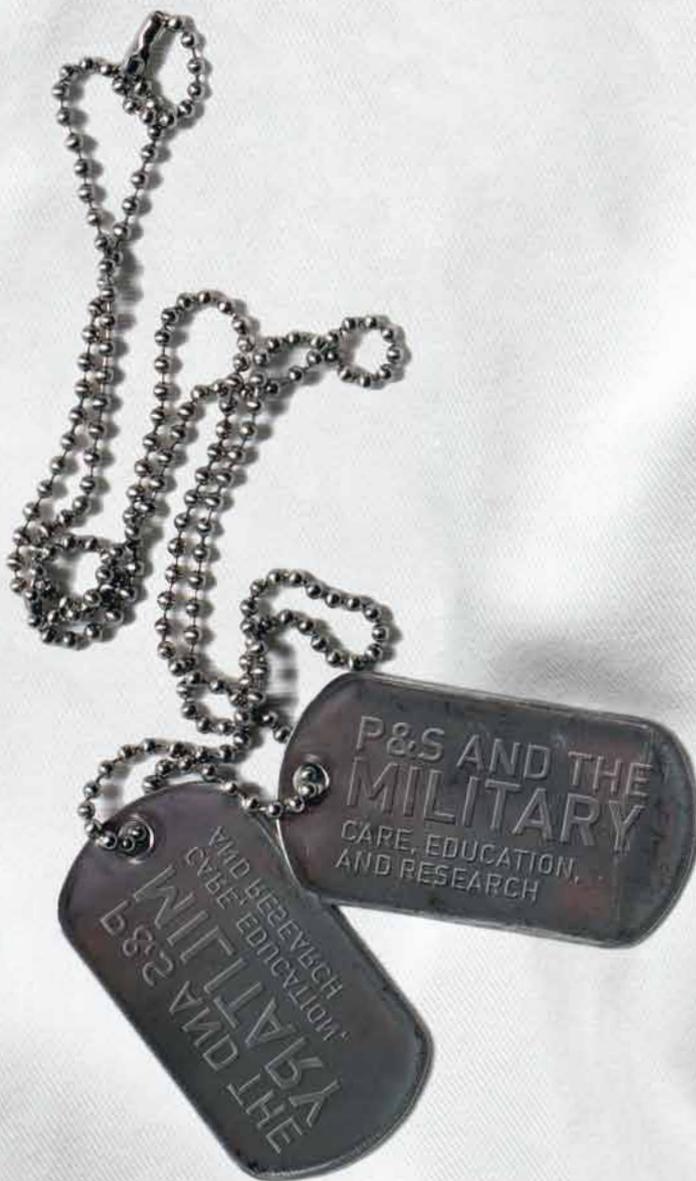


Columbia Medicine

Columbia University College of Physicians & Surgeons



New York Brain Bank

The ultimate gift to benefit neurodegenerative disease research

Dermatology Research

More than skin deep



MANHATTAN TIMES / MIKE FITELSON

● FROM THE DEAN

Dear Readers,

The nature of our work as a great medical center is to imagine the future of health and medicine. We do this across a wide spectrum of activities, from research and clinical programs that advance our understanding of the biology of disease to our admissions process, which allows us to identify the individuals we think are best able to lead us into that future.

But even as we define the future, we also appreciate those special moments when something we have imagined begins to take a physical form. Such a moment was celebrated in October when the final steel beams topped off the superstructure of the Medical and Graduate Education Building going up on Haven Avenue. *Superstructure* is a construction term, but it took on a new meaning as we watched one floor of the building go up every two weeks over the summer.

The ceremony brought together many of the individuals who are making the building a reality: generous supporters; members of our board of advisors; and alumni, friends, and our medical center community. Many of us signed one of the beams and reviewed a second beam signed by hundreds of students, faculty, and staff.

The 14-story Medical and Graduate Education Building is at the center of a wider campus revitalization program we are undertaking to make the medical center a premier destination for people who come to our campus to work, study, and receive care. We have remodeled the lobby of the P&S building, renovated several floors of our buildings, created 125,000 square feet of new clinical space at ColumbiaDoctors Midtown, completed the first phase of animal care renovations in Black and Hammer buildings, and begun installation of a new 9.4 Tesla small-animal MRI at the cancer center. In all, we have renovated more than 400,000 square feet of space for the medical center.

Our neighborhood also is undergoing improvements. Commuters will benefit from renovation of the 168th Street subway station and the George Washington Bridge bus terminal. A new hotel under construction and the opening of two nationally known fitness company locations represent significant investments in our neighborhood. New green space and a magnificent Hudson River view are features of the new education building. The medical center bookstore moved this fall to Haven Avenue, where Barnes & Noble and Starbucks now offer a unique new gathering place for students, faculty, staff, and our neighbors.

These changes, both sweeping and cosmetic, contribute to our efforts to make the campus appealing for patients, students, faculty, and the thousands of individuals who work and study here. The changes underscore our commitment to create an atmosphere that reflects the first-class quality of the medical center's people and programs. Our faculty and students aspire to make a difference through their work, so we are committed to providing a first-class environment to match those aspirations.

With best wishes,

Lee Goldman, MD, Dean
lgoldman@columbia.edu

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www.facebook.com/columbiaps

Alumni should update their addresses by writing the Alumni Association at the address above or calling the alumni office at 212-305-3498.

Faculty and staff should contact their departmental administrators to update their addresses, which are obtained through the Columbia University personnel system.

All others with address changes should contact P&S Communications at 212-305-3900.

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Commencement 2014

Faculty Awards

P&S Distinguished Service Awards were presented to **Charles S.H. Young, PhD**, professor emeritus of microbiology, and **John M. Driscoll Jr., MD**, the Reuben S. Carpentier Professor Emeritus of Pediatrics.

Charles W. Bohmfalk Awards were presented to **Henry M. Spotnitz, MD**, the George H. Humphreys II Professor of Surgery, for pre-clinical teaching, and **David L. Diuguid, MD**, the Hope Sheridan Associate Professor of Hematology (in Medicine) at CUMC and associate professor of pathology & cell biology at CUMC, for clinical teaching.

The Leonard Tow Humanism in Medicine Award presented by the Arnold P. Gold Foundation was given to **Rita Charon, MD, PhD**, professor of medicine at CUMC.

The Dr. Harold and Golden Lamport Research Award in basic sciences was given to **Raul Rabadan, PhD**, assistant professor of biomedical informatics and of systems biology. **David J. Lederer, MD**, associate professor of medicine and of epidemiology in pediatrics, received the Dr. Harold and Golden Lamport Research Award in clinical sciences.

The Distinguished Teacher Award was given by the Class of 2014 to **Michael Devlin, MD**, professor of clinical psychiatry.

Student Awards and Prizes

Doctor Harry S. Altman Award
(outstanding achievement in pediatric ambulatory care)
Bianca N. Calderon

Alumni Association Award
(in recognition of interest in and devotion to the College of Physicians & Surgeons and its Alumni Association)
Allen M. Costa
Nicholas A. White

*AAN Medical Student Prize
for Excellence in Neurology*
Jason B. Neal

The Virginia P. Apgar Award
(excellence in anesthesiology)
Kyra R. Bernstein

Michael H. Aranow Memorial Prize
(best exemplifying the caring and humane qualities
of the practicing physician)
Michael J. Healy

Herbert J. Bartelstone Award

(exceptional accomplishments in pharmacology)

Sasha Fahme

The Behrens Memorial Prize in Ophthalmology

(outstanding graduate entering ophthalmology)

Richard I. Kaplan

The Edward T. Bello, MD, Listening Award

(best portrays the art of listening to patients, colleagues and self in practicing the chosen field of medicine)

Bethany L. Johnson-Kerner

Robert G. Bertsch Prize

(emulating Dr. Bertsch's ideals of the humane surgeon)

Joyce Khandji

Coakley Memorial Prize

(outstanding achievement in otolaryngology)

Sarah E. Keesecker

Titus Munson Coan Prize

(best essay in biological sciences)

George Eng

Bethany L. Johnson-Kerner

Titus M. Coan Prize for Excellence in Research

Basic cell & molecular biology

German A. Plata Caviedes

Translational biology

Joseph M. Chan

Thomas F. Cock Prize

(excellence in obstetrics & gynecology)

Katherine S. Brown

Rosamond Kane Cummins'52 Award

(graduate entering orthopedics with academic excellence, sensitivity, kindness, devotion to patients and the fine human qualities that she exemplified)

Margaret L. Wright

Dean's Award for Excellence in Research, Graduate School of Arts and Sciences at the College of Physicians & Surgeons

Benjamin D. Hopkins

Matthew R. Lovett-Barron

The Endocrine Society's Medical Student Achievement Award

Cecilia C. Fix

Daniel J. Fink, MD, Memorial Prize

(best exemplifies Dr. Fink's enthusiasm for the study and practice of medicine)

Julia Z. Xu

Glasgow-Rubin Achievement Award

(presented to women students graduating in the top 10 percent of their class)

Zeena E. Audi

Kyra R. Bernstein

Julia V. Blum

Abigail Campbell

Talia R. Chapman

Margot E. Cohen

Kimberly Dessources

Juliet O. Idiga

Maryl G. Sackeim

Katherine E. Schwartz

Emily West

Doctor Charles E. Hamilton Award

(excellence in pulmonary disease)

Mahesh V. Madhavan

The Izard Prize for Research in Cardiology

(excellence in cardiology)

Mahesh V. Madhavan

Janeway Prize

(the highest achievement and abilities in the graduating class)

Julia V. Blum

The Jerry Jacobs Prize in Pediatrics

(excellence in the differential diagnosis and treatment of disorders in children)

Elana B. Mitchel

Albert B. Knapp Scholarship

(awarded at the conclusion of the third year to the medical students with highest scholarship in the first three years)

Julia V. Blum

David A. Martin

Emily West

John K. Lattimer Prize in Urology

(outstanding essay in urology)

Gregory A. Joice

Donald A.B. Lindberg, MD, (P&S '58) Award for Excellence in Biomedical Informatics

Alexander D. Sackeim

The Samuel and Beatrice Leib Memorial Prize in Ophthalmology

(outstanding graduate entering ophthalmology)

Juliet O. Idiga

Family Medicine Student Research Scholarship Award

Orlando I. Sola

Barbara Liskin Memorial Award in Psychiatry

(exemplifies the empathy, scholarship, and excellence exhibited by Dr. Barbara Liskin)

Zeena E. Audi

The Robert F. Loeb Award

(excellence in clinical medicine)

Margot E. Cohen

Monika Laszkowska

Darrick K. Li

F. Lowenfish Prize in Dermatology

(creative research in dermatology)

Nikhil Dhingra

Nayoung Lee

Alfred M. Markowitz Endowment for Scholars

(exemplifies Dr. Markowitz's dedication to patient care, teaching, and scholarship)

Brendan F. Scully

Doctor Cecil G. Marquez BALS0 Student Award

(outstanding contribution to the Black and Latino Student Organization and the minority community)

Juliet O. Idiga

Edith and Denton McKane Memorial Award

(outstanding research in ophthalmology)

Aakriti Garg



**James M. McKiernan, MD,
Prize for Compassionate Care**
(exemplified by the student most capable of combining humanism, medical knowledge, and compassion)
Elizabeth M. Sebesta

**Medical Society of the
State of New York
Community Service Award**
**Margot E. Cohen
Maryl G. Sackeim**

**Doctor Harold Lee Meirhof
Memorial Prize**
(excellence in pathology over the four years in medical school)
George Eng

**Doctors William Nastuk,
Beatrice Seegal, and
Konrad Hsu Award**
(demonstrated successful laboratory collaboration between student and faculty)
**Darrick K. Li
Julia Z. Xu**

Marie Nercessian Memorial Award
(exhibiting care, unusual concern, and dedication to helping sick people)
Kavita T. Vani

New York Orthopedic Hospital Award
(outstanding performance in research and clinical work)
Evan A. O'Donnell

**The Daniel Noyes Brown
Primary Care Scholar Award**
(recognizes the recipients' commitment to primary care and community service)
**Zeena E. Audi
Katherine S. Brown
Cecilia C. Fix**

**The Office of Student Affairs
Outstanding Service to P&S Award**
(outstanding contribution to improving the quality of life of his or her peers while at P&S)
Michael T. Caton

**Outstanding Student in
Family Medicine Award**
(demonstrates academic achievement in the area of family medicine and initiative in community health service and an understanding and commitment to the principles of family medicine)
Rosa M. Mendoza

Donald M. Palatucci Prize
(awarded to the student in the fall of his/her fourth year who is in the upper one-third of the class, who exemplifies through activities in art, music, and literature that living and learning go together, and whose interactions with patients reflect kindness, humor, compassion, candor, and zest for life)
**Michael P. Ayers
Monika Laszkowska**

Joseph Garrison Parker Award
(exemplifying through activities in art, music, literature, and the public interest the fact that living and learning go together)
Joshua R. Marr

**The Drs. Robert A. Savitt
and George H. McCormack Award**
(exemplifies Dr. George McCormack's medical skill, consideration, understanding, and compassion)
**Emily C. Ayers
Sasha Fahme**

The Rebecca A. Schwartz Memorial Prize
(achievement in pediatric cardiology)
Christopher Mardy

The Helen M. Sciarra Prize in Neurology
(outstanding achievement in neurology)
Bethany L. Johnson-Kerner

Aura E. Severinghaus Scholar
(superior academic achievement)
David A. Martin

**The Society for Academic
Emergency Medicine Award**
(excellence in the specialty of emergency medicine)
Fernando Barajas

The Miriam Berkman Spotnitz Award
(excellence in research of neoplastic diseases)
**Elizabeth E. Crouch
Anya L. Levinson**

The Leonard Tow Humanism in Medicine Award
(excellence in science and compassion in patient care)
Zeena E. Audi

William Perry Watson Prize in Pediatrics
(excellence in pediatrics)
Zeena E. Audi

**Doctor William Raynor Watson
Memorial Award**
(excellence in psychiatry throughout four years of medical school)
Michael P. Ayers

Doctor Allen O. Whipple Memorial Prize
(outstanding performance in surgery)
Michael P. Ayers

Sigmund L. Wilens Prize
(excellence in pathology)
Kimberly Point du Jour

GRADUATION 2014
See photos from this year's graduation online in the CUMC Newsroom, <http://bit.ly/PS2014grad>

New Chairs for Orthopedic Surgery, Urology

Two current faculty members have been appointed to chair P&S clinical departments.

William N. Levine, MD, is the new chair of the Department of Orthopedic Surgery and orthopedic surgeon-in-chief of NewYork-Presbyterian/Columbia University Medical Center. Dr. Levine succeeded Louis U. Bigliani, MD, who retired as chair after leading the department for 16 years.

Dr. Levine joined Columbia and the hospital staff in 1998. He served the orthopedics department as vice chair for education, director of its residency and fellowship programs, chief of the shoulder service, and co-director of the Center for Shoulder, Elbow & Sports Medicine.

A former tennis professional and starting goalie for Stanford University's varsity hockey team,

Dr. Levine is Columbia University's head team physician, responsible for providing care for 31 Columbia intercollegiate athletic teams.

James McKiernan, MD, the George F. Cahill Professor of Urology, has been named chair of the Department of Urology and urologist-in-chief at NewYork-Presbyterian/Columbia, succeeding Mitchell C. Benson, who stepped down as chair in 2013 after leading the department for nearly 10 years.

Dr. McKiernan, a P&S graduate, completed his training in urology and general surgery at NewYork-Presbyterian Hospital then completed a urologic surgical oncology fellowship at Memorial Sloan Kettering Cancer Center. He specializes in urologic oncology, particularly



William N. Levine, MD



James McKiernan, MD

surgical therapy in high-risk patients with bladder and kidney cancers.

His research, funded by NIH and the Prostate Cancer Foundation, focuses on novel drug and biomarker development, as well as comparative effectiveness, in urologic oncology.

Topping Off for New Education Building



The final beams were placed atop the Medical and Graduate Education Building in early October. The beams complete the facility's superstructure, a 14-story state-of-the-art facility at 104 Haven Ave.

Members of the P&S community took part in the milestone by leaving their marks on the structure's final beam. Hundreds of signatures, personal notes, and quotations were scrawled across the beam by students, faculty, and staff while the beam was displayed in the P&S Alumni Auditorium lobby.

Among those who signed were a medical student and a dental student who met and married at the medical center. Others wrote quotations, such as "Education is Power." One person scrawled the names of two P&S students who died in accidents, Jonathan Tang and Jimmy Watts, both members of the Class of 2016.

Signing the beam—and reading what others had written—had a sentimental significance for many who stopped by to see the beam. For Cecilia Davis-Hayes'17, signing the beam was a way to express a close connection to the building and to her class. "This building is part of the legacy of our class. We're all so proud of our school. Doing this expresses that we will always have a connection with P&S."

Towering approximately 223 feet above the ground, the new Medical and Graduate Education Building has quickly risen to take its place as the northern anchor of the medical center campus.

The new building site has been a hub of construction activity, as more than 100 contractors have been working since late summer 2013 to create a facility scheduled to open in 2016.

For monthly construction updates on the new Medical and Graduate Education Building, visit <http://educationbldg.cumc.columbia.edu/> and click "Project Updates."

David Goldstein to Direct Columbia's Institute for Genomic Medicine

A pioneering human geneticist has been recruited to direct a new Institute for Genomic Medicine at Columbia, a joint effort with New York-Presbyterian Hospital. David Goldstein, PhD, will join Columbia Jan. 1, 2015, as professor of genetics & development. Dr. Goldstein, who has been recruited from Duke University, will be responsible for building a program that comprehensively integrates genetics and genomics into research, patient care, and education.

Dr. Goldstein also will develop programs that prepare students for careers in the expanding field of genomic and precision medicine.

Dr. Goldstein will serve as an adviser to Columbia University President Lee C. Bollinger and Executive Vice President for Health and Biomedical Sciences Lee Goldman, MD, on the genetic and genomic components of Columbia's university-wide initiative in precision medicine, which was announced in February.

Dr. Goldstein's research has focused on identifying the relationship between human genetic variations and disease, including epilepsy, hepatitis C, and schizophrenia, and the response of disease to pharmacologic treatments. In addition to his leadership of the Institute for Genomic Medicine at CUMC, he

will have a faculty appointment at the New York Genome Center and an appointment in neurology at P&S.

At Duke, Dr. Goldstein has been director of the Center for Human Genome Variation and the Richard and Pat Johnson Distinguished University Professor, with appointments in molecular genetics & microbiology and biology. He joined Duke in 2005 after six years at University College London, which named him Honorary Professor in 2007. He received his PhD in biological sciences from Stanford University in 1994.

"The vision of Columbia University and NYP to create a truly integrated environment for research, clinical application, and student instruction is exactly the right vision," says Dr. Goldstein. "Human genomics is creating breathtaking new opportunities to better understand the biology of disease and to provide more effective and more accurately targeted therapies. Capitalizing on these opportunities and ensuring that clinical applications adhere to the highest-possible scientific standards require close collaborations among researchers, the clinical community, and patients and their families."

Dr. Goldstein was elected a fellow of the American Association for the Advancement of



David Goldstein, PhD

Science in 2013 and received one of the first seven nationally awarded Royal Society/Wolfson research merit awards in the United Kingdom for his work in human population genetics. Also in 2013, Dr. Goldstein chaired the Gordon Research Conference in Human Genetics. He serves on the Advisory Council at the National Institute of Neurological Disorders and Stroke.

P&S Class of 2018 by the Numbers



160 students

- 130 MD students
- 13 MD/PhD students
- 4 PhD-to-MD students
- 3 oral and maxillofacial surgery students pursuing a dual degree
- 10 Columbia-Bassett students

79 women

81 men

Age range: 21-40

38 underrepresented minorities (24%)

7,531 total applications through AMCAS

7,259 secondary applications

5,927 applications for traditional MD program (including 836 from underrepresented minorities)

688 applications for Columbia-Bassett track

530 applications for the MD/PhD program

74 applications for the PhD-to-MD program

1,064 interviews conducted (including 169 underrepresented minorities,

51 for Columbia-Bassett, 98 for MD/PhD, 22 for PhD-to-MD, and 18 for oral and maxillofacial surgery students pursuing a dual degree)

54% yield (percentage of accepted students who enroll)

61 colleges represented

29 states represented

3 foreign countries represented (Canada, Colombia, and China)

1 U.S. commonwealth represented (Puerto Rico)

Herbert Irving Comprehensive Cancer Center Renewed

The **Herbert Irving Comprehensive Cancer Center** of Columbia University Medical Center and NewYork-Presbyterian Hospital has received an \$18 million, five-year Cancer Center Support Grant from the National Cancer Institute. The grant renews the center's status as one of only two NCI-designated comprehensive cancer centers in New York City and one of only three in New York state.

The cancer center's recent growth has included the recruitment of a number of prominent physicians and researchers (40 overall during the last NCI funding period), including the center's director, Stephen G. Emerson, MD, PhD, who joined Columbia in 2012. In its assessment, the NCI praised Dr.

Emerson, the Clyde'56 and Helen Wu Professor of Immunology and professor of microbiology & immunology, for his leadership.

The cancer center has more than 250 members drawn from six Columbia schools, 12 core facilities, and eight research programs. The center's investigators have more than \$120 million in NIH and NCI research grants. The productivity of its programs is reflected in the 3,000 plus research publications authored by its members in the last NCI funding cycle. Some 33 percent of these papers are co-authored by investigators across different programs and laboratories, demonstrating the cancer center's strong culture of teamwork and interdisciplinary collaboration.

