their soccer teams on the weekends is a great break from work."

Montgomery C. Brower, MD '94: "I continue to practice forensic psychiatry in the greater Boston area, performing evaluations in criminal and civil courts. I am also continuing my development as an artist, drawing and painting in a variety of media. My wife, Em, and my 11-year-old son,

Gabe, and I make a good family. Life brings serenity and gratitude, one day at a time."

Tammy Gruenberg, MD '94, is the director of the Women's Health Center at Jacobi Medical Center.

Peter K. Kim, MD '97, is an assistant professor of surgery at Albert Einstein College of Medicine. He is also a general and trauma surgeon for the North Bronx Health Network. Dr. Kim is the founding chairperson of the Young Fellows Assn. of the New York Chapter of the American College of Surgeons, an initiate in the New York Surgical Society, and a member of the Surgical Infection Society and Assn. for Academic Surgery.

2000s

Miriam Hoffman-Kleiner, MD '00, and **Steven Kleiner, MD '02,** welcomed their son, Hillel, to the family. He joins big sisters Shoshana and Elisheva, who are still huge Yankee fans, even up in Boston.

Jonathan Glass, MD '03, completed dermatology residency at the University of Texas Southwestern Medical Center and



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In Memoriam

'35 MD—Charles E. Jacobson Jr. of Manchester, CT, May 25, 2010; urologist; urologist in chief, Manchester Memorial Hospital, Veterans Hospital, and Newington Children's Hospital; active in civic, community, and professional affairs.

'38 MD—Gilbert L. Klemann of Augusta, GA, January 18, 2011; retired physician; flight surgeon, US Army Air Corps; musician; founding member, Augusta Sailing Club; active in community and religious affairs.

'35, '38 MD—Alvin R. Mintz of Morristown, NJ, November 3, 2010; retired physician; active in alumni affairs. Zeta Beta Tau.

'43 MD—S. Gilbert Blount Jr. of Aurora, CO, October 11, 2010; cardiologist; emeritus professor of cardiology, University of Colorado School of Medicine; founder, Division of Cardiology, developer of the Cardiac Catheterization Laboratory, and founder of the Cardiovascular Pulmonary Laboratory, University of Colorado Health Sciences Center; former chief, Cardiovascular Section at Oliver General Hospital in Augusta, GA; recipient, Cummings Humanitarian Award and Gifted Teacher Award from the American College of Cardiology; veteran; author; editor; active in professional affairs.

'43 MD—Earl J. Netzwow of Thiensville, WI, October 24, 2010; family physician; veteran.

'43 MD—John L. Norris of Nashville, TN, and Winter Haven, FL, October 2, 2010; professor, Meharry Medical College and Vanderbilt U. School of Medicine; veteran; choral singer; active in civic, community, professional, and religious affairs. Wife, Margaret (Swann), MD '49.

'43 MD—William C. Thomas Jr. of Gainesville, FL, December 25, 2010; professor of internal medicine, University of Florida; director, University of Florida Clinical Research Center and VA Geriatric Center; chief of staff, VA Medical Center; specialist in endocrinology; researched calcium metabolism and kidney stones; veteran.

returned to active duty with the US Navy in July 2010. He and his family—Sarah, Thomas, Joseph, and Susanna—moved to Portsmouth, VA, where he is a staff dermatologist at Naval Medical Center Portsmouth.

Amy C. Scheffler, MD '03: "I am currently living in Miami, where I am on the full-time faculty at Bascom Palmer Eye Institute, practicing ocular oncology and vitreoretinal surgery and juggling my life at home with my 2-1/2-year-old daughter, Dalia, and 2-month-old son, Benjamin."

Heather C. Tauschek, MD '04: "I returned to my hometown of Anchorage, AK, to practice radiology with Alaska Radiology Associates."

Asha Yancy Okorie, MD '05, and Uzoma Okorie, MD '05: "Asha is currently a glaucoma fellow at Scheie Eye Institute, University of Pennsylvania. Uzoma is in his second year of a pediatric cardiology fellowship at New York University. We look forward to living in the same city again when Asha's fellowship is over in July 2011."

'44 MD—Robert E. Healy of Amesbury, MA, and Beaufort, SC, formerly of Mt. Kisco and Waccabuc, NY, October 16, 2010; internist, Mt. Kisco Medical Group; senior VP, Northern Westchester Hospital Center; also worked for General Foods and the Joint Commission; veteran; trustee, Stepping Stones Foundation; literacy volunteer; active in community, professional, and religious affairs.

'47 MD—James M. Toolan of Old Bennington, VT, November 18, 2010; psychiatrist; medical director, United Counseling Service; director of the female adolescent ward at Bellevue Hospital; veteran; active in community affairs.

'48, '46 BA, '50 MD—Alan S. Robinson of Coral Gables, FL, May 3, 2010; gastroenterologist; chief of medicine, Baptist Hospital; veteran; photographer; opera aficionado; active in community and professional affairs.