P&S Faculty Elected to the Institute of Medicine

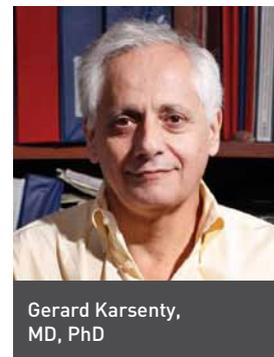
Four P&S faculty members were elected this fall to the Institute of Medicine of the National Academy of Sciences. Election to the IOM is one of the highest honors in the fields of medicine and health.

The new elected members from P&S are **Gerard Karsenty**, MD, PhD, the Paul A. Marks Professor of Genetics & Development, professor of medicine, and chair of the Department of Genetics & Development; **Michael Shadlen**, MD, PhD, professor of neuroscience; **Gordana Vunjak-Novakovic**, PhD, the Mikati Foundation Professor of Biomedical Engineering and professor of medical sciences (in medicine); and **James J. Cimino**, MD, adjunct professor of biomedical informatics.

P&S now has 46 faculty members in the IOM.

Dr. Karsenty, who was trained as an endocrinologist, has used clinical data, evolutionary history, and mouse genetics to study all aspects of skeletal biology. After identifying the master gene of bone formation, Dr. Karsenty turned his attention to the physiology of the skeleton. His laboratory postulated and demonstrated the existence of a coordinated control of bone mass accrual, energy metabolism, and reproduction. His laboratory was the first to demonstrate the existence of a central control of bone mass, to uncover its road map, and to establish that bone is an endocrine organ. He showed that the bone-derived hormone osteocalcin is necessary, in mice and in humans, for glucose homeostasis, male fertility, and cognitive functions.

Dr. Shadlen, who is also an investigator of the Howard Hughes Medical Institute and a member of Columbia's Mortimer B. Zuckerman Mind Brain Behavior Institute, investigates the neural basis of decision-making and cognition by studying neurons that process information to give rise to interpretations, decisions, and plans for behavior. His experiments combine electrophysiological, behavioral, and computational methods to advance knowledge of higher brain function. His work could eventually help patients with Alzheimer's disease, autism, or other brain disorders by using knowledge of how the brain is supposed to work as a basis for efforts to correct its malfunctions.



Gerard Karsenty,
MD, PhD



Michael Shadlen,
MD, PhD



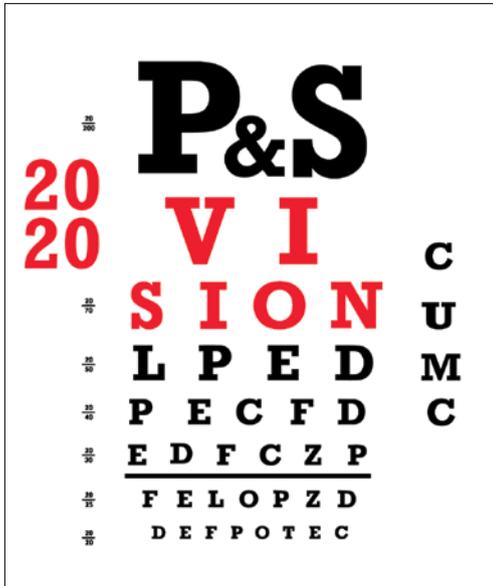
Gordana
Vunjak-Novakovic, PhD

Dr. Vunjak-Novakovic was a Fulbright Fellow at MIT when she became interested in the use of tissue engineering and emerging technologies to improve and save human lives. At Columbia, she directs the Laboratory for Stem Cells and Tissue Engineering, which works on engineering human tissues for application in regenerative medicine, stem cell research, and disease modeling. Her work is extensively published and highly cited; she has more than 70 licensed, issued, and pending patents, has founded two biotech companies, and is a frequent adviser to government and industry. She is the first woman from Columbia University to be elected to the National Academy of Engineering.

Dr. Cimino was a professor of biomedical informatics and medicine at P&S before joining the NIH, where he is chief of the Laboratory for Informatics Development at the NIH Clinical Center and the National Library of Medicine. His primary research interests include medical concept representation and using it to support clinical decision-making.

A Mailman School of Public Health faculty member, Quarraisha Abdool Karim, PhD, associate professor of epidemiology, was elected to the IOM this year as a foreign associate. In addition to her Mailman appointment, she is associate scientific director for the Center for the AIDS Programme of Research in South Africa.

Goals in Sight: An Update on the P&S Strategic Plan



When P&S rolled out Vision 2020, its strategic plan, in 2012, the goals were aspirational.

Yet, in an update that Dean Lee Goldman, MD, presented earlier this year to the task force that conceived the plan, the progress was nothing short of impressive.

“This strategic plan is not just bound beautiful pages that have been put away somewhere after having been presented,” says Kenneth Forde, MD, Columbia University trustee, the Jose M. Ferrer Professor Emeritus of Clinical Surgery, and 1959 P&S graduate.

“You can actually see it being effectuated. There is a tremendous amount of enthusiasm for the vision,” says Dr. Forde.

Vision 2020 outlines goals for improvements in four major areas: clinical care, education, research, and campus life.

The plan has fostered collaboration between P&S and NewYork-Presbyterian for growth in both the clinical and research arenas. Progress toward a major goal of the plan to expand clinical reach through increased ambulatory capacity and geographic range is well under way. At the time of the spring 2014 update, 144 new clinical faculty had been recruited. ColumbiaDoctors, the faculty practice plan for P&S, opened a new multispecialty practice at 51 W. 51st St., and NYP and ColumbiaDoctors have jointly expanded into Westchester and Rockland counties.

The educational accomplishments include construction of the new Medical and Graduate Education Building, scheduled to open in fall 2016. The medical school’s new curriculum was fully implemented with the 2013 gradua-

SLIM Curriculum Now Offered to All P&S Students

The SLIM curriculum first introduced to students in the Columbia-Bassett program has been expanded to all of P&S.

SLIM, which stands for Systems, Leadership, Integration, and Management, teaches medical students fundamental business concepts—such as how to reengineer processes to render them safer and more effective—as part of an effort to improve the quality and efficiency of the health care system. SLIM incorporates business and public health coursework to equip students with scientific tools of performance improvement and to help students understand the U.S. health care system through study of care delivery, cost, and payment issues.

“With SLIM, P&S is responding to a profound societal need,” says Henry Weil, MD, assistant dean for medical education at the Bassett campus. “The Institute of Medicine identifies at least \$750 billion in waste in health care each year, which profoundly affects the U.S. economy; the Dartmouth Institute estimates as many as 187,000 avoidable deaths are due to medical error in inpatients alone.”

Supported by a generous grant from IBM, SLIM forges an understanding about how health care is delivered at both the macro and micro levels, how policies are created, and how physicians, working collaboratively across disciplines, can lead the transformation of the U.S. health care industry.

Dr. Weil was the driving force in developing the SLIM prototype in the Columbia-Bassett program, and he negotiated the grant with IBM to adapt the program of best health care business practices into the P&S curriculum for all P&S students and to study the curriculum’s efficacy. Many of the first Columbia-Bassett graduates credited SLIM with helping them understand medical practice beyond the clinical and scientific knowledge that medical schools teach. “Through carrying out my own projects, I saw just how difficult and important it is to continue to refine how we deliver health care to patients,” said Monika Laszkowska’14. “I learned the importance of asking the right questions, and I was able to build a tool set that enables me to use data-

driven, collaborative approaches to find the right answers.”

P&S is the first medical school in the nation to offer a comprehensive, four-year curriculum of business lessons for medical students.

The curriculum spans all four years of medical school, slowly building on concepts instead of compressing them into one course. In the first two years, as program director Robert Sideli, MD, associate professor of biomedical informatics and CUMC chief information officer, explains, “Students learn the what, why, and how of business. In the third year, they’re put in the real world to be horrified by all the broken things, and in the fourth year they return with these stories from the front. Then they try to put it all together and ask, ‘How do you fix these problems?’

“We have so much to learn from the business world,” says Dr. Sideli. He cited Toyota’s success in applying lessons learned not only from Detroit, but also from American supermarkets, an approach that has improved productivity and improved prices. After U.S. automakers

tion of the first class to follow the curriculum's full four years. The curriculum continues to evolve, as new programs are introduced: the new three-year PhD-to-MD program, a dual MD/MS degree that allows students to conduct a research-intensive year, and expansion of the scholarly projects program to provide students with additional protected time for research. By the end of the second year of scholarly projects, which are required of all MD students, many student projects had been presented at national meetings.

The medical center campus continues to grow. Significant building improvements have been made, including upgrades to the P&S Alumni Auditorium, Bard Hall gym, Hammer 401, the first floor of the P&S building, and dozens of smaller projects that

improve the overall upkeep and aesthetics of the campus.

Perhaps one of the greatest achievements of the strategic plan to date was the adoption of precision medicine as the next university-wide priority by Columbia University President Lee Bollinger. Bringing together the knowledge of the faculty at P&S and CUMC with others at Columbia University, NYP, and the New York Genome Center, the precision medicine initiative will position Columbia and its partners to move the concept of precision medicine from the abstract into tangible benefits for patients.

More than \$380 million in philanthropic donations has been committed to implementation of strategic plan goals. In addition, NYP has contributed substantial financial support across all mission areas.

Co-chair of the strategic planning process, Mary D'Alton, MD, the Willard C. Rappleye Professor of Obstetrics & Gynecology and department chair, feels the plan is on track. "Look how far we've come. It's really mood elevating to hear Lee Goldman give an account of our progress together. It's truly remarkable what has been accomplished in the last few years. We saw progress on all fronts: clinical, educational, research, and the campus environment. We've seen expansion, recruitment, retention—a better atmosphere generally."

With the majority of the goals of Vision 2020 realized or in progress, the strategic plan's finish line appears within reach. "Your vision has led us to this point," Dr. Goldman told the task force. "This focus will help us achieve all that we've set out to do."

lost significant market share, they adopted the Toyota model for themselves. "Every industry does this," says Dr. Sideli. "Now it's coming to medical school."

A fundamental part of the curriculum's implementation is the SLIM student committee. Zoe Sansted, a medical student who co-founded the committee, says the group has three goals: improve the curriculum by offering helpful feedback, put students in touch with hospitals where they will have an opportunity to participate in quality improvement projects and business management, and organize events to get other students interested.

"Physicians are agents for change," she says. "Specifically, quality improvement and safety initiatives should be led by doctors."

Before the introduction of SLIM, the only access P&S students had to instruction on the business aspect of medicine was an elective taught each fall by Dr. Sideli, called "Process Redesign in a Complex Organization." But consensus seems to be growing that all medical students should be taught how to improve quality and reduce costs

as well as how to see their work in the larger context of the health care industry.

"The goal is to teach students to take ownership of the health care system," says Dr. Sideli. "Otherwise, they're passive, which is something that has been going on for years. Everyone blames everyone else. Ultimately, it's the physicians who are responsible."

SLIM, originally slated to debut with only the first-year class, will be offered to all students even if that means students in their final years receive only a cursory introduction to the material.

As the first medical school to offer the program, P&S has a responsibility to thoroughly evaluate SLIM's progress and publish the findings. The goal is to see the idea spread nationally. "One of the best ways to address the health care industry's manifold inefficiencies is to teach physicians directly what they can do to effect change," says Dr. Sideli.

"How can we have safer procedures? How can we have higher quality?" says Ms. Sansted. "There is an awareness among my classmates that we are the key to answering these questions."

LOG ON

Visit the CUMC Newsroom online at newsroom.cumc.columbia.edu for more news, including these articles:

- Columbia to Test Guidelines for Preparing Medical Students for Residency
- P&S Students Discuss Summer Research at New York Academy of Medicine Forum
- Students Take a Stand on Where They Will Sit
- With White Coat Ceremony, P&S Welcomes Class of 2018 (slide show)
- Health Professionals Study, Cook Their Way to Being Better Nutrition Counselors
- For Authenticity, TV Show Taps Columbia's Expertise in Medical Archives

Ebola: Columbia Experts Step Up to Explain, Assure Wary Public

With Ebola news appearing in the headlines every day this fall, Columbia faculty and alumni have been at the forefront in describing the scientific and clinical aspects of the spread of the disease and the accompanying concerns.

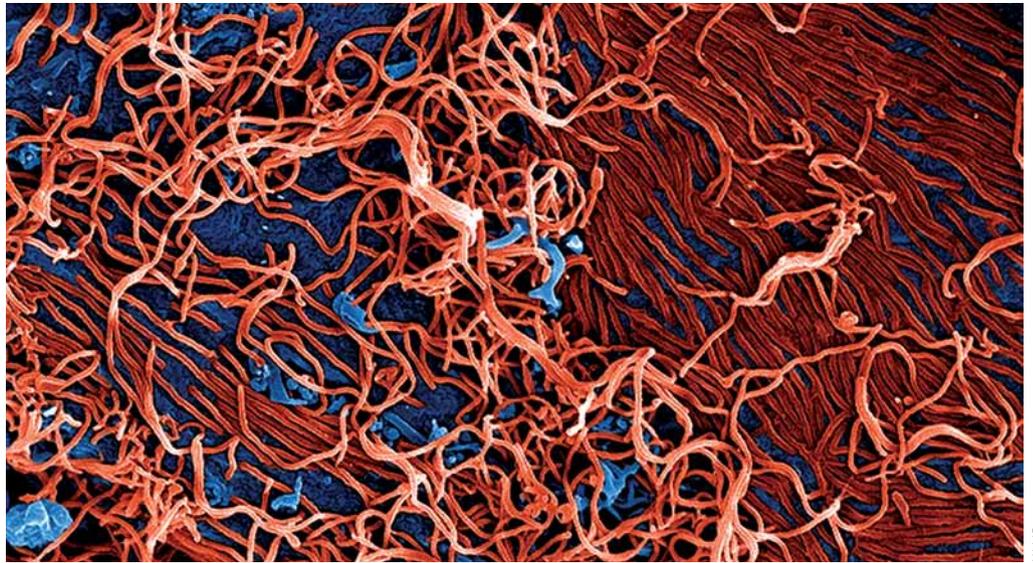
As *Columbia Medicine* went to press, Ebola remained a fast-moving story. The CUMC Newsroom has compiled news media and online Ebola mentions that feature medical center faculty. The compilation, which uses Storify to collect Columbia-related Ebola articles, is updated regularly and can be viewed at <http://bit.ly/CUMCEbola>.

In October, Ebola came closer to home when assistant professor of medicine Craig Spencer, MD, was diagnosed with the disease within days of returning to New York after traveling to Africa with Doctors Without Borders to treat Ebola patients. Dr. Spencer is now virus-free and has been released from the hospital. “We applaud his brave service to humanity,” says EVP and Dean Lee Goldman, MD.

New York City health commissioner **Mary Bassett**, a 1979 P&S graduate and an associate professor at the Mailman School of Public Health, has led the city’s response to concerns about preparedness. Starting over the summer, the *New York Times* reported, the city health department has consulted with doctors in several cases of suspected infection. The city has been able to conduct its own tests for Ebola without sending samples to the Centers for Disease Control and Prevention. Turnaround time on the tests is four to six hours.

Dr. Bassett fills the city health commissioner job once held by **Thomas Frieden**, a 1986 P&S graduate who is now director of the Centers for Disease Control and Prevention. Dr. Frieden, who also earned an MPH degree from Mailman, has been a fixture on news shows and in news articles since the first case of Ebola was diagnosed in the United States.

Columbians frequently appearing in the news media to discuss Ebola include two Mailman School of Public Health faculty, one of whom also has an appointment in P&S. **Stephen S. Morse**, PhD, professor of epidemiology, and **W. Ian Lipkin**, MD, the John Snow Professor of Epidemiology and director of the Center for



Infection and Immunity at Mailman, have been interviewed by media outlets that range from the *New York Times* and *Wall Street Journal* to *Salon* and *Popular Mechanics*. Dr. Lipkin also is professor of neurology and of pathology & cell biology in P&S.

Joan Bregstein, MD, associate professor of pediatrics at CUMC and director of community outreach at Morgan Stanley Children’s Hospital, authored a blog post titled “What New Yorkers Need to Know about Ebola” for her blog, NYC Kids 911, a parent’s guide to pediatric emergencies. The blog is hosted by Morgan Stanley Children’s Hospital, the Department of Pediatrics, and the Division of Pediatric Emergency Medicine.

Wafaa El-Sadr, MD, a Mailman and P&S faculty member with considerable experience in preventing and treating AIDS in West Africa as director of ICAP at Mailman, has discussed how HIV and AIDS can teach responders about Ebola. “Survivors go on to become our most valuable allies in stemming the tide of this outbreak,” she said. Dr. El-Sadr is University Professor. See a related video at <http://bit.ly/Ebola-diagnosis>.

Virologist **Vincent Racaniello**, PhD, the Higgins Professor of Microbiology & Immunology, has discussed Ebola on his popular podcast, *This Week in Virology* (TWiV). In a *Washington Post* video animation, Dr. Racaniello showed how viruses, including Ebola, mutate.

Siddhartha Mukherjee, MD, DPhil, assistant professor of medicine and Pulitzer Prize-winning author of “Emperor of All Maladies: A Biography of Cancer,” wrote in a *New York Times* op-ed piece on Oct. 12 about quarantine’s pitfalls despite reforms over several centuries.

Jeffrey L. Shaman, associate professor of environmental health sciences, uses computer models to forecast the future of the Ebola epidemic. He told NPR about the encouraging signs of a decline in new cases in Liberia.

A P&S graduate, **William T. Close**’51, is credited with playing an important role in controlling the first epidemic of the Ebola virus in central Africa in 1976. Dr. Close, who died in 2009, was personal physician to Zaire’s president, Mobutu Sese Seko, and chief doctor of the country’s army at the time of the epidemic, reported the *New York Times* in Dr. Close’s obituary. The epidemic caused widespread panic in the country, but three other doctors involved in helping to control it told the *Times* that Dr. Close’s connections, organizational ability, and medical expertise were essential in halting it. Dr. Close wrote four books, including two about Ebola, “Ebola” (1995) and “Ebola: Through the Eyes of the People” (2001).

The Mailman School of Public Health has compiled a set of facts about Ebola: <http://www.mailman.columbia.edu/news/ebola-facts>.

Clinical *advances*



CHARLES MANLEY

Michael Vitale, MD,
with a 6-year-old
scoliosis patient

Magnet Replaces the Scalpel for Treating Kids with Severe Spinal Deformities

Pediatric orthopedic surgeons at Columbia are using a new device with magnetic technology that avoids the need for multiple spine-lengthening surgeries to correct early-onset scoliosis, a severe curvature of the spine in young children.

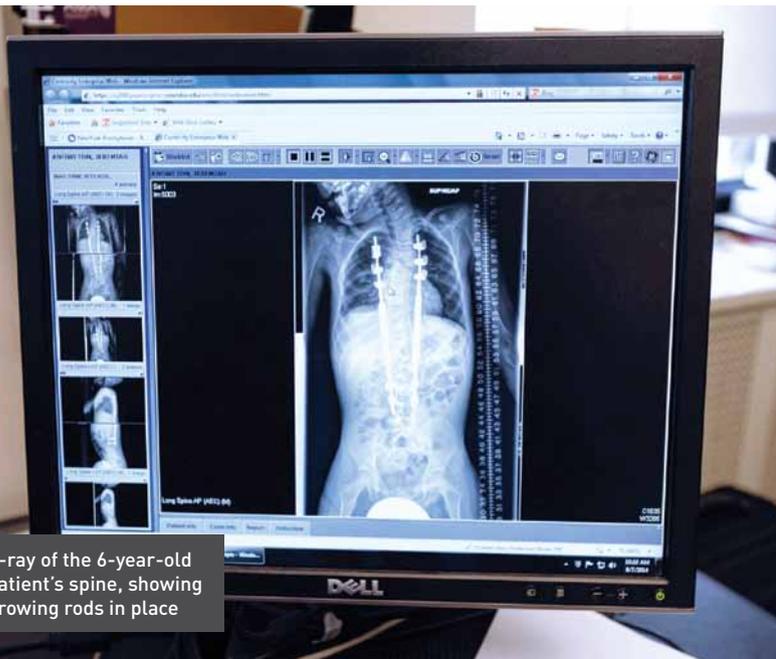
In April, Michael Vitale, MD, the Ana Lucia Professor of Pediatric Orthopedic Surgery at CUMC and 1995 graduate of P&S, performed the first procedure in the New York area, using the device to treat a 5-year-old boy.

When braces and casts cannot control scoliosis in young children, surgeons turn to growing

rods, which help correct the curve while allowing the spine to grow. When spinal maturity is near, the rods are removed and a spinal fusion can be performed.

But during years of treatment with growing rods, patients must undergo surgery every six months to lengthen the rods to keep up with the patients' growth. A patient may undergo eight to 10 procedures, which are costly and result in lost time for parents at work and children at school.

The new device—MAGEC (MAGnetic Expansion Control) rods—contains a mechanism inside



X-ray of the 6-year-old patient's spine, showing growing rods in place

CHARLES MANLEY

the growing rods that allows surgeons to lengthen the rods with a hand-held external magnet, without surgery.

Dr. Vitale expects this advance to improve outcomes in children with early-onset scoliosis in whom spinal curves exceed 40 degrees. Early-onset scoliosis accounts for about 10 percent of all children diagnosed with scoliosis. Left untreated, children with this condition are at risk for developing cardiac and/or respiratory problems related to stunted growth and development.

“This new approach is designed to remove the need for repeated trips to the operating room as well as eliminate complications from infections and psychosocial effects of multiple surgeries,” says Dr. Vitale.

Once the MAGEC rods are implanted, the rod-lengthening procedure, which takes approximately 15 minutes, is performed every three to six months.

The MAGEC system has been used successfully to treat more than 750 children in 24 countries. For the past five years, Dr. Vitale has been part of efforts to advocate for FDA approval of the device. In February 2014 the MAGEC system was cleared by the FDA for use in young patients with severe spinal deformities associated with, or at risk of, thoracic insufficiency syndrome.

Columbia Offers Latest Stroke Treatments Through National Network

Columbia patients will be able to participate in clinical trials evaluating the most promising therapies for stroke through trials offered through the New York Stroke Trials Network of Columbia and Cornell, one of 25 centers across the country selected to form the National Institutes of Health Stroke Trials Network (StrokeNet).

“By participating in StrokeNet, patients at CUMC will have access to the most advanced and cutting edge treatments,” says co-principal investigator Randolph Marshall, MD, the Elisabeth K. Harris Professor of Neurology at CUMC and chief of the stroke division. “Trials will be completed faster, new effective treatments will be identified sooner, and advancements will improve stroke treatment for all patients.”

The NIH established StrokeNet earlier this year to rapidly and efficiently conduct trials of the most promising stroke therapies. Before StrokeNet was created, new teams of personnel from multiple medical centers were assembled each time a large clinical trial was initiated. The teams recruited patients, paid bills, and analyzed data then were disbanded when the trial was completed. The inefficiencies of the pro-

cess led to cost overruns and delays in patient recruitment and trial completion.

StrokeNet eliminates the inefficiencies and creates a permanent infrastructure to conduct phase 2 and 3 clinical trials through the 25 regional centers. The coordinated and long-range approach of StrokeNet also will ensure that the trials with the greatest potential health impact are prioritized and moved efficiently toward clinical practice. All NIH-funded phase 2 and 3 stroke trials will be conducted through the national network.

Dr. Marshall expects the first StrokeNet trials, covering stroke prevention, acute stroke treatment, and stroke recovery and rehabilitation, to begin enrolling patients at CUMC this fall.

The New York Stroke Trials Network of Columbia and Cornell is led at Columbia by Dr. Marshall and E. Sander Connolly, MD, the Bennett M. Stein Professor of Neurological Surgery.

Columbia and Cornell have extensive leadership in stroke clinical trials and have been involved in 44 human stroke studies in the past five years. Another research project, the Northern Manhattan Study, is an ongoing study of stroke and stroke risk factors in the North-

ern Manhattan community. The study, which started enrolling individuals in 1993, is led by Mitchell Elkind, MD, professor of neurology and epidemiology.

The network's patient demographics (Columbia patients are 40 percent Hispanic and 25 percent African-American and Cornell's patients are 15 percent Asian) will help StrokeNet trials identify the best treatments for a diverse population.

The network will enroll patients at the Columbia and Cornell campuses of New York-Presbyterian Hospital, three rehabilitation centers (Helen Hayes Hospital in Rockland County, Burke Rehabilitation Center in Westchester County, and Kessler Institute for Rehabilitation in New Jersey), and three acute stroke hospitals (Valley Hospital in New Jersey, St. Joseph Hospital in Long Island, and New York Methodist Hospital in Brooklyn). In addition, the network will expand soon to include SUNY Downstate in Brooklyn, SUNY Upstate in Syracuse, and the University of Rochester, permitting even greater enrollment and more rapid completion of the trials.

A list of available trials can be viewed online at the StrokeNet website: www.nihstrokenet.org.

Improving on Pancreatectomy By Sharon Tregaskis

The pancreas, tucked discretely between the stomach and the spine, does not get much attention—until something goes wrong. For people with pancreatitis, a noncancerous inflammation of the tiny ducts within the 6-inch organ, the discomfort can be devastating.

“Patients describe unrelenting pain in the abdomen and back that’s exacerbated by eating, so they’re often malnourished as well,” says Beth Schrope, MD, PhD, assistant professor of surgery. “Many can’t work or enjoy a normal life because of the significant narcotics they take to control the pain.”

In certain cases, it may be appropriate for a patient to undergo a total pancreatectomy, removal of the entire pancreas, but the surgery comes with a high cost. “We only recommend it if the condi-

tion has made the patient’s life intolerable,” says Dr. Schrope, who dedicates half of her clinical time to patients with pancreatitis and pancreatic cancer. “More than 90 percent get major, if not entire, relief of their symptoms, but some say that they are trading one disease for another—painful, debilitating pancreatitis for insulin-dependent diabetes. The latter is manageable, and livable, especially with new advances, but obviously not ideal.”

Removal of the pancreas necessarily eliminates the islet cells nestled deep within the organ that manufacture insulin and glucagon, the hormones that regulate blood sugar. The form of disease that develops after pancreatectomy—known as brittle diabetes—can be particularly challenging to control. “Because of the loss of glucagon, the counterregulatory hormone, people with brittle

diabetes can lack an ability to sense the low blood sugar caused by the absence of insulin,” says Dr. Schrope. “It can lead to coma, seizures, and death. Many say the quality of life improvement associated with a pancreatectomy far outweighs the long-term challenges of managing diabetes, but it is a last-ditch effort.”

Dr. Schrope and her team are using autologous islet cell transplants to improve the outcomes of a pancreatectomy. During an autologous transplant, the pancreas is removed as it is in a pancreatectomy. While the patient is still anesthetized, the Cell Therapy Laboratory staff of NewYork-Presbyterian Hospital and the Department of Pathology & Cell Biology isolate the islet cells from the patient’s own pancreas and return them to the operating room. There, Dr. Schrope and her team infuse the cells into the patient’s liver. Within weeks to months of the procedure, the patient’s islet cells—now in the liver—should resume insulin production. More than one-third of patients can forgo insulin injections entirely, while another third are able to significantly reduce their dependence on injections.

The first transplant at NewYork-Presbyterian/Columbia was done in April 2014. Of two patients who have undergone the procedure, both are making insulin and one has been able to forgo insulin injections. “The first patient waited for us to do the procedure because his insurance only allows treatment in New York state,” says Dr. Schrope. Becoming insulin-dependent—a certainty with conventional pancreatectomy—would have put him on permanent disability. He waited to schedule his pancreatectomy until he could have the autologous islet cell transplant.”

Dr. Schrope and her team plan to continue to refine autologous islet cell transplants and investigate the procedure’s promise for patients at high risk for developing pancreatic cancer. “The best way to treat cancer is to prevent it. Among patients in whom we identify high risk of cancer, perhaps total pancreatectomy followed by autologous islet cell transplant will prove appropriate as a prophylactic treatment.”

Dr. Schrope is a member of Columbia’s Pancreas Center, which is directed by John A. Chabot, MD, the David V. Habif Professor of Surgery at CUMC.



Beth Schrope, MD, PhD





Veterans Among Us

From clinical rotations at the Bronx VA Medical Center to research into the neuroscience of PTSD, P&S strives to improve the health of men and women who served in the military

By Aliyah Baruchin

On a cold Sunday in February 1942, 50 doctors and 105 nurses from New York's Presbyterian Hospital reported to Fort Meade, Md., to begin basic military training. At the request two years earlier of the Army Surgeon General, the group had assembled to form the 2d General Hospital, a medical unit that could be deployed overseas. The 2d General sailed to England in the summer of 1942 to convert a specialty hospital outside Oxford into a general hospital for both British and U.S. soldiers. Two years later, the unit advanced to the front lines in France, establishing a 1,000-bed tent hospital and then advancing as the front moved east. By the end of the war, Presbyterian Hospital practitioners had cared for 32,000 patients in the field.

Seventy years later, the P&S connection to the military has taken a different form: the presence of veterans—from conflicts ranging from World War II to Iraq and Afghanistan—not only as patients, but also as medical students and faculty members. As a university, Columbia welcomes and supports the 560 self-identified veterans among the student body in undergraduate, graduate, and professional schools. Columbia, including P&S, participates in Joining Forces, a federal initiative to provide employment, education, and health services for returning veterans. In addition, Columbia's Office of Military and Veteran Affairs coordinates programming and resources to support student veterans and their families and to help bridge the gap between students who have served in the military and the majority of their peers who have not.

Photographs by Jörg Meyer

Veterans Among Us

“When I talk to students about my military experience, it’s always about respect. Don’t look down on folks who have taken the military option. Pay attention to how people have suffered on your behalf, in the name of defending the country. It’s about respect and understanding where they’re coming from and what got them there.”

— Nicholas Morrissey, MD

One student who has served is Elvis Camacho’17, who traces the path to his enrollment at P&S directly back to the U.S. Marine Corps. In 2004, on the trailing edge of a turbulent childhood and adolescence in Puerto Rico and Miami, Mr. Camacho, then 17 years old, decided to enlist. “When I was in high school I did not have any direction, work ethic, discipline, and I definitely did not have any confidence,” he says. “The Marine Corps, especially when I was in the infantry, made me grow up quick and helped me to strengthen many of my weaknesses, weaknesses that would have made me fail out of school a long time ago. There is no way that I would have ever been ready to study eight to 10 hours a day without having gone through the military.”

Mr. Camacho’s military service did not just instill that work ethic; it was what ultimately pointed him toward medical school, a 180-degree pivot for someone who had never even considered going to college. From the ages of 17 to 22, Mr. Camacho was stationed in nine different countries and served in combat just outside Fallujah in Iraq. Yet it was a noncombat experience—at a posting in Okinawa, Japan—that became the turning point, when Mr. Camacho volunteered at a hospital. “The exposure, the environment, talking to physicians who were formally enlisted, it all helped to orient me toward medicine,” he says. “I also had

the privilege of being deployed with great corpsmen, which is our version of a medic.”

Some of those medics, once they returned to the United States, received medals for their exceptional courage, the way in which they combined medical service and service to country; that dual role had a powerful influence on Mr. Camacho. “Our corpsmen did everything that the other infantrymen were doing, and they also had the added responsibility of taking care of us,” he says. “Through many different interactions, I had this intuitive feeling that was drawing me to become a physician; it became stronger and stronger until I decided not to reenlist and to pursue my goals instead.”

At Columbia, Mr. Camacho feels the impact of his military training on his studies every day. “As a young Marine, it was hard to understand why we were always getting yelled at and told to pay attention to detail. But then I quickly realized that small details can make an incredible difference,” he says. “I try to take my education as seriously as possible, because I know that one day I may be in a position where a person’s life will be in my hands, and if I didn’t utilize my time here properly it could have serious consequences.”

Mr. Camacho does not believe that his status as a veteran sets him apart from his fellow medical students. “One of the main reasons I fell in love with Colum-



Elvis Camacho’17

Read more about Elvis Camacho at http://bit.ly/Elvis_Camacho

bia was because of the diverse student body. So many people come from so many different backgrounds that I am just another individual with a typical nontraditional story,” he says. “The fact that I go to school with students who were professional ballet dancers or currently play piano on Broadway or at Carnegie Hall or have spent a great deal of time in South Africa helps me to see things from different perspectives.”

The United States has more than 20 million veterans today. Ten percent are female; 44 percent are over the age of 65. Of New York state’s 886,000 veterans, the largest groups are from the Vietnam War, peacetime enlistment, and the more recent conflicts in Kuwait, Iraq, and Afghanistan. Veterans have always come home with significant physical injuries, trauma, or both: Nearly 9 million veterans are currently enrolled in the Veterans Affairs (VA) health care system nationwide, which counted more than 6 million unique patient visits in 2013. Almost 4 million vets are disabled, and nearly 700,000 have received compensation following a diagnosis of post-traumatic stress disorder (PTSD).

While P&S has both medical students and faculty members who have served in the military, veterans present in the greatest numbers as patients. Their most common injuries include traumatic brain injury (TBI), PTSD, limb loss, spinal cord injury, and burns. Particularly due to the prevalence of blast injuries in the most recent conflicts, some veterans also have polytrauma—simultaneous injuries to multiple body parts or organ systems—and require even more complex levels of care.

“It’s really hard to quantify polytrauma, but I’ve seen it be a very devastating thing to people’s personal lives,” says Nicholas Morrissey, MD, associate professor of surgery and a lieutenant colonel in the Army Reserve Medical Corps. “The system is designed to address individual diagnoses. But some of the signs of TBI or PTSD are very subtle, so if you take someone who’s got a TBI from a blast along with PTSD, sometimes it’s hard to distinguish between the two. And if you combine PTSD with TBI with extremity trauma, then you have a patient in their 20s who has a lifelong polytrauma to deal with, and there’s a big psychological component on them as well as on their families. You’re dealing with a patient, and maybe a young wife, who are trying to figure out what the hell happened, what’s going on here; it’s sometimes hard to come up with a real diagnosis.”

Dr. Morrissey was commissioned in 1992, while he was a surgical resident, and served three stateside deployments as a surgeon, one caring for Iraq vets at Walter Reed National Military Medical Center in Washington, D.C. He remembers pulling into the parking lot there one



Nicholas Morrissey, MD

morning and being struck all over again by the hospital’s plethora of handicapped parking spaces; improvements in military body armor beginning with the Vietnam War have meant that more soldiers survive but often with either amputations or disabling injuries to their arms and legs. “There’s limb loss, and then we’re able to save a lot of limbs that will have functional issues down the road because of trauma,” he says. “So there’s a lot of need for rehabilitation and long-term issues related to amputation and also just to mangled limbs.”

Another faculty member’s military service has directly shaped patient care protocols at Columbia. Matthew Bacchetta, MD, director of adult ECMO and co-director of the Center for Acute Respiratory Failure at NewYork-Presbyterian/Columbia, used his experience in frontline trauma care to standardize protocols using mobile ECMO, or extracorporeal membrane oxygen-

Veterans Among Us

ation, a machine that acts like an artificial lung. ECMO can allow lungs to recover from acute distress and even serve as a bridge to lung transplant for patients whose diseased lungs have failed. The center is one of a few in the United States to use a mobile unit, which enables the team to stabilize patients with ECMO before transferring them. Dr. Bacchetta, a lieutenant colonel in the U.S. Army Reserves who served in Iraq, Afghanistan, and Africa, used ECMO during his last tour in Afghanistan and has helped build the nation's largest contemporary transport service at NYP/Columbia. The ECMO transport team that he leads has completed 130 transports, including one from more than 7,000 miles away.

Across injuries, diagnoses, and periods of service, issues of trauma filter into every aspect of a veteran's health care. Yuval Neria, PhD, professor of medical

psychology at CUMC (in psychiatry and epidemiology), directs the Trauma and PTSD Program at the New York State Psychiatric Institute. His research uses tools, such as functional magnetic resonance imaging (fMRI), to try to identify the neural mechanisms of resilience, PTSD, and capacity for recovery in patients who have experienced trauma. The research program, established in the wake of 9/11, includes veterans but also studies civilian trauma. A recent gift from the Hopeful Dawn Foundation, which partners with academic medical centers to fund research on PTSD, will create a new state-of-the-art PTSD center at CUMC, directed by Dr. Neria.

One of the key impairments that Dr. Neria sees in trauma patients is difficulty in processing fearful memories appropriately. "Soldiers who have PTSD are often unable to distinguish well between fearful and nonfearful stimuli," he says. "They come to New York from Iraq or Afghanistan and can react very extremely to safe cues that resemble, to them, fearful cues that they had in the combat field, let's say an explosion that, in Iraq, can make them very sensitive to any type of explosion, or what seems like an explosion, in Manhattan." Using fMRI, "We are now able to identify the deficiencies in the way the brain of patients with PTSD works before treatment, then we provide treatment [often prolonged exposure psychotherapy] that addresses those impairments. Then we look with fMRI at the brain once again, after treatment, to see whether we were able to normalize those impairments."

PTSD was introduced as a diagnosis in 1980, amid growing concern about psychiatric issues among Vietnam veterans. "The diagnosis of PTSD is closely interwoven with Vietnam veterans in particular," says Bruce Dohrenwend, PhD, professor of social sciences (in psychiatry and epidemiology) and chief of research in the Division of Social Psychiatry at the New York State Psychiatric Institute. Dr. Dohrenwend, who served in the Navy during World War II, has revisited findings from the 1988 National Vietnam Veterans Readjustment Study, focusing on issues related to risk for and rates of PTSD in Vietnam vets. One of his most recent studies, which suggested that lessons about PTSD in Iraq and Afghanistan veterans could accurately be drawn from the experience of Vietnam, found that nearly 10 percent of Vietnam vets still experienced PTSD more than a decade after the war. Another looked at the elevated prevalence of chronic PTSD in black and Hispanic Vietnam vets compared with white vets years after the end of the conflict.

One of the most pressing issues in veterans' health is the risk of suicide. Suicide rates among veterans have risen precipitously since 2008; the VA now estimates



Yuval Neria, PhD

that 22 veterans are lost to suicide every day. Young male veterans, in particular, are more than three times more likely to commit suicide than civilian men.

Barbara Stanley, PhD, professor of medical psychology at CUMC (in psychiatry) and director of the Suicide Prevention Training, Implementation, and Evaluation Program at the New York State Psychiatric Institute, works on clinical interventions for patients at risk for suicide, some of them adapted specifically for veterans. With a colleague at the University of Pennsylvania, Dr. Stanley developed the Safety Planning Intervention, a brief, low-cost intervention shown to reduce suicide risk by helping people devise a written strategy—a specific, five-point checklist—for managing suicidal feelings and surviving a crisis. She designed a Safety Planning version for use by VA clinicians with veterans at risk of suicide, and she is part of a team developing SAFE VET, a protocol that applies the Safety Planning Intervention combined with careful follow-up to the care of suicidal veterans in emergency departments (both within and outside the VA) and after discharge. SAFE VET has been found to reduce the rate of suicide attempts by 40 percent among veterans who were discharged from emergency departments following a visit for a suicidal crisis.

J. John Mann, MD, the Paul Janssen Professor of Translational Neuroscience (in psychiatry and radiology), uses functional brain imaging, neurochemistry, and molecular genetics to explore the causes of depression and suicidal behavior. His research also looks at health behaviors; Dr. Mann co-authored a study, published this summer in the *Journal of Clinical Psychiatry*, on rates of health care visits among soldiers in the Israeli Defense Forces in the month before they committed suicide. The study found that soldiers were more likely to have sought care from a primary care physician than to have sought specialized mental health care, emphasizing the importance of enhanced mental health screening within primary care as a potential suicide-prevention strategy.

While PTSD, TBI, and spinal cord injury are often the most obvious health care challenges for veterans, some less obvious conditions relate specifically to a veteran's period of service. Jessica Newman, MD, assistant clinical professor of dermatology and dermatology chief at the James J. Peters VA Medical Center in the Bronx, heads up a rotation at the VA that brings all 13 CUMC dermatology residents through the facility each year for three- to five-month periods. Because many of the Bronx VA's patients are Caucasian World War II vets, residents there see—and treat—much higher rates of skin cancer than they might in rotations at civilian hospitals. Among Vietnam vets, Dr. Newman says, many



Bruce Dohrenwend, PhD

have some degree of chloracne, a skin condition caused by exposure to the herbicide Agent Orange. The effects of various chemical exposures in Iraq and Afghanistan are still being studied.

The situation is similar in hematology/oncology, where residents also do rotations at the Bronx VA. Yeun-Hee Anna Park, MD, assistant professor of clinical medicine and chief of hematology/oncology at the Bronx VA, directs the rotation. She notes the prevalence of prostate cancer, possibly due to Agent Orange exposure, and hepatocellular carcinoma, which accounts for most liver cancers, among her patients. “Vietnam-era veterans were exposed to hepatitis C in the 1960s and ’70s, and that is the right incubation time to now develop hepatocellular carcinoma,” she says. “It is opposite outside the VA, as colon cancer is usually much more common.”

Both the dermatology and hematology/oncology rotations at the Bronx VA are relatively new programs. Dr. Newman believes that dermatology residents have opportunities at the VA that they might not encounter elsewhere. “It’s the concept of graduated responsibility; both

Across injuries, diagnoses, and periods of service, issues of trauma filter into every aspect of a veteran's health care.

See video at the magazine's website, columbiamedicinemagazine.org

Yeun-Hee Anna Park, MD,
Ali Dana, MD, and
Jessica Newman, MD,
at the Bronx VA



Bronx VA Affiliation



the VA and I give residents more responsibility for patient care each year, and they ultimately become the primary dermatologist for these patients,” she says. “There’s more decision-making by residents; that’s built into the philosophy of any VA training program. And the result is that after residency, you’re not initially so scared about seeing patients alone, because you’ve already done it.”

Dr. Newman and her residency medical director, Ali Dana, MD, assistant clinical professor of dermatology, stress that one of the biggest plusses for residents at the VA is the patients themselves. “The education is incredible, because patients are very willing; they’re willing to come in and be seen twice, they’re extraordinarily patient,” says Dr. Dana. “They’re very pro-education, and very giving. They’ll say, ‘This is your first biopsy? Wow, that’s great!’ You can bring five residents into the examining room with you, and they’ll ask, ‘Is there anyone else who needs to come in?’”

Dr. Dana also says that even in dermatology, an awareness of trauma underlies all of the department’s patient care. “A lot of our patients are in therapy for trauma, and they may have additional issues like substance abuse or mental illness. We’re seeing more use of service dogs now,” she notes. “We try to treat all patients with the same issues in mind: We don’t make quick movements with sharp objects, we talk through all procedures, we ask if it’s all right to close an examining room door. We’re also very aware of patients who have experienced military sexual trauma, and who might specifically request a clinician of one gender or the other.”

While Elvis Camacho admits that he hasn’t yet experienced the time constraints of clinicians firsthand, he says that in terms of treating veterans, “it would be amazing if physicians could spend more time talking and getting to know us. I think that would go a long way in helping clinicians to be more in tune with the psychological state that the patient is in, and it could hopefully reduce the incidence and prevalence of suicide rates among veterans.” In August alone, Mr. Camacho’s unit lost two former Marines. “It’s incredibly troubling that I’ve lost more Marines from PTSD/suicide than actual combat operations,” he says. “Marines pride themselves on being tough, and I doubt that there are many of them that would actually go and actively seek help, but if they had a good rapport with their physicians, it could open the communication lines and increase the likelihood of them talking about their problems.”