'50 MD—Dean G. Hudson of Seattle, WA, November 25, 2010; internist in private practice; affiliated with Swedish Hospital; battalion surgeon in the Korean War.

'51 MD—James G. Gray of Elmira, NY, December 22, 2010; chief of surgery, St. Joseph's and Arnot Ogden Memorial hospitals; established Arnot Medical Specialties; physician for the Worker's Compensation Board; veteran; pianist; VP, Choral and Symphony Society; active in civic and community affairs.

'47 BA, '51 MD—Sanford M. Reiss of Westfield, NJ, November 13, 2010; internist and gastroenterologist; former president of medical staff, Overlook Hospital; veteran; active in professional, religious, and alumni affairs. Sigma Alpha Mu. Wife, Beatrice (Strauss) '47.

'49, '52 MD—Frank B. Throop of Indianapolis, IN, October 18, 2010; orthopaedic surgeon; associate professor of orthopaedic surgery, Indiana University Medical School; partner, Winona Orthopaedics, Hoosier Orthopaedics and Sports Medicine, and Orthopaedics of Indianapolis; volunteer director, Cerebral Palsy Clinic, Indiana University Medical Center; veteran; active in community and professional affairs. Beta Theta Pi.

'54 MD—Philip R. Nast of Ripon, CA, formerly of Gladwyne, PA, September 1, 2010; practiced at Bryn Mawr Hospital; founder, Bryn Mawr Medical Specialists Assn.; veteran; active in community affairs.

'54 PhD—Theodore W. Sery of Haddonfield, NJ, January 2, 2011; former director, Basic Research Science Department at Wills Eye Institute in Philadelphia; a pioneer in developing an antiviral eye drop for use on eye ulcers caused by the herpes virus; veteran; poet; author.

'55 MD—Miles H. Sigler of Merion Station, PA, November 29, 2010; pioneer in the field of kidney dialysis; founder of the nephrology division at Lankenau Hospital, where he also developed the hospital's kidney transplant program; introduced the technique of slow continuous hemodialysis; partner, Nephrology Associates; veteran.

'55, '58 MD—Ronald N. Ollstein of Newark, DE, formerly of Bronx, NY, December 30, 2010; pioneer in plastic surgery for burn victims; chief, Plastic and Hand Surgery Section, St. Vincent's Hospital; chief, Burn Section, Department of Surgery, Harlem Hospital Center, where he created the city's first modern burn center; founding member of the American Burn Association; chairman, Information Council on Fabric Flammability; served on the National Advisory Committee for the Flammable Fabrics Act; member of the surgical faculties at New York Medical College, New York University School of Medicine, and Columbia University College of Physicians and Plastic Surgeons; author of *Mission, Matrix & Money*, the history of St. Vincent's Hospital; active in community and professional affairs.

'60 MD—Martin Gardy of Tenaflly, NJ, November 14, 2010; internist, Department of Medicine, and dean of students, Weill Cornell Medical College; recipient, Elliot Hochstein Teaching Award; active in professional affairs.

'64 MD—Robert H. Reid of Wilmette, IL, November 27, 2010; staff physician, Rush University Medical Center; volunteered at Habitat for Humanity and Lakeview Food Pantry.

'67 MD—Christopher D. Saudek of Lutherville, MD, October 6, 2010; founder and director, Johns Hopkins Comprehensive Diabetes Center; pioneered the implantable insulin pump; professor of endocrinology and metabolism, Johns Hopkins Medical School; faculty member, Johns Hopkins Bloomberg School of Public Health; program direc-

tor, Johns Hopkins General Clinical Research Center; ABC News consultant for "OnCall + Diabetes Center"; taught at Weill Cornell Medical College; fellow, National Institutes of Health and the Robert Wood Johnson Foundation; co-author, *The Complete Diabetes Prevention Plan*, *The Johns Hopkins Guide to Diabetes*, and *Diabetes*; veteran; active in professional and religious affairs.

'69 MD—Paul A. McGee of Fredon Township, NJ, December 11, 2010; internist in solo practice; attending physician and former chief of medicine and chief of CCU, Newton Memorial Hospital; medical director, Valley View Nursing Home; former president and treasurer, Sussex County Medical Society; active in professional affairs.

'90 MD—Kathreen Gimbrere of Seattle, WA, September 30, 2010; pediatrician, psychiatrist, and expert in adolescent medicine.