For his part, Dr. Morrissey believes that beyond enhanced communication and awareness of trauma, providing high-quality health care to veterans involves one additional, crucial element. “When I talk to students about my military experience, it’s always about respect,”

Since January 2013, P&S students have rotated through the Bronx VA in several new clerkships. Building on a successful primary care clerkship that had been in place for several years, a new 12-week longitudinal clerkship integrates inpatient medicine, primary care, and several surgical subspecialties. The Bronx VA is also now a new site for the traditional surgery clerkship.

The P&S affiliation with the VA Medical Center in the Bronx, which was renamed the James J. Peters VA Medical Center in 2005, has evolved as P&S seeks new ways for students to rotate through patient-care settings during core clerkships. The Bronx VA has an inpatient teaching hospital with 311 beds, a two-floor nursing home with 120 beds, and a five-floor research building. The Bronx VA is designated as a Center for Spinal Cord Injury, offering students opportunities to learn about this unique population and some of the latest technological strategies to help them.

The new integrated clerkship is constructed “longitudinally” to allow students to join a team of doctors that care for particular patients over an extended period of time. “Students pick up a patient and follow them from an inpatient stay, or a surgical procedure, to outpatient follow-up visits or rehabilitation,” says Katherine Nickerson, MD, medicine clerkship director. She and Deborah Jones, MD, primary care clerkship director, along with colleagues in urology and orthopedics, have worked with partners at the VA to build a unique experience in which students follow patients in multiple environments, including home visits and visits to specialists. Says Dr. Nickerson, “It’s a unique opportunity to experience care as the patients experience it.”

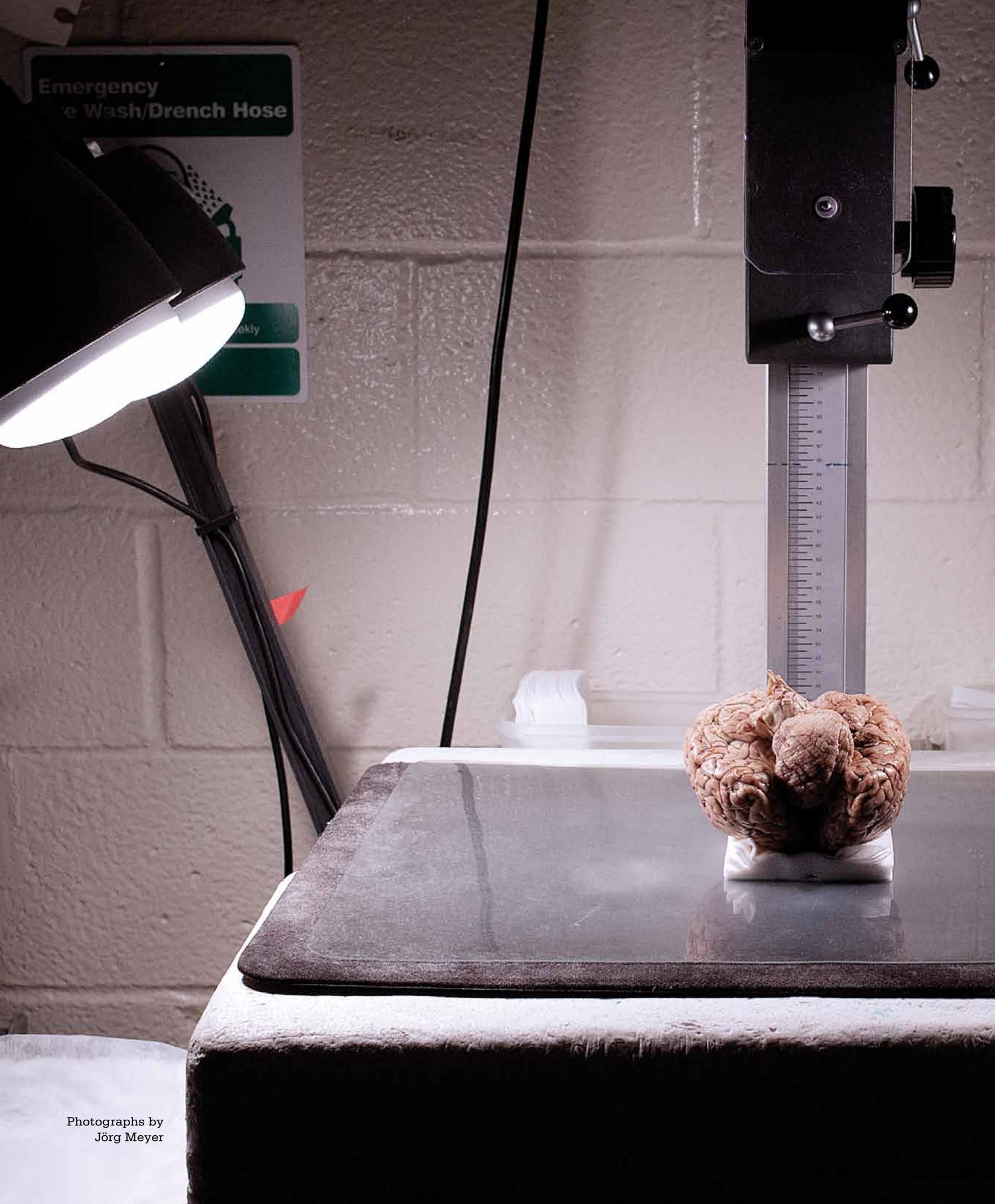
It is also an important opportunity for students to learn about the life experiences and health care needs of veterans. “There are a lot of misconceptions about veterans: the number of them, where they receive care,” says Charles Rinehart ’15, a former Marine, who was among the first class of students to participate in the longitudinal clerkship. “People think caring for service members is exclusive to the VA.”

An estimated 21 million Americans—13 percent of the adult U.S. population—have served in the armed forces. VA hospitals only see a quarter of that number, as most veterans have private insurance. All P&S graduates, then, wherever they practice, are likely at some point to provide medical care for a veteran.

The longitudinal clerkship provides medical students with an exceptional opportunity to learn. Closely involved with the different stages of a patient’s treatment, students serve as liaisons between doctors and specialists. In the process they forge a relationship that is impossible to forge in the brief windows of time available in traditional rotations. “Students can be a point of access for patients,” Mr. Rinehart says. “There is comfort in a familiar face. We’re more invested in patients, and they seem to appreciate it.”

—Joseph Neighbor

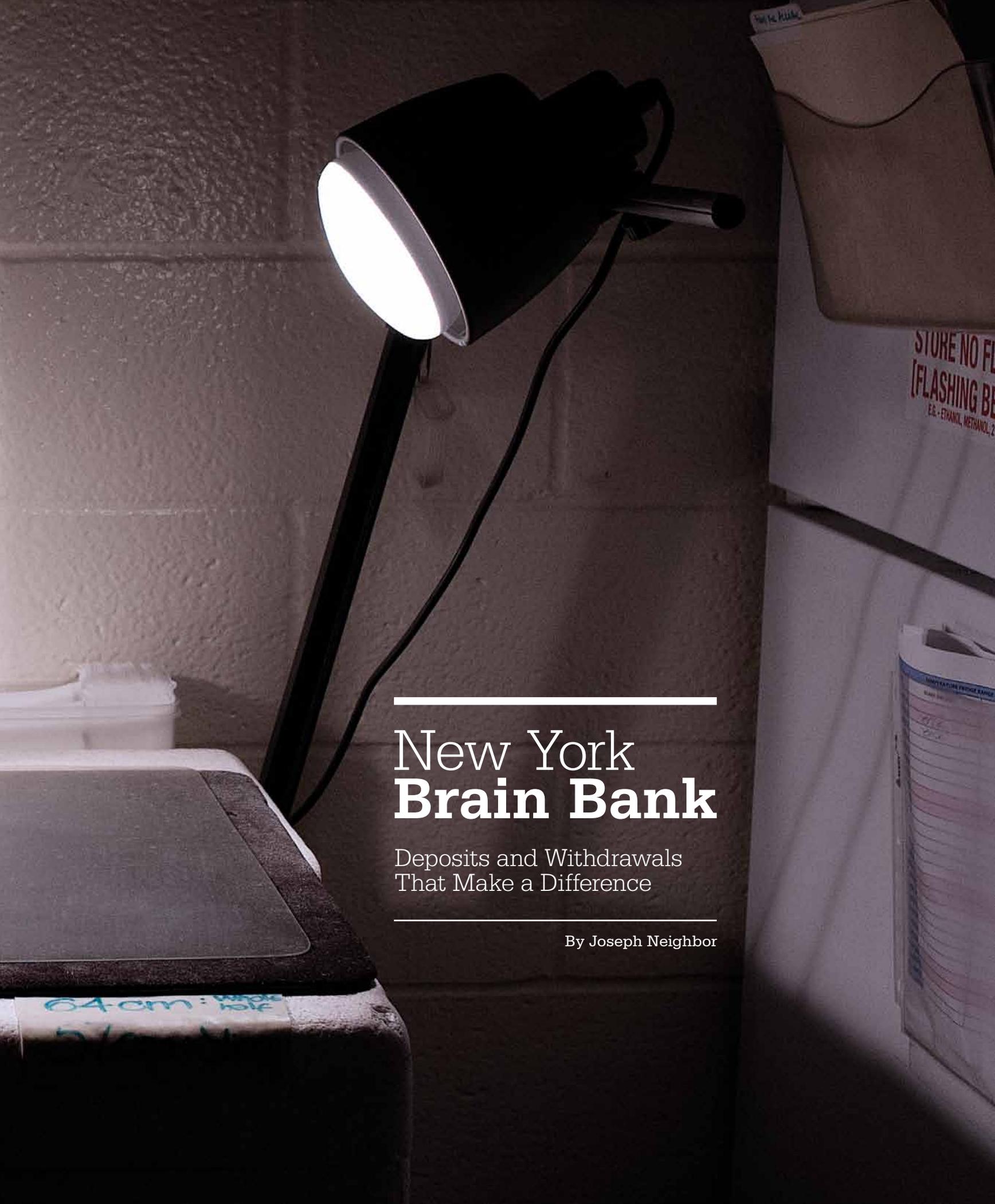
he says. “A lot of these soldiers did not have the same educational opportunities as medical students; they may have chosen a military career because they didn’t have another option. I always like to tell people, students or otherwise, to not make yourself out to be different from someone who serves in the military; don’t look down on folks who have taken the military option. Pay attention to how people have suffered on your behalf, in the name of defending the country, and keep that in mind when wars are being considered and service is being considered. It’s about respect and understanding where they’re coming from and what got them there.” ❖



Emergency
Wash/Drench Hose

akly

Photographs by
Jörg Meyer



New York Brain Bank

Deposits and Withdrawals
That Make a Difference

By Joseph Neighbor

Beneath New York-Presbyterian Morgan Stanley Children's Hospital, tucked within a labyrinthine network of corridors, is the New York Brain Bank, a key research resource for the study of neurodegeneration.

In 10 massive freezers, the New York Brain Bank houses the meticulously catalogued brains of more than 5,000 donors with neurodegenerative diseases. Banking of frozen autopsy brains for research is not new and over the years has improved to allow the preservation of the tissue to be suitable for today's cellular and genetic analyses. When Jean Paul Vonsattel, MD, became director of the neuropathology core of Columbia's NIH-funded Alzheimer's Disease Research Center, he introduced a method of preserving the dissected brain tissue in liquid nitrogen vapor following a uniform sampling protocol. The precision with which brains are dissected, studied, and stored has made possible all kinds of research in neurodegenerative disorders and attracted visits from teams of scientists and doctors from around the world.

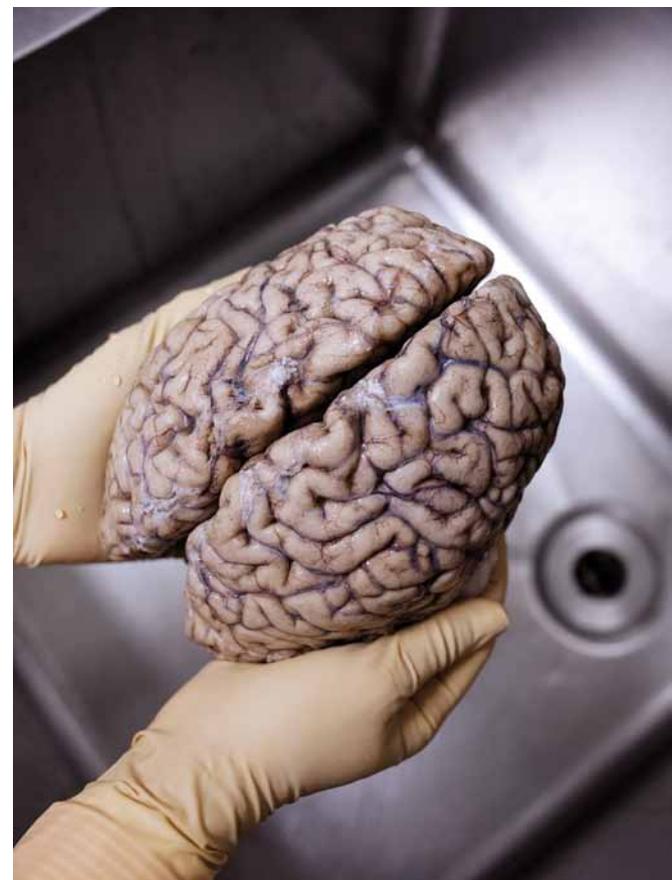
Dr. Vonsattel, director of the brain bank, professor of pathology & cell biology, and attending pathologist

The precision with which brains are dissected, studied, and stored makes possible all kinds of research in neurodegenerative disorders.

at the Columbia University Medical Center, is known for his studies on the pathology of Huntington's disease. Born and trained in Switzerland, Dr. Vonsattel moved to Boston in the late '70s to work with esteemed neuropathologist Edward Richardson, director of Massachusetts General Hospital's neuropathology laboratory. The two eventually joined Edward Bird, who established what is now known as the Harvard Brain Tissue Resource Center. It was from this fruitful partnership at Harvard that Dr. Vonsattel learned much of what he brought to Columbia in 2001.

Speedy Withdrawals

This is how the brain bank works: A researcher goes to the brain bank, which is linked to a custom-built database that contains the clinical and pathological information on every brain in the bank. The researcher finds the needed tissue—say, a piece of cerebellum with Parkinson's—and requests the tissue. The request comes with a set of coordinates that direct a technician at the brain bank to a particular freezer, which has numbered shelves, racks, columns, and boxes—which are further divided into numbered rows and columns. It is here, in either a small plastic bag or vial color-coded to indicate the part of the brain from which it came, that the requested tissue can be found. It takes only a few minutes to retrieve, and the average time between request and disbursement is about five business days. The freezers are currently at 98 percent capacity, and not an inch of space is wasted.



“It’s like Wal-Mart meets a brain bank,” says John Crary, MD, PhD, assistant professor of pathology & cell biology. “If you want a piece of the hippocampus, it’s already there and ready to go. The beauty is that you put a lot of work in upfront, so when it comes out, it comes out fast.”

Since neurodegenerative diseases affect the brain in roughly symmetrical fashion—i.e., one half mimics the other—a fresh brain is cut down the middle. One half is cut into slices and “fixed” in formalin, a method that goes back hundreds of years. The other half is carefully divided into “blocks”—or particular regions of the brain—and frozen using liquid nitrogen vapor. A single brain yields as many as 150 blocks for freezing.

The brain bank’s method allows for a single brain to be used in many different ways. Fixed tissue is excellent for teaching, so it is used to instruct medical residents at NewYork-Presbyterian, with which the brain bank shares staff and equipment. Dr. Vonsattel and the bank’s assistant director, Etty Cortés, MD, also use the fixed tissue to make a detailed pathological examination of the brain, the results of which determine how the fresh samples will be classified in the computer and filed in the freezer. The unfixed, fresh tissue is used in biochemistry and molecular biology research. A small portion of the brain is also pulverized and mixed with liquid nitrogen for use in chemical and molecular studies.

“The idea was to make a system to be used beyond the university,” says Dr. Vonsattel. “This is customized for us and though it’s now copied in Munich and Japan, it’s still a work in progress.”

Researchers worldwide rely on the bank’s extensive collection of dissected and catalogued brain tissue for their work in neurodegenerative diseases. The bank works closely with other brain banks, each of which has its own focus—e.g., pediatrics, autism.

Many of the day-to-day duties in the bank fall to Dr. Cortés, who holds the keys to the freezers. She handles requests from researchers for samples—300 a month, on average. She is on call 24 hours a day, should a fresh brain arrive.

“As you can see, there are no windows here,” Dr. Cortés says. “You couldn’t stay here if you don’t like this. For us, this is a passion.” Born in Colombia to a family of physicians, including neurologists, she trained in surgical pathology at the Industrial University of Santander, where in 1999 she earned her medical degree. In 2006, after completing her residency, she moved to the United States to work as a postdoctoral research scientist on Dr. Vonsattel’s team. Dr. Cortés



spent three months observing before she could handle fixed tissue. After six months, she could handle fresh tissue, and at nine months she was able to process a brain on her own.

The Process Begins Before Death

The moment a donor dies, the brain tissue so precious to researchers starts to decompose. The sooner the brain is put on ice, the better. But goals of science must be brought into accord with the family’s right to grieve.

Carol Moskowitz, autopsy coordinator at the brain bank until her retirement in September, is mindful of that balance. As autopsy coordinator since 1995, she was the person who received the call from the next of kin when the donor died.

Part of her job was to work with the donor to draft a plan detailing the course of action that would be followed when the donor died. She would find a nearby pathologist who could remove the brain, and the donor would pick a funeral home. Since each state makes its own rules regulating organ donation, Ms. Moskowitz would rely on the funeral homes to provide information about local laws.

The next of kin was instructed to call Ms. Moskowitz as soon as possible after death. But real life does not always adhere to a plan. “People are in chaos,” she says of the next of kin. “The person they’ve been married to for 50 years just died, and now they’re calling this perfect stranger.”

Her role in that moment was both teacher and counselor. She had to tactfully explain the process of



Brain Donation

To talk about one's own death is scary. To consider donating a piece of one's body—especially the brain, the epicenter of personality—is to acknowledge mortality in an uncomfortably tangible way. And the decision is not only the donor's to make: The entire family is involved, for the survivors must take responsibility for carrying out their loved one's wish.

Donors and their families are encouraged to participate because the brain they donate might contribute to a treatment that could spare future generations some of the pain the donor suffered. It might even help lead to a cure.

More information about the New York Brain Bank, which is affiliated with Columbia's Taub Institute for Research on Alzheimer's Disease and the Aging Brain, can be found at its website, nybb.hs.columbia.edu, or the Taub site, cumc.columbia.edu/dept/taub.

donation, to the degree that the person wanted to hear, while offering a sympathetic ear. “I’d start by asking, ‘Are you all alone, or do you have family there with you?’ The family dynamic is really important, because if the donor made all these plans and didn’t tell anybody else, there’s a lot of teaching going on.”

For the next few hours her role was to be part of the family, privy to its private world. “I would ask them, ‘Is there something you’re waiting for—are there children coming to say goodbye to their dad?’ Ms. Moskowitz says. “Do you need to say goodbye? Is there something you wished to do, and you feel like you’re being pushed because you had to make this call?’ I would tell them that at Columbia, care comes first and research comes second.”

In each case, Ms. Moskowitz confirmed the family’s intent to donate the brain because the donor’s wishes are not legally binding. Families say yes almost every time, Ms. Moskowitz says. Some want to know exactly what will become of their loved one, step by step, so she described the process: On its way to the funeral home, the body is brought to an autopsy suite, where the local pathologist extracts the brain from a small, triangle-shaped hole in the back of the skull. The brain is then placed on ice in a bucket sent by Columbia. Within hours, a courier service arrives to pick up and personally deliver the brain to the New York Brain Bank, where it is received by either Dr. Vonsattel or Dr. Cortés.

“They’re stunned,” Ms. Moskowitz says of the families. “‘You don’t send it FedEx?’ No! It’s handed person to person. No one throws the box anywhere. They’re very impressed. They see that this is the gift of life.”

Once the brain arrives at the brain bank, it undergoes a pathology evaluation to definitively determine what condition afflicted the donor. Sometimes the pathology results do not match the clinical evidence gathered while the patient was alive. A person may have appeared to have Parkinson’s, for instance, but the pathology evaluation does not confirm that. For this reason, Ms. Moskowitz often would follow up with the family to share the final findings. This is more than a matter of courtesy: Since neurodegenerative diseases are thought to have a genetic component, it is important that the family be informed.

Priceless Gift

Spread out on the desk in Dr. Vonsattel’s office are dozens of glass slides stained using Luxol fast blue and Hematoxylin and eosin, as well as other dyes, to highlight particular proteins.

“Come, sit,” he says, motioning toward a big, antique-looking microscope designed so that two peo-



Researchers worldwide rely on the New York Brain Bank’s extensive collection of dissected and catalogued brain tissue for their work in neurodegenerative diseases.

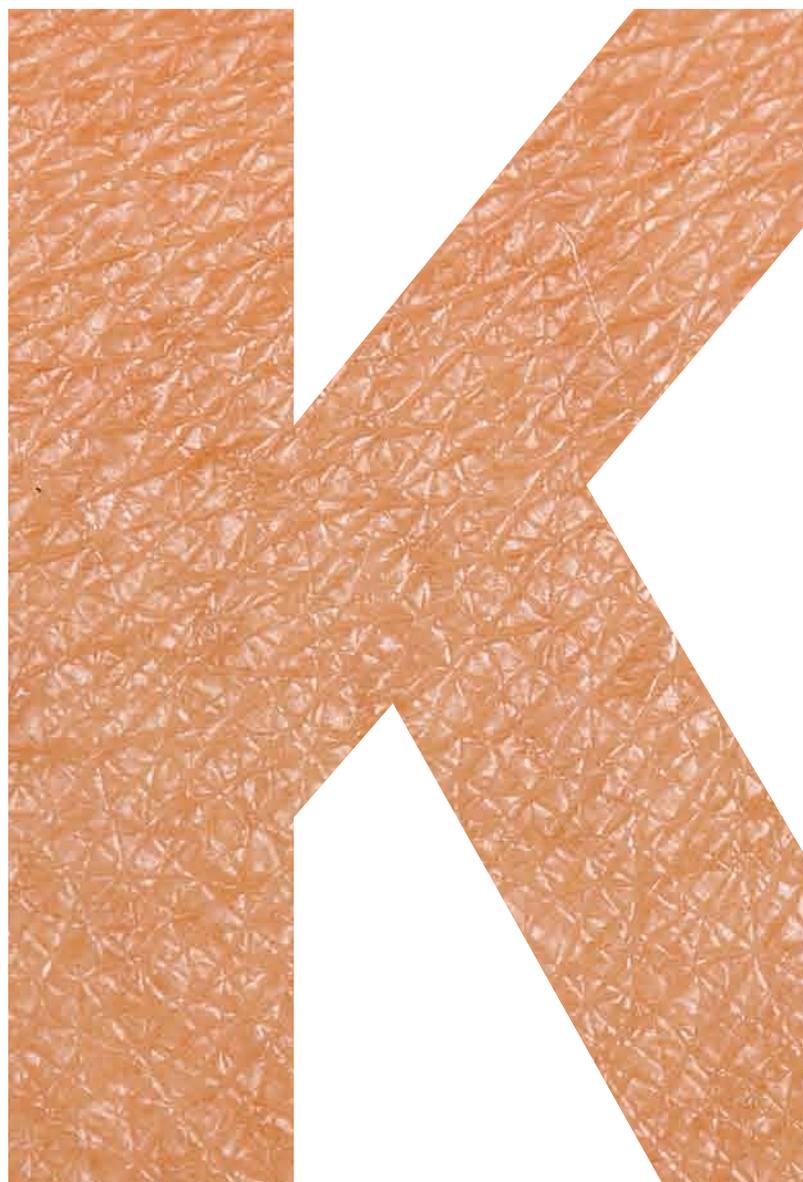
ple can sit opposite each another and look at a sample at the same time. “Have you used one of these before?”

He places a slide under the microscope and gestures toward the viewfinder: The view is of a beautiful wash of blue and purple and red, freckled with black dots. The tissue is from the brain of a person who had Alzheimer’s disease. With a palpable sense of wonder, Dr. Vonsattel describes the pathological features of the disease, highlighting the amyloid plaques and neurofibrillary tangles that the German physician Alois Alzheimer first described in 1906. Research into the causes of Alzheimer’s is more exigent than ever as people live longer, increasing their likelihood of developing the disease.

The New York Brain Bank makes this work possible. But first, it asks people with Alzheimer’s—or Parkinson’s or amyotrophic lateral sclerosis or Huntington’s disease, or any number of other dementias and movement disorders—to make the call that offers a priceless gift: their brain.

“They’re amazing people, letting us go into their brain,” Dr. Vonsattel says. “Those people are with us, each of them, even though they are dead. For me, it’s religious. These people are amazing.” ❖

MORE THAN



Interdisciplinary
Investment in
Dermatology
Research is Now
Paying Dividends
for Patients

By **Keely Savoie** | Photographs by Jörg Meyer

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DEEP

When geneticist Angela Christiano showed histological slides from the skin of a patient with the hair-loss disease alopecia areata to immunologist Raphael Clynes, “He scratched his head and said, ‘Why is no one working on this?’”

The pictures showed a swarm of T cells (lymphocytes) surrounding, and attacking, a hair follicle, a sure sign of the autoimmune disease. These basics of alopecia areata have been known for decades, but details that could lead to a treatment that restores hair growth were lacking. And few researchers were pursuing the leads.

“Alopecia areata can sometimes get pushed to the back burner,” Dr. Christiano says. “It’s not life-threatening, so it’s believed that it’s not a big problem. It’s just hair.”

It is true that no one dies from alopecia areata, but it is a life-altering disease, Dr. Christiano emphasizes with an unusual air of authority for a research scientist. She is also a patient. Soon after joining the Department of Dermatology in 1996, “my hair started falling out in patches typical of alopecia areata,” she recalls. The next two years were emotionally

draining. Her hair eventually grew back, but it gave her a new research direction. Finding new ways to treat alopecia areata and other hair loss conditions became her lab’s major focus.

Dr. Christiano had reached a turning point in this search in 2010, after trawling the genomes of a thousand alopecia areata patients for new clues to the source of the disease. “We found a surprising overlap in genes linked to alopecia areata and autoimmune diseases such as type 1 diabetes, celiac disease, and rheumatoid arthritis.” Armed with these data and the pictures, she approached Dr. Clynes for advice.

“There’s a joke among geneticists that you can’t get an immunologist to return an email much less to talk to you,” says Dr. Christiano. Naomi Berrie Diabetes Center researcher Domenico Accili recommended that Dr. Christiano get in touch with Dr. Clynes, an expert in the study of cytotoxic (killer) T cells in diabetes.

“I remember the picture of a hair follicle swarmed by killer T cells, like bees attacking in a swarm—and the rest of the skin looked completely empty,” says Dr. Clynes. “I saw immediately that there was an elegance involved. It seemed like a simple problem to figure out, because it was confined to this one spot.”

Drs. Clynes and Christiano began collaborating and now, just four years later, they may be on the brink of delivering an effective drug treatment for the 6 million people in the United States with some form of the disease.

In a paper published in *Nature Medicine* in August of this year, the two reported results from the first three participants in a clinical trial directed by Julian Mackay-Wiggan, MD, assistant professor of dermatology and director of the department’s clinical research unit. The drug stops the T cell attack on the follicles, and in three patients with severe disease, nearly all hair returned after up to six months of therapy.

“This is a major step forward,” says David Bickers, MD, the Carl Truman Nelson Professor of Dermatology and chair of the Department of Dermatology at P&S. “There are few tools in the arsenal for the treatment of alopecia areata that have any demonstrated efficacy.”

The success in finding a potentially groundbreaking treatment for millions of alopecia areata patients clearly has much to do with Dr. Christiano’s personal quest, but it also is a testament to the collaboration between researchers from two separate fields, dermatology and immunology.

“People used to think that the skin was just a passive barrier, that it was simply there to protect the body from environmental stresses and there was nothing of interest going on,” says Dr. Bickers. “Now it’s very clearly a major outpost of the immune system, and it’s my belief that it is also the furthest outpost of the nervous system. The whole paradigm has changed and it’s why we’ve recruited researchers who can tap into the expertise of these other fields.”

The strategy of branching out into other fields has helped the department increase its share of NIH funding; it consistently ranks in the top 10 dermatology departments in the United States in terms of NIH funding. Since 1997 it has been designated as one of six Skin Disease Research

Dermatology at P&S

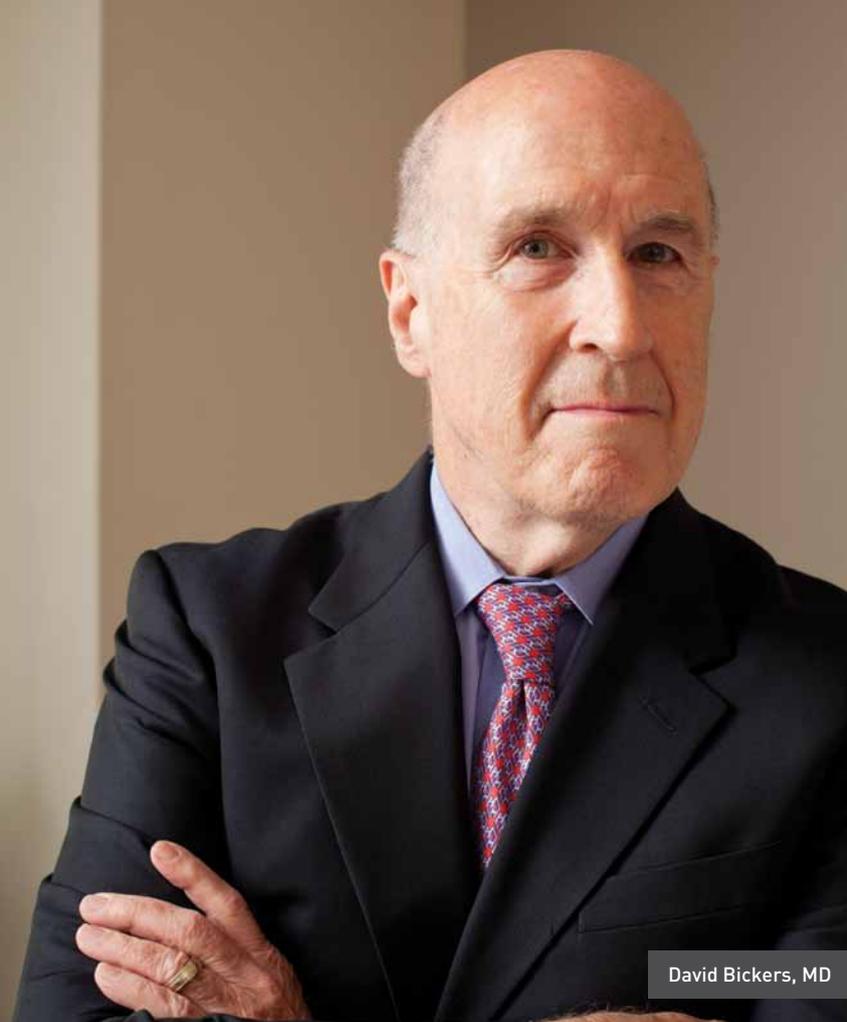
The P&S Department of Dermatology has one of the longest-funded Skin Disease Research Core Centers (SDRC) in the nation, one of only six centers supported since 1988 by the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS).

NIAMS supports centers that provide shared facilities and services to groups of established, funded investigators who address scientific problems in skin biology and diseases. The centers are designed to improve efficiency, accelerate the pace of research, and ensure greater productivity.

Columbia’s SDRC has been funded since 1997. Its major goal is to build and sustain awareness of the opportunities that exist for discovering the pathologic basis of skin diseases that in turn can be translated into innovative treatments that will improve the quality of life for patients. The Columbia SDRC provides the infrastructure and support for ongoing research groups centered around three themes: skin neuroscience, stem cells, and genetics and immunology.

The department has been chaired by David R. Bickers, MD, since 1994. Before joining P&S, he was professor and chair of dermatology for 15 years at Case Western Reserve University, where he was awarded one of the two original SDRCs funded in 1988.

The P&S Department of Dermatology consistently ranks among the best-funded dermatology departments in the nation. Since 2006 it has ranked in the top 10 in NIH research funding, including two years at the No. 2 position.



David Bickers, MD

The new treatment for basal cell nevus syndrome, also called Gorlin syndrome, springs from an unlikely location: Idaho's mountain pastures. In the 1960s and 70s, sheep farmers began noticing that when their flocks grazed at higher altitudes, pregnant ewes would give birth to lambs with a single, central eye. The alarmed sheep farmers called in the U.S. Department of Agriculture, which launched an investigation. It took 11 years to discover that the ewes were grazing on the American corn lily, a mountain meadow plant that contains a chemical that disrupts normal brain and facial development, resulting in the deformities the farmers observed.

Years later, the corn lily chemical—cyclopamine—was determined to be a potent inhibitor of the Sonic hedgehog (Shh) signaling pathway that is critical for normal fetal development.

“I was also interested in looking at underlying mechanisms and trying to identify therapeutic targets in skin cancers, with the ultimate goal of finding drugs and compounds that could be taken to the clinic,” says Dr. Bickers. He knew that Gorlin syndrome patients inherit a mutation in a tumor suppressor gene family called patched (PTCH).

PTCH1 was the primary inhibitor of the Shh signaling pathway that was turned off in the cyclops sheep. Normally PTCH1 causes the signaling to cease after birth. But when PTCH1 is mutated, signaling continues, resulting in abnormal cell growth and proliferation and setting the stage for tumor formation. “If we could find a molecule to inhibit this pathway we could, in theory, reverse the growth of the tumors,” says Dr. Bickers.

The right molecule turned out to be cyclopamine, the corn lily chemical. Dr. Bickers, working with research scientist Mohammad Athar, PhD,

Dermatology chair David Bickers and a colleague found a drug that can dramatically shrink basal cell skin cancers and prevent the formation of new cancers.

and Arianna Kim, PhD, assistant professor of dermatology, found that while it had disastrous results for the farmers and their flocks, it was precisely what Gorlin syndrome sufferers needed: a way to block postnatal signaling that led to the unchecked growth of tumors in many patients.

Drs. Epstein and Bickers investigated the use of a vismodegib, a derivative of cyclopamine synthesized by Genentech. Their clinical study found that patients taking this orally administered drug for an average eight months experienced about two new basal cell cancers during the study, compared with 29 such tumors for patients in the placebo group. Among patients taking the drug, the diameter of clinically significant skin cancers decreased an average of 65 percent, compared with 11 percent among controls.

“The purpose of the study was to see whether, by using this targeted molecular therapy, we could match the performance of a surgeon, and in many ways, we could,” says Dr. Bickers.

Important issues remain, however, and Dr. Bickers says the drug is not suitable for all patients with basal cell nevus syndrome. The drug caused muscle pain and loss of taste in many patients, and half of the study's participants stopped using the drug even though that meant their cancers returned.

Centers by the NIH, a coveted distinction that provides funding for interdisciplinary research projects. “The center allows us to create a variety of core facilities and fund pilot studies where people working in disciplines outside of dermatology can submit proposals that might connect to skin,” says Dr. Bickers.

And though the timeline of the Christiano and Clynes research—moving from genetic findings to positive results in a clinical trial in only four years—was astoundingly fast, says Dr. Bickers, it is just one example of how the department's commitment to interdisciplinary discovery is paying dividends for patients.

CYCLOPS SHEEP AND A NEW TREATMENT FOR SKIN CANCER

It is estimated that at any one time, a third of Americans are grappling with a skin disease, from diseases that cause simple burning or itching to life-threatening melanoma. In 2005, a report from the Society of Investigative Dermatology and the American Academy of Dermatology Association calculated the annual economic burden of skin diseases to be more than \$37 billion, including lost productivity at work.

Dr. Bickers came to Columbia in 1994 with a major interest in skin cancer projects, including research into basal cell nevus syndrome, a rare genetic disorder that causes multiple basal cell carcinomas in patients. Surgery has been the only option for these patients until recently, when Dr. Bickers and Ervin Epstein of Children's Hospital Oakland Research Institute in California found that a drug called vismodegib can dramatically shrink basal cell skin cancers and prevent the formation of new ones. Their findings were published in 2012 in the *New England Journal of Medicine*.

“The challenge now is to see if we can lessen the adverse effects while achieving the same therapeutic benefits by modifying the dosing schedule or perhaps by alternating drug treatment with other modalities such as photodynamic therapy, which can be effective for smaller lesions.”

MELANOMA MAKEOVER

Seven years ago, patients with malignant melanoma had one treatment option: chemotherapy with dacarbazine, which had devastating side effects and did not prolong survival. The first major breakthrough was the identification that 50 percent of all melanomas carry an oncogene called B-RAF that is responsible for melanoma cell growth. This resulted in the development of two drugs (vemurafenib and dabrafenib) that inhibit this oncogene. These drugs show amazingly high response rates in this disease and in themselves result in a prolongation of survival in melanoma patients with advanced disease. “However, there are some limitations with this class of drugs in that patients often develop resistance to them and they essentially stop working,” says Gary Schwartz, MD, chief of hematology and oncology and associate director of the Herbert Irving Comprehensive Cancer Center. “In view of this

there has been renewed interest in the immune system and trying to find ways to harness one’s own immunity as a means to treat melanoma. In particular, we asked if there was a way to turn on the immune system to target cancer cells and not the healthy cells of the body.”

Collectively, this work has helped transform the disease from one that was virtually incurable to one that is manageable for months to years in some patients. Dr. Schwartz and colleagues at Memorial Sloan Kettering, where Dr. Schwartz was chief of the melanoma and sarcoma service until moving to Columbia earlier this year, found that a drug called ipilimumab could restore the immune system’s ability to attack cancer. Cancer shuts down the immune attack via a protein, CTLA-4, on the surface of T cells.

“Ipilimumab blocks this protein and activates the T cell,” says Dr. Schwartz. “In clinical studies with melanoma patients, we are seeing durable complete remissions for the first time, sometimes for as long as five years.”

Because side effects with ipilimumab, which was approved by the FDA in 2012 and marketed as Yervoy, are still an issue, Dr. Schwartz and other researchers are now focusing on another T-cell protein, PD-1, a target that is associated with fewer side effects. “Five years ago, the two-year survival rate in patients with metastatic melanoma was 1 percent,” Dr. Schwartz says. “Now, our initial data shows that the two-year survival rate is approaching 90 percent. We have transformed metastatic melanoma from an incurable cancer to one that we think is now manageable—and perhaps curable—by harnessing the immune system.” To build Columbia’s immune targeted therapy program in melanoma, Yvonne Saenger, MD, an immuno-oncologist, was recently recruited from Mount Sinai School of Medicine to lead efforts to develop new therapeutic approaches directed at novel immune targets in melanoma. She also will focus her research studies on identifying specific biomarkers in tumors or in the blood by which she hopes to identify patients who will most benefit from this type of targeted therapy.

Looking toward the immune system also may lead to new therapies for another skin cancer: squamous cell carcinoma. Usually these common cancers can be easily treated with surgery, but in certain clinical settings

Renewed interest in the immune system and trying to find ways to harness a person’s own immunity to treat melanoma has helped transform the disease from a mostly incurable one to one that is manageable for months to years in some patients.

these tumors are more aggressive and dangerous, killing about 2,300 people in the United States each year. Many of these deaths occur in patients who are immunosuppressed, such as organ transplant recipients. These patients require lifelong treatment with drugs that suppress the immune system to prevent rejection of the transplanted organ.

A basic researcher, David Owens, PhD, associate professor of epithelial cell biology (in dermatology, pathology & cell biology, and dental medicine), initially fell in love with skin as a model epithelial organ while he was a graduate student. “I got hooked when I started doing tumor experiments. In the skin you can see these tumors emerge right before your eyes,” he says. “I began wondering where the tumors come from.”





David Owens, PhD



Angela M. Christiano, PhD

Like melanoma, squamous cell carcinomas actively engage with immune cells to evade detection and fuel their expansion. “We think this interaction is critical to metastasis,” says Dr. Owens.

Using a mouse model, Dr. Owens has identified a signaling axis that may be essential for the ability of these cells to propagate secondary tumors. If so, the signaling axis could be utilized as a biomarker to indicate more aggressive cancers.

Working with Vishal Patel, MD, assistant professor of dermatology and a dermatologic surgeon who specializes in treating high-risk patients with skin cancer, Dr. Owens is using tissue samples collected in surgery in hopes the analyses could help him firmly establish the utility of this biomarker in identifying lesions that have a higher propensity to metastasize in humans, which could lead to treatments personalized to fit each patient’s needs.

“Our collaboration with Dr. Patel is designed to address two goals,” says Dr. Owens. “First, we hope to firmly establish the utility of this signaling axis as a biomarker that will allow us to identify cutaneous squamous cell carcinoma lesions that have a higher propensity to metastasize in humans, and, second, we want to identify ‘druggable’ tumor-specific targets of this axis as a novel therapeutic strategy for high-risk patients.”

STEM CELL BIOLOGY

Before she turned her attention to alopecia, Dr. Christiano was on the hunt for genes that cause epidermolysis bullosa (EB), a rare disease of the skin and connective tissues that causes severe and even fatal blistering of the skin and mucous membranes. “As skin diseases go, epidermolysis bullosa is about as severe as it gets,” says Dr. Christiano.

As a postdoctoral student, Dr. Christiano worked in the lab that discovered the gene responsible for a specific subtype of the disorder. The mutation in the gene, COL7A1, causes a defect in type VII collagen that attaches the epidermis to the underlying dermis. Without this connection, the skin splits apart from even the lightest of touches.

After the discovery of COL7A1, epidermolysis bullosa became a target for conventional gene therapy. The idea was to take skin cells from a patient, correct the defective gene, and then graft the corrected skin back onto the patient.

“But there were a lot of challenges with that approach,” says Dr. Christiano. “There was no persistence of gene expression, and the grafts weren’t long term because they didn’t have stem cells, meaning that they could not self-renew.”

Dr. Christiano began to think about bone marrow transplants as a way to repair defective skin. “When patients have a bone marrow transplant, stem cells in the donated marrow repopulate the marrow in the recipient, but they also wind up in a lot of places, including the skin,” she explains. This observation led her to reason that if an EB patient were given bone marrow harvested from a person with normal COL7A1 genes, the stem cells would eventually find their way to the patient’s skin and other affected tissues and begin producing normal collagen.

Dr. Christiano suggested the transplant idea to pediatric transplant researchers at CUMC, led by Mitchell Cairo, MD, formerly in the Depart-

“This technology basically enables you to shake the Etch A Sketch and reprogram a patient’s own cells back to pluripotency so that you can then push them down a different pathway.”

ment of Pediatrics at P&S. Using Dr. Christiano’s preliminary data on an EB mouse model, the researchers were encouraged that the treatment was successful in animal tests before performing a transplant at CUMC on a patient using bone marrow cells from his unaffected brother.

Other centers around the world are also trying the approach, and now, close to 30 kids with EB have undergone the treatment. The down side: The transplanted patients require the same lifelong immunosuppressive drugs that other transplant recipients take.