Faculty

Eugene McCarthy, MD, MPH, clinical professor emeritus of Public Health, died November 16, 2010. Dr. McCarthy, a department faculty member since 1970, was a highly respected clinician, teacher, and researcher and was a leading expert in the field of second-opinion surgery and clinical cost containment. From 1982 through 2006, he was director of Cornell University Medical College's Health Benefits Research Unit, the first national Second Opinion Panel, which included 28,000 board-certified surgeons. His work led to worldwide acknowledgment of the importance of second opinions for elective surgery and major clinical events. He held other important positions as well, including chief health adviser to the Government of Paraguay and director of Paraguay's Health Services in the Alliance for Progress (a program created by President John F. Kennedy), and medical adviser to Senator Robert Kennedy of New York. He was also appointed by President Lyndon Johnson as a member of the committee that formulated the regulations and policies of Medicare Part B-Physician Reimbursement. Among the honors he received were the Award of Merit from the Public Health Association of New York City and the Medallion de Oro from the Universidad Nacional de Asunción in Paraguay.

Operation Care Package

The staff of the CTSC brightens the holidays for Marines in Afghanistan



RAYNARD FEAGIN

Old Glory: To thank the CTSC staff, the Marines sent a flag that was flown over Camp Leatherneck on Christmas Day.

When the Marines stationed at Afghanistan's Camp Leatherneck go out on missions—sometimes for weeks on end—they expect few creature comforts. A bath or shower? Out of the question, since whatever water they tote is reserved for drinking. "The majority of our time is spent on patrols, in caves, and constant combat fighting," says Gunnery Sergeant Raynard Feagin of the I Marine Expeditionary Force, "which

means there is little to no access to hygiene products or clean water." Not that Feagin—a third-degree black belt and Marine martial arts instructor—is looking for sympathy. As he writes in an e-mail from the camp: "No complaints, because that is the life of an infantry Marine and we wouldn't trade it for anything in the world!"

This Christmas, the staff of the Clinical and Translational Science Center (CTSC) conducted a drive for supplies and donated their time and money to make the Marines' lives a bit more pleasant. After hearing that U.S. troops in Afghanistan were sorely in need of such items as toiletries, snack foods, and moisture-absorbent socks, they took up a collection. At two sites on campus, Weill Cornell employees donated bag after bag of baby wipes, foot powder, canned fruits and meats, individually wrapped cookies, playing cards, travel games, and more. "They may be minor things to us," says Julianne Imperato-McGinley, MD, CTSC program director and associate dean of translational research and education, "but they're major to them." Or, as Feagin puts it: "Most people do not understand just how important, and how much of a miracle, baby wipes are."

In early December, the staff packed more than forty boxes and mailed the care packages to Camp Leatherneck, a 1,600-acre Marine Corps base in the desert of southwest Afghanistan. "The packages couldn't have come at a better time," Feagin says. "They arrived a few days before Christmas, which brought color and brightness to such a gloomy place. The look on the Marines' faces when I presented the care packages to them was priceless. For some of my Marines, this was the first time that they had received any mail or packages throughout their entire deployment. As I handed the boxes to them, they embraced me, with smiles and a few with tears in their eyes, saying proudly, 'Gunnery Sergeant, they do care.' "

To thank the CTSC staff, the Marines sent an American flag, smartly folded into the traditional military triangle, as well as photos and a certificate attesting that it had flown over the camp on Christmas Day. "Everyone here got very emotional," says Imperato-McGinley, the Abby Rockefeller Mauze Distinguished Professor of Endocrinology in Medicine. "We didn't expect to get any response except maybe an e-mail saying 'thank you.' We got the full impact of how needy these soldiers are, and we realized we did something really meaningful and important." Now, the CTSC—which has conducted similar drives for city kids in need of school supplies—is already planning another round of care packages. "It looks like we've adopted Camp Leatherneck," says Imperato-McGinley. "How can we not continue to help them?"

The Hahn Family— *Generations of Generosity*

Weill Cornell's exceptional physicians gave Ilse Hahn the best gift of all—they added vibrant years to the time she had with her daughter, Frances. In appreciation of the care she received from Drs. Michael and Gerardo Zullo and Dr. Karl Krieger, Ilse established a charitable gift annuity to further cardiology research at Weill Cornell.

Philanthropy and compassion were important to Ilse—who, with her late husband, Fred, fled Nazi Germany for the U.S. during World War II. Throughout her life she was known and loved for her generous and caring spirit. Now, although she has passed away, Ilse's gift annuity continues to benefit both the Medical College and her daughter, Frances.

"My mother taught me the importance of helping others," says Frances Hahn Stewart. "She believed that, no matter how much you have endured, ***there will always be someone whose life you can help make better."***

That same spirit of caring and foresight led Frances and her husband, Gene Stewart, to establish another gift annuity for cardiology research. "I know that Weill Cornell research will help others as much as it has helped our family," says Frances.



Ilse Hahn with her daughter, Frances Hahn Stewart, in 2006

Planned gifts benefit you, your loved ones, and Weill Cornell. For more information, please contact:

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Executive Director of Development

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Please visit our website:

www.weill.cornell.edu/campaign

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86	8.3%
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