Induced pluripotent stem (iPS) cells may be a better option in the future, says Dr. Christiano. “This technology basically enables you to shake the Etch A Sketch and reprogram a patient’s own cells back to pluripotency so that you can then push them down a different pathway. We saw the possibility of starting with cells from an EB patient, correcting the gene, and then grafting them back onto the patient.”

The discovery of iPS cells also shed new light on a well-known fact of unrecognized significance: About one-third of patients with EB have healthy and intact areas of skin. “Previously doctors would largely ignore these patches in these patients,” says Dr. Christiano. “But it turns out that those patches have undergone a spontaneous correction event. That normal appearing skin is healthy and producing normal COL7A1. If we take those healthy cells as starter cells for iPS, then we don’t have to go through the gene correction step. We can use the fact that the body has already corrected these cells and then we can generate unlimited healthy cells for use in treating these patients.”

SENSE OF TOUCH

Whenever Ellen A. Lumpkin, PhD, is at a party and guests find out she makes her living studying touch, “That’s all anyone wants to talk about,” she says. The sense of touch creates the sensation of a soft caress but is also necessary for more mundane tasks like manipulating pens and buttons.

In sensory neuroscience, says Dr. Lumpkin, associate professor of somatosensory biology (in dermatology and physiology & cellular biophysics), touch is the last frontier. The cells and molecules that initiate vision—rod and cone cells and light-sensitive receptors—have been known since the early 20th century, and the senses of smell, taste, and

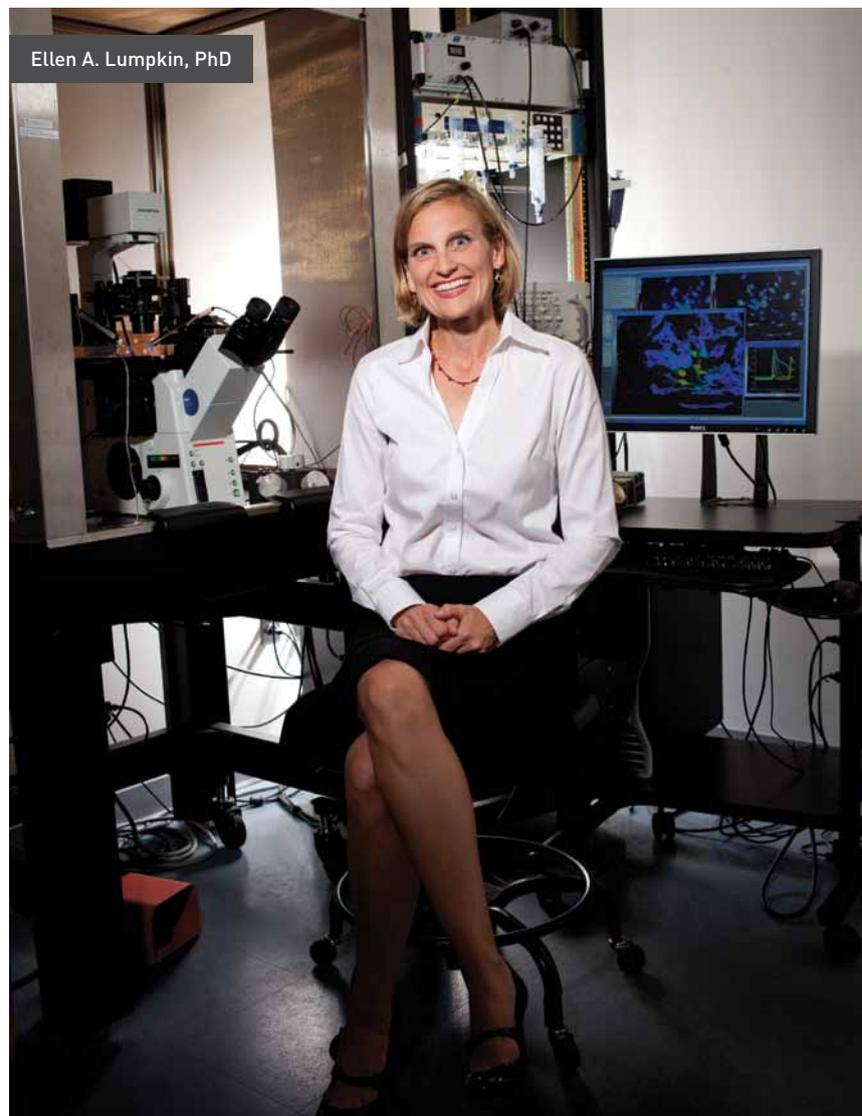
hearing are increasingly understood. But almost nothing is known about the cells and molecules responsible for initiating our sense of touch.

Dr. Lumpkin, who originally trained in the neuroscience of hearing, now focuses on understanding how the cells in skin transmit information about tactile sensations. She has solved a 100-year-old mystery about the nature of touch, which will let researchers start to ask even bigger questions.

For decades scientists have known that Merkel cells, specialized skin cells concentrated in fingertips, lips, and other highly sensitive areas, are involved in the sensation of gentle touch and pressure. The question was how: Are they simply scaffolding that allow touch signals to be transmitted or are they sensing and actively creating touch signals?

In two back-to-back studies published earlier this year in *Nature*, Dr. Lumpkin and colleagues showed that Merkel cells can sense touch and work virtually hand in glove with the skin’s neurons to create what we perceive as fine details and textures. Using optogenetics to turn the cells on and off, the researchers were able to identify the biophysical basis of touch sensitivity in Merkel cells.

“What’s more, we collaborated with Scripps scientists to pinpoint the gene that encodes the Merkel cells’ molecular touch sensors. These studies are the first to demonstrate that Merkel cells are capable of turning touch into an electrical signal that is then transmitted to the brain as the sensation of light touch.”





Julian Mackay-Wiggan, MD



Larisa Geskin, MD

The knowledge of how nerve cells and Merkel cells divide up the job of creating and sending touch signals provides a jumping off point for touch researchers. “Now we can start to ask deeper questions, such as how the brain deciphers information sent by skin cells and nerves so that we can perceive shapes, textures, and pressure,” says Dr. Lumpkin.

The research also may lead to treatments for people who become touch-impaired, including people with diabetes and the elderly. “When we lose our sense of gentle touch, it has serious repercussions. In the elderly, this contributes to loss of handgrip and falling,” says Dr. Owens.

Merkel cells start disappearing from our skin in our 30s and 40s, and by the sixth or seventh decade, almost no Merkel cells are left. As a stem cell biologist, Dr. Owens became intrigued by the idea of restoring Merkel cells, which may be possible by reviving the right stem cells in the skin. “We know the stem cells are still there, but they are not making Merkel cells. We have to figure out how to entice them to reproduce.”

CLINICAL RESEARCH

When the findings from the Department of Dermatology’s basic researchers are ready to be tested in patients, the department’s in-house clinical research

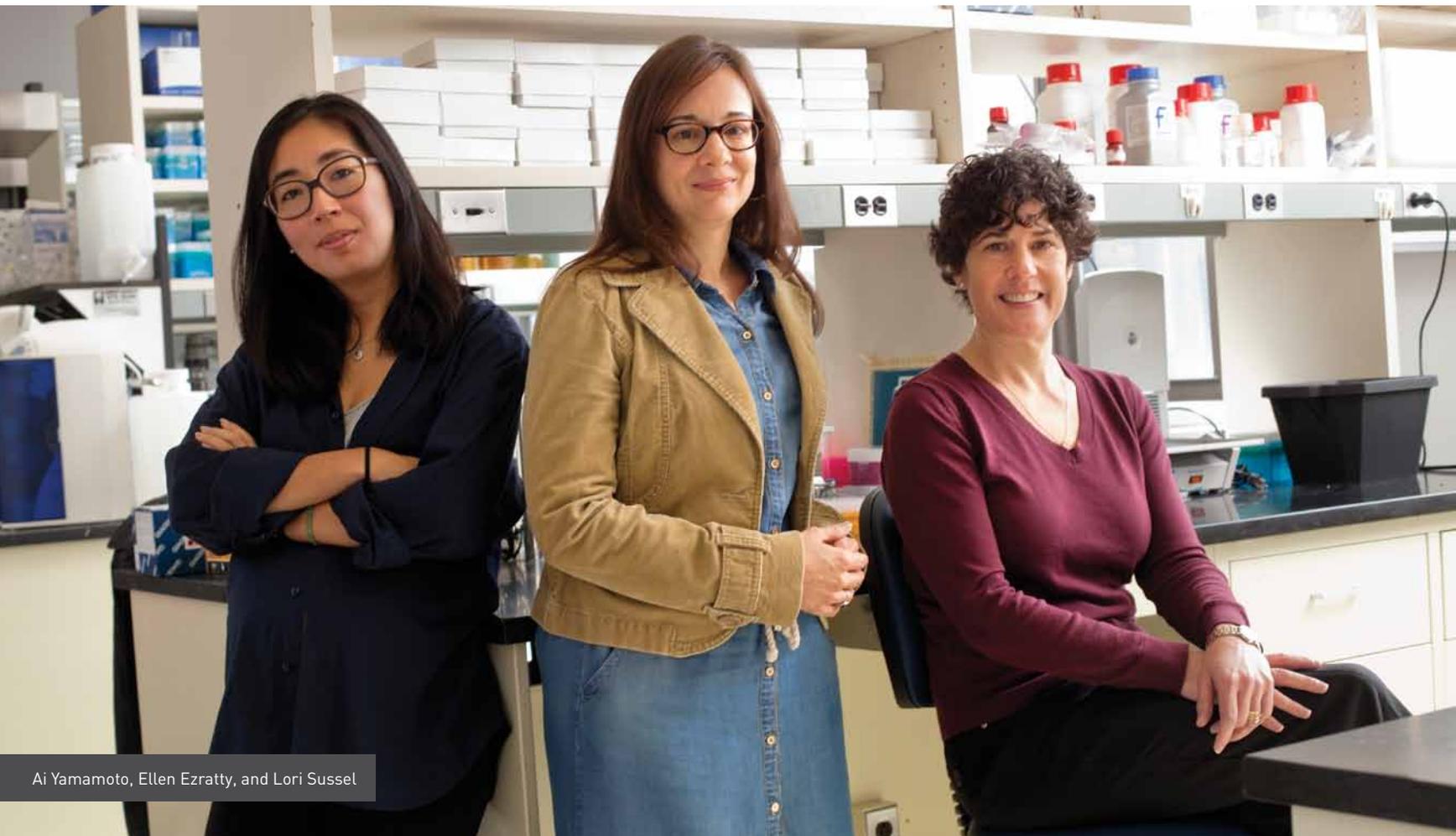
unit, directed by Dr. Mackay-Wiggan and including a research fellow and in-house research coordinator, speeds the process. “Being able to take that next step into translational and clinical research is vital,” says Dr. Christiano. “If we didn’t have a self-contained clinical trial unit in our department, our trials for alopecia areata would not have happened so quickly.”

Skin cancer patients at Columbia will see similar benefits with the department’s new comprehensive skin cancer center led by Larisa Geskin, MD, a renowned researcher in cutaneous T-cell lymphoma and associate professor of dermatology. Dr. Geskin’s dual training in dermatology and oncology allows her to build bridges between clinical disciplines and enables the center to support interdepartmental collaborations, such as the one between Dr. Owens and Dr. Patel. The center provides a place that brings together experts from across the medical center to consult on patients with skin cancer.

“It is my philosophy that when you are a relatively small department, your success hinges on building collaborations and talent across the institution,” says Dr. Bickers. “We may be small, but we’ve been very fortunate to recruit and retain talented faculty and to find splendid research collaborators in other departments as well. Fortunately, Columbia is a place where such cooperative opportunities are a part of our culture.” ❖

A look at work
from the labs
of CUMC's
graduate
programs

Graduate School *life*



Ai Yamamoto, Ellen Ezratty, and Lori Sussel

JÖRG MEYER

Three Who Returned

By Arthur G. Palmer III

Robert Wood Johnson Jr.
Professor of Biochemistry &
Molecular Biophysics and
Associate Dean for Graduate Affairs

Each year, approximately 60 doctoral graduate students in the coordinated doctoral programs in biomedical sciences at Columbia University Medical Center defend their doctoral theses and then scatter to new positions around the world, most commonly for a period of further training as postdoctoral scientists before beginning their independent careers as leaders in various academic, governmental, and industrial institutions.

CUMC is fortunate that some of these exceptional graduates eventually return to their alma mater as faculty members training the next generation of

scientists. Three such recently repatriated faculty—Ellen Ezratty, Lori Sussel, and Ai Yamamoto—describe their experiences as graduate students and faculty at CUMC. Strikingly, each of these scientists has established research programs pursuing different questions or directions from the research of their graduate or postdoctoral mentors, while acknowledging links back to their training as students at CUMC.

Dr. Ezratty was a graduate student in the laboratory of Gregg Gundersen, PhD, professor of pathology & cell biology. She received the doctorate in 2007, studying

molecular mechanisms regulating microtubule-induced focal adhesion disassembly during cell migration. She was a postdoctoral scientist with Dr. Elaine Fuchs at Rockefeller University, where she studied epidermal morphogenesis. Dr. Ezratty returned to CUMC in the spring of 2014 as assistant professor of pathology & cell biology. Her research focuses on the mechanisms by which the primary cilia temporally and spatially regulate cell signaling and proliferation in tissue stem cells, with an emphasis on polycystic kidney disease and skin cancer.

Dr. Sussel was a graduate student in the laboratory of David Shore, PhD, in the Department of Microbiology & Immunology. She received the doctorate in 1993, studying molecular mechanisms underlying transcriptional repression in yeast. She was a postdoctoral scientist with Dr. John Rubenstein at the University of California, San Francisco, studying the transcriptional regulation of forebrain patterning and neuronal specification during mouse embryonic development. One of these transcriptional regulators also proved essential for specification of pancreatic insulin-producing beta cells, which led to her current research interests in transcriptional networks that regulate development, differentiation, and function of the pancreas. Dr. Sussel began her independent career as an assistant professor at the University of Colorado Health Sciences Center and was promoted to associate professor in 2005. She returned to CUMC in 2007 as associate professor of genetics & development in the Naomi Berrie Diabetes Center.

Dr. Yamamoto was a graduate student in the laboratory of Rene Hen, PhD, in the Department of Pharmacology. She received the doctorate in 2001, studying the role of constitutive expression of the huntingtin protein in the persistence of Huntington's disease. Dr. Yamamoto was a postdoctoral scientist with Dr. James Rothman at Memorial Sloan Kettering Cancer Center and CUMC and pursued interests in cell biology and biochemistry. She began her independent career in 2008 at Columbia as assistant professor of neurology

and of pathology & cell biology. Her research uses cellular, biochemical, and genetic methods to investigate how proteins are targeted for degradation and endocytosis, with a focus on Huntington's and Parkinson's diseases.

Familiarity with CUMC was a strong factor in inducing all three to return to Washington Heights as members of the faculty.

Dr. Ezratty: "Columbia gives me the best of both worlds—the ability to ask new questions as an early stage independent investigator, while being immersed in an environment that initially molded my interests in cell biology and still instructs my perspective on basic research."

Dr. Yamamoto: "This was an ideal environment in which I could pursue how fundamental biochemical/cell biological events influence neural function. The fundamental neurobiology

lessons for mentoring their own graduate students. Dr. Ezratty recalls being told as a student that the most difficult thing to teach is how to generate new knowledge. "I was well mentored by different faculty members and I look forward to contributing to the environment at Columbia by properly training and mentoring my own students."

"I always tell my students that graduate school is an important time in your life, but a finite one," says Dr. Yamamoto. "Take the time to sincerely think about why you are pursuing your PhD."

Dr. Sussel advises students about life after graduate school. "Make sure you make the most of your postdoctoral experience. It is the one time in your research career where your main responsibilities are to your own research."

"I knew at Columbia I could find an expert in any field. When one aspect of our work moved unexpectedly into neurodevelopment...all I had to do was walk upstairs!"

and translational work in movement disorders was undeniably hard to resist. I knew at Columbia I could find an expert in any field. When one aspect of our work moved unexpectedly into neurodevelopment, Wes Gruber and Carol Mason provided critical help and all I had to do was walk upstairs!"

Dr. Sussel: "I knew that I would have excellent colleagues in both developmental biology and diabetes research and that I would have the opportunity to have outstanding graduate students in my own laboratory."

Of course, CUMC is part of Columbia University and situated in New York City, leading Dr. Yamamoto to note, "Location, location, location."

Having been graduate students at CUMC, Drs. Ezratty, Sussel, and Yamamoto have unique perspectives and now as faculty members have distilled their experience into

Things change at CUMC, even if changes seem imperceptible for those who have not left and returned. Dr. Sussel notes the new research buildings on the east side of Broadway where her laboratory is located. Dr. Ezratty took note of the Starbucks on the corner. "If it was there when I was a student I would have written at least one more paper."

Some things do stay the same, particularly the community of people that make up CUMC. "So many of the faculty and support staff are still here," says Dr. Sussel, "even some of the same security guards are still here and they remember me!"

Outstanding mentors are essential for training outstanding graduate students. Drs. Ezratty, Sussel, and Yamamoto, as former graduate students and current faculty members, have closed the circle and bring new approaches and perspectives back to CUMC.

Alumni News & Notes

Marianne Wolff '52, Alumni News Editor

Peter Wortsman, Alumni News Writer

Additional class notes by
Bonita Eaton Enochs, Editor,
and Peter Wortsman

1951

A few members of the Class of 1951 met July 30 in Northern Manhattan. "Our 63rd reunion was a blast," writes **Dick Banfield** of Stamford, Conn., pictured at right. Others in the photo, from left, are **Man-nie Friedman** of New York City, Anke Nolting from the P&S Alumni Association, **Virginia Kanick** of

this year's alumni reunion. Professor emeritus of clinical surgery at P&S and a living legend in neonatal surgery and the care of pediatric cancer and gastroesophageal reflux, John mentored generations of pediatric surgeons to hone their skills in the treatment of the youngest and most vulnerable. Beyond the walls of the academy,

University and its alumni, the 1994 Practitioner of the Year Award of the Columbia-Presbyterian Medical Center, the 1995 Arnold P. Gold Award (for compassionate patient care and for serving as a humanistic role model for medical students and young physicians), and the 2003 P&S Alumni Gold Medal for Excellence in Clinical Medicine.

ing the Next Generation of Psychiatric Drugs" (2003); and "Making Sense of People: Decoding the Mysteries of Personality" (2011).

Sheldon H. Cherry was appointed associate dean of clinical affairs at the Herbert Wertheim College of Medicine at Florida International University in Miami. Sheldon



Class of 1951 outing

New York City, **Frank Iaquina** of Pelham, N.Y., and **Len** and **Muriel Moss** of Princeton, N.J. "Conversation was very animated and ranged from class anecdotes, world travels, and the introduction for Len's book about aging. Of course, all you guys and gals who were not there got the worst of it. It was such a success that we all wanted to do it again, especially for our 65th."

he reached out for many years on behalf of the Children of China Pediatrics Foundation to treat surgically correctible deformities of Chinese orphans and train young Chinese surgeons to do the same. He received the 1989 P&S Alumni Medal for Meritorious Service to the medical school and its alumni, the 1992 Gold Medal for Conspicuous Service to Columbia

1958

See Alumni in Print to read about a book of poetry written by **Samuel Barondes**. Sam began publishing poems while he was an undergraduate at Columbia College and poetry editor of *Jester*, the college's humor magazine. His grandchildren were the first audience for his poems. He practices psychiatry and does brain research at the University of California, San Francisco, as the Jeanne and Sanford Robertson Professor of Neurobiology and Psychiatry. He has been at UCSF since 1986 and served for seven years as chair of the Department of Psychiatry and director of Langley Porter Psychiatric Institute. In addition to authoring more than 200 original research articles, Sam has written several books for a general audience, including "Molecules and Mental Illness" (1993); "Mood Genes: Hunting for Origins of Mania and Depression" (1998); "Better Than Prozac: Creat-

joined the college in 2011 as professor of obstetrics & gynecology and founding medical student ombudsman. He later became medical director of the physician assistant program. He will continue in those roles in addition to his work as associate dean. Sheldon is a clinician in the reproductive and women's health field and has done pioneering work in intrauterine diagnosis and treatment. He was senior editor of "Complications of Pregnancy," a textbook now in its fourth edition, and he has written several general-audience books on women's health, including "Understanding Pregnancy and Childbirth," a Book-of-the-Month Club classic that has been published in four editions, which are now in their 19th printing and have sold more than 1 million copies. His books have been published in Russia, France, England, Canada, Spain, and Israel. He has been con-



Sheldon H. Cherry '58

1954

Members of the anniversary classes participated in the alumni scientific symposium at this year's alumni reunion. **P. Roy Vagelos**, retired chairman and CEO of Merck & Co. and chair of the Columbia University Medical Center Board of Advisors, gave a presentation on "Development of the Vaccine for Hepatitis B."



John Schullinger '55 with
Martha Welch '71



Samuel Barondes '58

1955

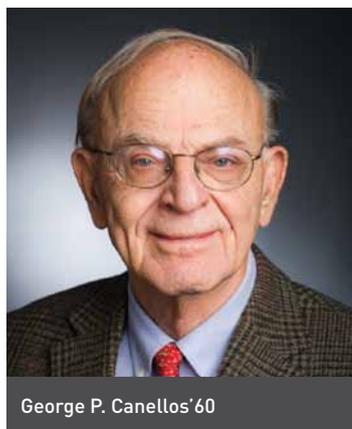
John N. Schullinger officiated as Honorary Alumni Day Chair at

sistently named as a “Top Doctor In America” and to “Who’s Who In The World.” A former faculty member at Mount Sinai School of Medicine in New York City, Sheldon belongs to the American College of Surgeons and the New York Obstetrical Society.

See Alumni in Print to read about the final book in a medical trilogy by **Lawrence W. Norton**. The three-book memoir traces Larry’s surgical training (the first book, “Masked & Gowned”) the use of his surgical training during five years in a mission hospital in northeast India (“Doctor Sahib”), and his career in academic surgery (the new “Operative Notes”). The latest book includes stories of teaching in American medical schools as well as in schools in Uganda, Mongolia, and the Democratic Republic of Congo.

1960

George P. Canellos, who has spent the past 50 years dedicated to the fight against cancer, received an honorary doctorate degree from Hellenic College and Holy Cross Greek Orthodox School of Theology in recognition of his leadership and service. The award was conferred in May at the 72nd commencement of Hellenic College Holy Cross in



George P. Canellos '60

Brookline, Mass. George was clinical associate and senior investigator at the National Cancer Institute and in 1975 became founding chief of medical oncology at Dana-Farber Cancer Institute, a role he filled until 1995. He was the first person to hold the William Rosenberg Chair in Medicine at Harvard Medical School and Dana-Farber Cancer Institute, and he continues on the faculty as professor of medicine. A Fellow of the Royal College of Physicians, he received an honorary doctorate of science from Athens University in Greece, and he served as president of the American Society of Clinical Oncology. He was editor-in-chief of the Journal of Clinical Oncology for 13 years. A Boston native and graduate of Harvard College, George returned to Massachusetts after graduating from P&S for internship and residency at Massachusetts General Hospital.

1962

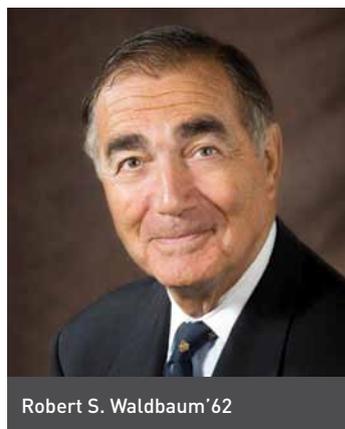
Henry A. Solomon, senior medical adviser and chair of the Professional and Corporate Consortium at the American College of Cardiology, has returned from China, where he was honored guest at a meeting in Beijing of the Chinese Society of Cardiology and a Distinguished Scholar at Shanghai Jiao Tong University School of Medicine.

Robert S. Waldbaum was honored in September at the 2014 Doctors of Distinction golf invitational at the Glen Oaks Club in Old Westbury, N.Y. The event raised money to support American Cancer Society programs. Bob is vice president for physician relations at the North Shore-LIJ Health System. He also is professor of urology at Hofstra North Shore-LIJ Medical School. After graduating from P&S, Bob was a battalion surgeon in the Marines, and he completed his surgical training at Columbia and



From left, alumni reunion gold medalists Larry Norton '72, Martha Welch '71, Allen Costa '14, Nicholas White '14, and Thomas R. Frieden '86 with Honors and Award Committee Chair Kenneth A. Forde '59, Alumni Association President Neil J. Freeman '85, and P&S Dean Lee Goldman

his urology training at Cornell. The founding partner and president of Urology Associates, a group practice of 10 urologists, from 1970 to 2007, Bob also was founding chair of the Department of Urology and director of urology for 30 years at North Shore University Hospital, where he is now chairman emeritus. He served the New York Academy of Medicine as chair of the urology section and was president of the New York section of the American Urological Association. He currently serves as vice president of the American Urological Association Foundation. His many awards include the National Kidney Foundation Award, the Russell W. Lavengood Distinguished Service Award, and the Lifetime Achievement Award from North Shore University Hospital.



Robert S. Waldbaum '62

His patients endowed the Robert Waldbaum and Robert Gardner Professorship in Urology. His name also is on the annual Robert S. Waldbaum Rounds in the Department of Radiation Medicine and the Robert S. Waldbaum Center at the Smith Institute of Urology.

1964

David Forrest has been a regular contributor to the annual CUMC art show since it began in 2010, but this year was special because of his 50-year P&S reunion. To commemorate the anniversary, he submitted pop art and op art pieces from the 1960s. One piece, “Arm & Hammer Soda Bicarbonate,” seems appropriate to the location of the show in the lower levels of the Armand Hammer Health Sciences Center. “Who knew in 1964 that Hammer would be built in '75?” he asks. Though Armand Hammer had no direct connection to Arm & Hammer, a brand in use more than 30 years before Dr. Hammer, a 1921 graduate, was born, Dr. Hammer did own stock in and serve on the board of the company that made the baking soda. “He must have thought it amusing,” David adds. David, clinical professor of psychiatry at P&S, took art courses in high school, took summer classes at the



David Forrest '64

Pratt Institute, and did paste-up and apprentice work in medical illustration at Sudler & Hennessey. He has more than 50 years of experience in life drawing, currently at Spring Studio, the Society of Illustrators, and Salmagundi Club. In the photo, David's painting to the left of his head depicts the Vermont farm of his classmate, **Ted Robbins**. David and his wife, Lynne, join Ted and his wife, Caroline, at the farm every Labor Day weekend. Ted continues to practice in a community mental health clinic that covers Vermont's two southeast counties.

Members of the anniversary classes participating in the alumni scientific symposium at this year's alumni reunion included **Walter Franck**, chief academic officer and physician-in-chief emeritus at Bassett Healthcare in Cooperstown, who spoke about "Columbia Bassett Medical School Program at P&S."

1969

Members of the anniversary classes participated in the alumni scientific symposium at this year's alumni reunion. **Allen C. Steere**, professor of medicine at Harvard Medical

School, presented "A Lyme Disease Journey: From Discovery to the Present."

1970

"After 33 years of clinical practice in Lewiston, Maine, we retired in 2010," write **Edward Z.** and **Candace C. Walworth**. Candace recently joined the board of the Maine Women's Fund after serving as



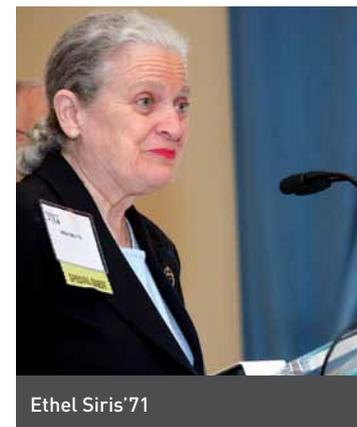
Edward Z. and Candace C. Walworth '70

president of the (dialysis) Network of New England until 2013. "I have done one-month surgical missions with Doctors Without Borders in

Cote d'Ivoire in 2011, Haiti in 2012, and the Central African Republic in 2013," writes Edward.

1971

Ethel Siris received the 2014 Virginia Kneeland Frantz'22 Distinguished Women in Medicine Award at this year's alumni reunion. Ethel, the Madeline C. Stabile Professor of Medicine at P&S and director of the



Ethel Siris '71

Toni Stabile Osteoporosis Center at NewYork-Presbyterian Hospital/Columbia, has worked tirelessly as a clinician, clinical investigator, and

Class of 1964 Reaffirms the Hippocratic Oath

Stephen Nicholas, MD, associate dean for admissions, directed the "re-graduation" ceremony of members of the 50th anniversary class at this year's alumni reunion.

Professor of pediatrics at P&S and of population and family health at the Mailman School of Public Health and a founder of the International Family AIDS Program, Dr. Nicholas is a pioneer in the care of HIV-infected children and an advocate for the medically underserved. "As associate dean for admissions since 2010," said **Neil Freeman '85** in introducing Dr. Nicholas, "he is also the man who monitors the selection of tomorrow's P&S students and our future colleagues. So it is fitting that he should supervise the 're-graduation' of the members of the 50th anniversary class."

Dr. Nicholas invited members of the Class of 1964 to come forward one by one to receive their "re-graduation" certificate, a compilation of remarks from their professors. "We've done a little digging on you from your old student records," he said.

Dr. Nicholas led the members of the class in a recitation of the modernized Hippocratic Oath written by the late **Louis Lasagna '47**.



medical educator in metabolic bone diseases, particularly osteoporosis and Paget's disease of bone. She has focused her research on the study of the class of bisphosphonate compounds in these disorders and on selective estrogen receptor modulators in osteoporosis. She also serves as medical director of the National Osteoporosis Risk Assessment, a public health initiative and extensive longitudinal study of osteoporosis in postmenopausal women in the United States. She is the author of numerous papers and co-editor of the widely used reference work, "The Bone and Mineral Manual." Accepting the award, Ethel noted: "The last time I stood on a stage here in Bard Hall is when I had a bit part in 'A Funny Thing Happened on the Way to the Forum.' I was respectfully advised to keep my day job as a medical student. P&S means a lot to me. I've spent my entire career here. Andy Frantz'55, whose portrait hangs behind me, was my mentor, and so to receive an award named for his mother, another P&S great, is a special honor. And the other very important connection is that I am one of four people in my immediate family who are P&S graduates." (The fellow family alumni are her husband, **Samuel G. Siris'70**, her brother, the late **Joseph A. Silverman'56**, and her daughter, **Sara Siris Nash'05**.)

Martha G. Welch received the 2014 Gold Medal for Meritorious Service to P&S and its Alumni Association



Martha Welch'71 with Ken Forde'59

at this year's alumni reunion. Martha, who holds joint appointments in psychiatry (developmental neuroscience), pathology & cell biology, and pediatrics, has devoted her professional life to the care and service of others, not least of all to P&S and its alumni association. In 1997, after 25 years of practicing child and family psychiatry, she joined the faculty at P&S to translate her bedside findings to the bench. In 2006, she established and became co-director of the BrainGut Initiative. A charismatic past president of the P&S Alumni Association, she has been and remains active on many committees.

1972

At this year's alumni reunion, the 2014 Gold Medal for Outstanding Achievements in Medical Research was presented to **Larry Norton**, deputy physician-in-chief for breast cancer programs at Memorial Sloan Kettering Cancer Center and medical director of the Evelyn H. Lauder Breast Center. Larry made major discoveries that changed the field of oncology and gave new hope to millions. He conceived and expounded the Norton-Simon hypothesis, demonstrating that human tumors grow and shrink in response to therapy according to Gompertzian kinetics, which has led to new, more effective, and better tolerated treatment regimens that are new standards of care around the world. He and his team proved that rather than increasing dosages, decreasing the interval between doses of chemotherapy produced better results while decreasing toxicity. In addition, Larry and his collaborators proved that circulating cancer cells do self-seed tumors, in part because they already established a suitable microenvironment for cancer cell growth.

1974

William Theodore, chief of the clinical epilepsy section of the National Institute of Neurological Disorders and Stroke at the NIH, was among members of the anniversary classes



Donald Quest'70 being interviewed for a video that was shown this fall when the 2014 alumni medalists were honored at the Columbia Alumni Association Leaders Assembly Gala

Donald Quest'70 Receives Columbia's Alumni Medal

Donald O. Quest received one of 10 alumni medals given in 2014 by Columbia University to recognize graduates for distinguished service of 10 years or more to the University. Dr. Quest left Columbia for two years of internship and residency at Massachusetts General Hospital after graduating from P&S and two years as an attending neurosurgeon at SUNY Downstate before returning and spending the rest of his career at P&S.

Born in St. Louis, Dr. Quest attended the University of Illinois on a Navy scholarship and served as a combat pilot in Vietnam aboard the aircraft carrier U.S.S. Kittyhawk. With no formal guidance, he applied to two medical schools while serving in Vietnam and was accepted to both. While waiting to enroll at P&S, he worked as an orderly at Presbyterian Hospital and took organic chemistry at Columbia's School of General Studies.

He was impressed by the quality of his classmates and the Columbia environment, but he felt different from other medical students. "I was older than my fellow classmates. There were very few students who didn't come directly out of college. I had been a warrior for four and a half years. It was a lot more enjoyable studying for biochemistry than getting shot at over Hanoi. I was very grateful that I survived harrowing experiences, not only in combat but landing an airplane on an aircraft carrier is pretty harrowing even when they're not shooting at you. I was a lot more relaxed as a student than some of my fellow classmates who hadn't gone through experiences like that."

At P&S, Dr. Quest found neuroanatomy interesting—though "almost everything appealed to me; that's one of the great things about medicine"—and decided to become a neurosurgeon. "I did some work in the summer after my first year in the operating rooms in neurosurgery and I liked the intellectual challenge. And I enjoyed being around the people who did neurosurgery. J. Lawrence Pool'32 was one of my mentors. He went to P&S, he was a world class neurosurgeon, he was a national squash champion when he was in college. He was an amazing person and one of the most impressive people I have ever met. He mentored me and guided me, and I said I want to be like these people."

At P&S, Dr. Quest rose through the faculty ranks to become the J. Lawrence Pool Professor of Neurological Surgery. He also is an assistant dean for student affairs. He served as vice chair and acting chair of the Department of Neurological Surgery and plays trombone for a neurosurgery jazz quintet. An active member of the P&S Alumni Association for many years, he also served as president of the association for two years.

"I owe a tremendous amount of my career and my life to Columbia and to P&S," says Dr. Quest, "so it's a no-brainer to be involved giving back to the organization, to the university, and to the medical school. In large measure P&S and Columbia have made me what I am. I have been able to fulfill my dream of becoming a doctor, serve my patients, and help lead my department and the medical school in becoming the best that it can be."



The 40-year-old Class of 1974 at this year's alumni reunion.



Andrew M. Kaunitz '78

who participated in the alumni scientific symposium at this year's alumni reunion. He presented a talk titled "Neurology in Zambia."

1975

Alice Prince is shown with her son, Benjamin D. Hopkins, as



Alice Prince '75 with son, Benjamin D. Hopkins, PhD

he receives the Dean's Award for Excellence in Research, Graduate School of Arts & Sciences, during the MD and PhD graduation ceremony at P&S in May. Alice is professor of pediatrics (in pharmacology) at P&S. Benjamin is also the son of the late **Smith Hopkins '75**.

1976

Over the past two years, **Jim Dunford** has served as the emergency medicine expert on several National Quality Forum/Measure Applications Partnership work groups responsible for recommending to the Secretary of Health and Human Services the best measures of quality pertaining to dual eligibles, hospitals, and (most recently) health care affordability.

1978

Andrew M. Kaunitz, professor and associate chairman of obstetrics & gynecology at the University of Florida College of Medicine-Jacksonville, received a University of Florida Research Foundation Professorship award. The award recognizes faculty who have established a distinguished record of research and scholarship that is anticipated to lead to continuing academic distinction.

1980

After arriving in the United States from Ghana with \$12 in his pocket, **Oheneba Boachie-Adjei** used his MD from P&S to build a career as an orthopedic surgeon. Now chief emeritus of the scoliosis service at the Hospital for Special Surgery in New York, Oheneba announced plans to return to Ghana this fall to be "president, CEO, surgeon-in-chief, medical

director, and janitor" of the Foundation of Orthopedics and Complex Spine Orthopedic Hospital in Accra, capital city of Ghana.

Warren Grundfest, professor of bioengineering at UCLA and director of research and technology development at Cedars Sinai Hospital, was honored with the 2014 Pierre Galletti Award for his pioneering work in the development and dissemination of minimally invasive surgery. It is the highest honor bestowed by the American Institute for Medical and Biological Engineering. The author of more than 120 scientific papers in the fields of laser applications of medicine, biologic spectroscopy, microendoscopy, and minimally invasive surgery, Warren was named in "100 Notable People in the Medical Device Industry." The award citation stated: "As surgeon, inventor, and educator, Dr. Grundfest has demonstrated that minimally invasive technology can improve health care delivery while lowering health care costs."

1981

Brenda Aiken became president of the P&S Alumni Association at this year's alumni reunion weekend in May. Brenda, a graduate of Barnard College, is director of medical services at Columbia Health, the student health service for Columbia University. Brenda is the first African-American woman to lead

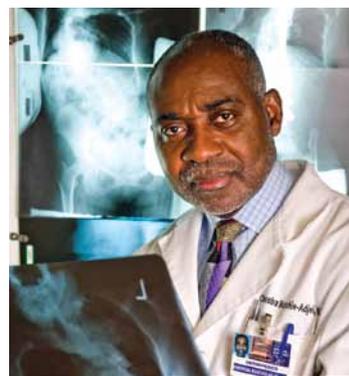
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Oheneba Boachie-Adjei '80



Brenda Aiken '81

the alumni association, where she has served on many committees, mentored promising students, and chaired the Campaign for Diversity Scholarship Fund.

1985

Neil Freeman completed his two one-year terms as president of the P&S Alumni Association.

1986

Thomas R. Frieden, director of the Centers for Disease Control



and Prevention, received the 2014 Gold Medal for Excellence in Clinical Medicine at this year's alumni reunion. His career has encompassed such mega-medical challenges as nipping in the bud a resurgence in multidrug resistant TB in New York City in the early 1990s, coordinating India's campaign to tame the rise of rampant TB, returning to New York in 2002 to address the city's diverse public health challenges as city health commissioner in the Bloomberg Administration, and his current outsize task, supervising the nation's public and preventive health needs, including Ebola (see Page 10). Tom also holds a master's degree in public health from the Mailman School of Public Health. At the CDC, he helped stop an outbreak of avian flu and has been instrumental in the Million Hearts Initiative to help prevent heart attacks and strokes in the United States.

1988

Allen Ho, the retina research director at Wills Eye Hospital in Philadelphia, led surgery in July that restored sight in a 66-year-old blind woman with retinitis pigmentosa. Allen led the team that implanted the new FDA-approved Argus II retinal prosthesis system, often called a "bionic eye," in her eye. The surgical team implanted the microelectrode device on her macula in the back of her eye. The surgery enables her to use wireless



technology activated when wearing a pair of specialty glasses with an attached camera and a video processing unit that transmits images to the brain. Allen and two colleagues at Wills Eye were involved in the early development of the device and refinement of the surgical techniques leading to the approval of the implant, and they were the lead surgeons in implanting some of the first devices in the United States during clinical trials.

At the March dinner meeting of the P&S Alumni Council, **Albert Ruenes**, a urologist based in Doylestown, Pa., riveted attendees with a presentation on "Advancing the Treatment of Prostate Cancer and Obstetric Fistula in Sub-Saharan Africa." The founder 10 years ago of ASSISTS (American-Senegal Surgical Initiative: Surgeons Teaching Surgeons), he travels to Senegal and other coun-

tries in West Africa to teach local surgeons how to treat prostate cancer; more recently he added the repair of obstetric fistula to his medical mission. In a posting on the website of the Doylestown community, he wrote: "As fortunate as I am to live and work in this community, I realized there are people in other parts of the world in desperate need of urological care. If I can help individual patients by teaching, I am expanding the reach of what I do as a

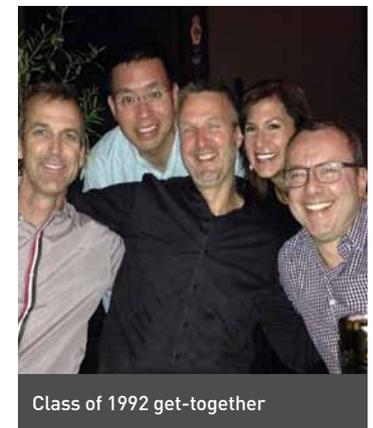


surgeon. It is incredibly rewarding." Of one memorable operation, during which he performed radical perineal resection in Senegal under difficult conditions, notably the breakdown of the air conditioning system, he recalled: "The room was very humid, I was sweating. Multiple times someone had to remove my glasses, clean them, and put them back on." He also spoke of his work repairing obstetric fistula on women with no access to obstetric care who, having survived prolonged obstructed labor, become incontinent and are rejected by their husbands and the entire community as unclean. With the assistance of local personnel, Al has performed countless operations to repair fistulas and hopes to help create a training video to help African surgeons learn the procedure. When his patients in Doylestown heard about his work in Africa, Al said, they provided

the funding to create ASSISTS, a nonprofit organization to support his work.

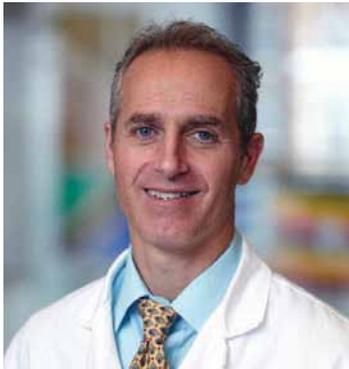
1992

A few members of the Class of 1992 gathered in San Francisco in June. "Great times for all," reported **Jason Flamm**, left, who lives in Sacramento. Also pictured are **Andrew Cheng** of Burlingame, Calif., **John Barrett** of Salt Lake City, **Mary Diana** of Poughkeepsie, N.Y., and **Bill Reeves** of Los Angeles.



1995

Dariush Mozaffarian became dean of the Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University July 1. As a cardiologist and an epidemiologist, Dariush brings a unique skill set to the Friedman School and Tufts. He was recruited from Harvard University, where he was associate professor and founding co-director of the cardiovascular epidemiology program at the Harvard School of Public Health and associate professor in cardiovascular medicine at Harvard Medical School and Brigham and Women's Hospital. He also has a DrPH degree from Harvard. He has written or co-written more than 200 scientific publications on the diet and lifestyle factors that contribute to heart disease, stroke, diabetes, and cognitive decline. Dariush is the fourth dean of the Friedman School, which was



Dariush Mozaffarian '95

founded in 1981 as the only graduate school of nutrition in the country. He is a Fellow of the American College of Cardiology and the American Heart Association and has served in leadership and advisory roles for other groups, including WHO and the United Nations.

1996

The Peter J. Gingrass, MD, Memorial Award, an annual award given by the Plastic Surgery Research Council, recognizes the best paper presented by a medical student or nonplastic surgical resident presenting at the council's annual meeting. The award this year was received by a P&S student, Naikhoba Munabi, working in the lab of **June Wu**.

Devinder Singh was appointed by Maryland Gov. Martin O'Malley as chairman of the State Board of Physicians. Devinder is chief of plastic surgery at the VA Hospital in Baltimore and co-director of the Kernan Hospital Cleft Lip & Palate Clinic. He has been a member

of the board since 2011, when he was then the only plastic surgeon on the board, which regulates all licensed physicians and allied health practitioners in Maryland. Devinder is also associate professor of surgery at the University of Maryland and holds a part-time faculty appointment at Johns Hopkins. In 2012 he was voted a "Top Doc" in cosmetic surgery by Baltimore Magazine. He has completed 12 international surgical missions to provide pro bono humanitarian cleft lip care to children all around the world, including Thailand, Vietnam, Colombia, Guatemala, Dominican Republic, Honduras, and Uganda.

1998 MD/PhD

The Foundation Fighting Blindness, a national nonprofit organization dedicated to sight-saving research, honored **Stephen Tsang** with its Visionary Award at its Banking



Stephen Tsang '98

on a Cure benefit in April, which raised \$1 million for research into prevention, treatment, and cure for vision-robbing retinal degenerative diseases. Stephen is the László Bitó Associate Professor of Ophthalmology and associate professor of pathology & cell biology at P&S. He was honored for his research into inherited retinal degenerations, his internationally recognized contributions to retinitis pigmentosa research, and his advances in gene therapy that have led to clinical trials for RP patients.



Sara Monaco '03

2003

See Alumni in Print to read about two books by **Sara Monaco**. Sara, who was a resident in anatomic and clinical pathology at Columbia after graduating from P&S, is now associate professor of pathology at the University of Pittsburgh Medical Center. She also is program director of the cytopathology fellowship, director of the FNA (Fine Needle Aspiration) Biopsy Service at Children's Hospital of Pittsburgh, and director of the FNA Clinic at UPMC-Shadyside Hospital.

2009

See Alumni in Print to read about a book of short stories by **Jacob M. Appel**. Jacob has authored several award-winning novels and short story collections and has published short fiction in more than 200 literary journals. He has won the New Millennium Writings contest four times, the Writer's Digest grand prize twice, and the William Faulkner-William Wisdom competition in both fiction and creative nonfiction. His work has been short-listed for the O. Henry Award (2001), Best American Short Stories (2007, 2008), and Best American Essays (2011, 2012). When he is not writing, he is a psychiatrist at Mount Sinai Medical Center in New York.

Marianna Shnayderman Yugrakh has joined the neurology faculty at P&S as assistant professor

of neurology in the Division of Multispecialty Neurology and the Headache and Facial Pain Center. She completed her neurology residency at the Neurological Institute before completing a clinical fellowship in headache medicine at Roosevelt Hospital's Headache Institute. She will care for patients with all kinds of headache disorders but also is interested in developing a program for patients who are pregnant or undergoing fertility treatments but suffering from intractable migraines.

2014

Three members of the graduating class were recognized at this year's alumni reunion. **Allen Costa** and **Nicholas White**, co-presidents of the P&S Club, shared the 2014 Gold Medal to a Student in Recognition of His/Her Interest and Devotion to P&S and its Alumni



Allen Costa '14 and Nicholas White '14

Association. Allen also served as co-president of the Columbia chapter of the American Medical Association Medical Student Section, and he attended and helped organize regional and national meetings. Nicholas also applied his creative spark to P&S by co-writing, co-directing, and editing a video for the transition ceremony. **Krishna Khanna** represented the graduating class in remarks delivered at the alumni reunion's gala dinner dance held at the Palace Hotel in midtown Manhattan.

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Karen Kinsell'93: A Committed Primary Care Practitioner in the Deep South

By Peter Wortsman

You can still find arrowheads scattered about if you know where to look, trinkets of the Creek War of 1813-1814. Steamboats came and went, carting off cotton and leaving behind an abandoned opera house, a vintage hardware store, a cluster of reconstructed log cabins, and a historic stockade, all faded traces of bygone glory. Once a hub of commerce and a strategic confederate outpost in the War Between the States, Fort Gaines in Georgia today is a picturesque memento of yore on the Chattahoochee River, county seat of Clay County, a three-hour drive south of Atlanta. The county ranked last in the state health assessment for the second year in a row and was designated by the Georgia Office of Rural Health as the most medically underserved county in the state. Fort Gaines' population of 1,100 comprises 429 households and is roughly 60 percent black and 40 percent white. The town, where the median household income is \$18,300, has one doctor.

In fact, the entire county has only one MD tending to the health needs of some 3,600 people: Karen Kinsell'93. Her patient pool includes many destitute individuals, some of whom cross state lines from nearby Alabama to seek care. She regularly works 10-hour days, seeing between 30 and 40 patients, including many uninsured, and charging a nominal \$10 a visit "if they can afford it, nothing if they can't."

"I have a commitment to the community," says Dr. Kinsell, who also serves as vice chair of the local school board. "I think I make a difference here. If I left, they would be in pretty bad shape."

Columbia Medicine shadowed Dr. Kinsell over two days in October 2013 for an interview-on-the-run, conducted in her car, her office, and the local nursing home, where she stopped by after hours to look in on a patient. The patient was close to a century old and weaving in and out of consciousness, but his smile upon seeing Dr. Kinsell said it all.

Practicing "Where They Didn't Even Know They Needed Me"

A feisty Indiana native not inclined to mince words, Dr. Kinsell, who faced her share of hurdles when she first came to Georgia in 1996 and is still willing to wrangle with the powers that be if the cause is right, says, "I wanted to practice in an underserved area, in a place so 'sorry' they didn't even know they needed me."

They *know*. Local feelings for her run strong. "If I could win the lottery, I would build her the finest clinic she ever had," declares the newly elected Fort Gaines mayor, Tirena Kenyon, who served as Dr. Kinsell's first receptionist. Absent lottery windfalls and public funding, the doctor

makes do with the Clay County Medical Center, in the remodeled, albeit somewhat sagging, premises of a former Tasty Freeze ice cream stand. "It has termites and a tendency to slip into the ditch behind it, but the ceiling holds," says Dr. Kinsell.

"She'll drop whatever she is doing to rush to the rescue," Mayor Kenyon says. "I don't care where she comes from, these are *her* people now. She's one heck of a diagnostician, too, let me tell you. My husband was having severe abdominal pains. It was late at night, so I didn't want to bother her and took him to the little emergency room in the town next door. Big mistake! After writhing in agony for a day and a half, they told him to go home and take Maalox. I finally called her. 'It's his gallbladder,' she said over the phone after I described the symptoms, 'get him to the hospital right away.' He had emergency surgery that afternoon. She saved his life."

From the Midwest to Midtown, from the Bronx to the Backwoods

A graduate of Lawrence University, a liberal arts college in Appleton, Wis., Karen Kinsell initially pursued a PhD degree in human nutrition at Cornell before switching to a program in geriatric social work at Yeshiva University to have a more immediate impact on people's lives. After working for seven years as director of two Times Square area residence facilities for homeless women, many with mental health issues, she decided she needed more training and clout to really make a difference; she revived an old idea to become a doctor.

At age 34, having been out of college for 12 years, she buckled down to take the prerequisite premed courses, scored high on the MCATs, and was admitted to several medical schools, opting for P&S "because it was the most rigorous place I got into...and because it offered a dual degree MD-MPH track with the School of Public Health."

The second oldest member of her class, she was "informed in no uncertain terms that by not starting medical school until age 34 [I] had essentially deprived society of 12 years of being a doctor," Dr. Kinsell recalls. "I know that it takes tremendous resources to train a physician. And you have a responsibility to do all you can with that education. But I still felt I had a lot to offer. My experiences before medical school helped me tremendously to be a better doctor."

She enjoyed the patient contact in the clinical years and particularly relished classes in public health, and the combined experience reaffirmed her belief, as articulated by 19th century German physician, pathologist, and

PHOTOS BY PETER WORTSMAN



public health and social medicine pioneer Rudolf Virchow, that “medicine is politics.”

Among her teachers at P&S, the late Glenda Garvey’69—“Tough! Demanding!”—and pathologist Jay Lefkowitz’76—“Knowledgeable! Cool!”—left indelible impressions. But having decided from the start to pursue a career in primary care while attending an institution that clearly favored specialty training, she admits to having felt “a bit like a fish out of water.” To make matters worse, she fell ill at the end of her second year and had to take a brief leave of absence.

After graduation, Dr. Kinsell pursued training and was chief resident in primary care internal medicine at Montefiore Medical Center and West Central Bronx Hospital, honing her diagnostic skills while treating some of the city’s poorest. “It was grueling and gratifying,” she says, “but there were already a thousand fine doctors floating around in the Bronx, and they didn’t need another.”

Also, the murder of the Chinese restaurant owner across the street from where she lived gave her pause. That and a bad case of asthma aggravated by pollution and cold made her reconsider city life. “I came from a small Midwestern town but didn’t want to go back there either. I wanted an underserved area where it was warm and I could run around in shirt

sleeves most of the year.” She went to the library, got a map and a book of statistics, and considered 10 government-funded clinics for the poor in the Deep South.

She picked a remote corner of Georgia near the Alabama border. But the institutional culture of Albany Area Primary Health Care, an affiliate of Phoebe Putney Health Systems, where she initially decided to practice, did not prove to be a good fit. When her contract was not renewed, Fort Gaines caught her eye as just the sort of place she wanted to practice.

Unsustainable Business Model

Given the current constraints of the American health care system and committed as she is to affordable care, Dr. Kinsell confesses that her business model of charging uninsured patients \$10—or nothing—per visit is “financially completely unsustainable.”

She trained to become a certified application counselor under the Affordable Care Act but remains frustrated by the Georgia governor’s refusal to expand Medicaid, which would permit state residents and doctors to benefit from health insurance, despite the state’s large number of uninsured. “Southwest Georgia,” Dr. Kinsell points out, “has the second highest insurance rates in the state, probably a combination of poverty, ill health, and lack of competition, with only one insurer in the region. It would make life a whole lot easier for all if there were a viable payment scheme in place.”

Economics, she points out, is a major factor in medicine. “Poverty causes and complicates so many conditions and diseases. If you’ve had a heart attack, your prognosis if you’re poor is markedly worse. Your ability to afford the medications and take them correctly is compromised. Poverty colors your expectations of what your life should be like. I’ve had young people come in, and when I ask them what they’re going to do, they reply, dead seriously, ‘Either I’m gonna go to auto-body school or else I’m gonna collect my disability.’”

Medical Detective Work

Dr. Kinsell’s patients often present a complex puzzle of interrelated medical, psychological, and social issues. On the afternoon this interviewer sat in on her practice with consent from patients, Dr. Kinsell saw a self-described “germophobe,” a young woman distressed about a lesion on her lip. “The presenting issue was really nothing, but she needed to have her ills acknowledged.” The next patient was a woman who had just had a knee replacement. She complained of being “tired of just sitting there” in a wheelchair, so she got up to walk prematurely and fell. Next came a young man suffering from chronic pancreatitis brought on by alcoholism. He also was diagnosed with bipolar disorder, and the medicine clearly impacted his demeanor. He found and sold precious arrowheads to supplement meager disability payments. Suspecting addiction, Dr. Kinsell was skeptical of his request for additional prescription painkillers.

“A lot of what I do is medical detective work. In most cases you’re not discovering multiple sclerosis,” she says of her day-to-day practice. “Most of it is figuring out how you can treat whatever your patient walks in with in a way that’s actually feasible. And that’s where you need to get clever about how to get people medications they’re not going to be able



Dr. Kinsell with a nursing home patient

to pay for.” Her commitment to her patients includes helping them apply for prescription assistance plans with major drug companies. Her abiding concern is: “How do you actually make the care happen?”

Her office walls are decorated with inspirational quotes from Christ, Gandhi, Abraham Lincoln, the Dalai Lama, and others. “It catches people’s attention and helps them and me get through the day. In some respects medical care is very similar to religion,” she says. “You go to see somebody dressed in white robes, in a small room, and you tell them all this private information about yourself. There is something in the human brain, a silent suffering that needs to feel acknowledged. It’s the second oldest profession, OK? Before there was any medicinal arsenal to change the course of biological disease, people still needed to turn to healers, shamans, medicine men. A third of all primary care patients are clinically depressed. Most of the people who came in this morning would not have died if I hadn’t seen them. You’re trying to improve the quality of their daily life.”

The Bitter Side of Sweetness

Having already been interested as a graduate student of nutrition in the adverse effects of sugar consumption, every day Dr. Kinsell witnesses the bitter side of sweetness. Very few of her patients are normal weight. “Obesity causes most diabetes, a lot of hypertension, and, in turn, cardiovascular disease, some cancers, depression, and a lot of arthritis. The number of middle-aged women over 250 pounds with arthritic knees is just overwhelming. People hereabouts will frequently drink a six pack of soda pop and other soft drinks a day. And not just teenagers—mothers and grandmothers, too.

“I had a vastly overweight lady almost literally run me down with a shopping cart at the Dollar General the other day to tell me how excited she was to lose 20 pounds. She said it took the pressure off her knees, that she could walk again. Her mother, who is likewise obese, was in the hospital with congestive heart failure. Her son, age 15, drinks nothing but soft drinks. I said, ‘You don’t have to buy it for him.’ She said, ‘If we don’t have it, he’ll put sugar in water and drink that.’”

“To make an accurate diagnosis without any labs or high-tech equipment, and no second opinion from somebody down the hall, that’s the primary challenge. From a professional standpoint it’s an ongoing test of your medical skills.”

She recalls a day last year when, within 24 hours, three young men came in who were over 400 pounds. “The first was 34 with congestive heart failure. The second was 29 with severe hypertension. The third, age 24, over 430 pounds, came in to address some other issue, but didn’t think he had a problem with weight.

“Of course, lack of adequate education is a tremendous part of the problem. The high school graduation rate among adults is under 58 percent,” she says. Teen pregnancy, drug and alcohol abuse, inadequate asthma pre-



Dr. Kinsell and a patient

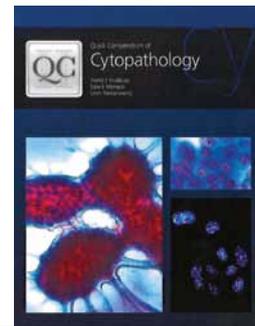
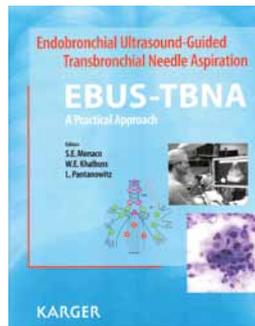
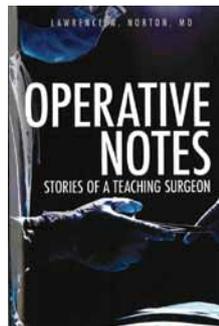
vention, ignorance of basic preventive measures, and the absence of positive role models are among other health issues. As vice chair of the local school board, she has tried to make a modest difference. In recent years she also has written a health column in the local newspaper.

A Job That’s Never Boring

All things considered, she relishes the opportunity to practice primary care medicine the way she wants. In a remote rural practice, “you have to figure everything out for yourself. Well, heck, if I had an X-ray machine, it’d be pretty easy, wouldn’t it? To make an accurate diagnosis without any labs or high-tech equipment, and no second opinion from somebody down the hall, that’s the primary challenge. From a professional standpoint it’s an ongoing test of your medical skills.”

Dr. Kinsell thinks of her practice as “doing Peace Corps work with cable. It may not be as exotic as, say, practicing in sub-Saharan Africa, [but] you’ve got more creature comforts—cable TV, Internet, and such. But what makes the American Deep South any less valuable or worthy or interesting than any other culture?”

Dr. Kinsell has been saluted as a Lions Club “Woman of the Year” and named a National Library of Medicine “Local Hero.” But the real payoff is in the practice. “Would I recommend this kind of lifestyle to others?” she asks. “I like living in a little town and seeing people at the supermarket, seeing what they buy and knowing what they talk about. It helps me be a better doctor. It’s a small enough venue so that you can really make and see a difference. Nothing about this job is *ever* boring! I don’t have any hospital administrators to second guess what I do. I call all the shots. It’s Disneyland for a doctor,” she adds, before once again reasserting a serious medical mien. “And yes, it’s good to know I’m needed.”



alumni *in print*

By Bonita Eaton Enochs, Editor

Before I Sleep/poems for children who think

Samuel Barondes '58

North Street Steps Press, 2014

In "Before I Sleep," Dr. Barondes combines whimsical illustrations by Mark Wooding with poems he recently wrote that he calls contemporary successors to Robert Louis Stevenson's "A Child's Garden of Verses." "Each is about experiences at home, at school, or at play," writes Dr. Barondes. "Each invites children to develop a poetic awareness of themselves, of others, and of their place in the world." The book includes this poem of introduction to the collection:

To the Reader

When a child prepares for bed
And a story will be read
You may wish to take the time
To include a little rhyme.

One designed to entertain
And inspire a growing brain
Helping it to figure out
What the world is all about.

And if you would like to see
Samples of such poetry
Here are some I hope will please,
Why not start with one of these.

Operative Notes: Stories of a Teaching Surgeon

Lawrence W. Norton '58

Xulon Press, 2014

"Operative Notes" is the final book of a trilogy by Dr. Norton that traces his surgical training, his work in a mission hospital in India, and his years of teaching in medical schools in America and abroad. "Operative Notes" begins with Dr. Norton's culture shock in operating on patients with knife and gunshot wounds in Denver soon after his return from five years in India, where such trauma was seldom seen. Along the way Dr. Norton describes with transparency his clinical victories and defeats in treating patients suffering with life-threatening conditions. In doing so he opens doors to the mysteries of operating room behavior, doctor-patient relationships, and camaraderie among surgeons both in the United States and overseas.

Endobronchial Ultrasound-Guided Transbronchial Needle Aspiration (EBUS-TBNA): A Practical Approach

Sara Monaco '03

Karger, 2014

Quick Compendium of Cytopathology

Sara Monaco '03

ASCP Press, 2013

Dr. Monaco is one of three editors of "EBUS-TBNA: A Practical Approach," a reference book that focuses on the clinical, technical, and pathological aspects of endobronchial ultrasound-guided transbronchial needle aspiration. It covers the procedure from the clinical perspective, technical aspects, and cytomorphology of common and uncommon entities and highlights diagnostic challenges. Dr. Monaco is one of three authors of "Quick Compendium of Cytopathology," the latest in the American Society for Clinical Pathology Quick Compendium Series. This edition has been upgraded with more than 900 full color images illustrating key cytomorphologic features, results of ancillary studies, and diagnostic pitfalls.

Einstein's Beach House

Jacob M. Appel '09

Pressgang, 2014

Dr. Appel's latest collection of short stories includes tales about a couple who adopt a depressed hedgehog; a stranger who shows up and claims to be the father of a girl's imaginary friend; a woman who kidnaps her ex-husband's turtle; and a family evicted from a home that may not have been theirs. The eight stories in Dr. Appel's book examine how we deceive ourselves and others in the quest for something far more real. As one reviewer put it, "Lives are coming apart, and coming together, in stories that live with you long after you've read them."

send books (published within the past two years) to:

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Send inquiries about books to
columbiamedicine@columbia.edu



Leonard C. Harber



Alfred Jaretzki III



Alfred R. Lenzner '43



Charles "Dave" Price '44



Gene H. Stollerman '44

FACULTY

Leonard C. Harber, MD, chair of the Department of Dermatology from 1973 to 1989 and the Rhodback Professor Emeritus of Dermatology, died Oct. 12, 2014. He also was professor emeritus of public health (environmental health sciences).

Dr. Harber is credited with building the department into a modern academic department that has a strong emphasis on basic science and is highly regarded for its educational programs.

During his tenure as chair, Dr. Harber established one of the world's foremost centers dedicated to the phototherapy of skin disorders, such as psoriasis. He was a distinguished clinical researcher and one of the leading academic dermatologists of his generation, pioneering innovative diagnostic and therapeutic techniques now widely used in managing patients with photosensitivity diseases. In 1978, a research team led by Dr. Harber developed an animal model to detect chemicals in the environment that interact with sunlight to cause contact dermatitis.

Dr. Harber was the fifth chair of the Department

of Dermatology, which grew out of the affiliation between P&S and Presbyterian Hospital in the early 20th century.

OTHER FACULTY DEATHS

Geary Ahern, MD, assistant professor of psychiatry, died April 24, 2014.

Stanley B. Braham, MD, retired associate clinical professor of urology, died March 27, 2014. (See Alumni In Memoriam, Class of 1947, for more information.)

Israeli A. Jaffe, MD, professor emeritus of clinical medicine, died Sept. 24, 2014. (See Alumni In Memoriam, Class of 1950, for more information.)

Alfred Jaretzki III, MD, professor emeritus of clinical surgery, died May 29, 2014.

Alvin I. Krasna, PhD, professor emeritus of biochemistry & molecular biophysics, died Jan. 27, 2014. (See Alumni In Memoriam, Class of 1955 PhD, for more information.)

Imre Redai, MD, former assistant professor of anesthesiology, died June 21, 2014.

Joseph Sweeting, MD, professor of clinical medicine, died April 29, 2014. (See Alumni In Memoriam, Class of 1956, for more information.)

ALUMNI 1943

Alfred R. Lenzner, a retired internist specializing in endocrinology, died March 23, 2014. For more than two decades Dr. Lenzner headed the diabetes clinic at Buffalo General Hospital in Buffalo, N.Y., before transferring to Kenmore Mercy Hospital in Kenmore, N.Y. He spent his military service in the U.S. Army Medical Hospital in Würzburg, Germany. Preceded in death by his wife, Jean, he is survived by a daughter, a son, and three grandchildren.

1943D

Paul J. Bilka, a retired rheumatologist and generous supporter of P&S, died Oct. 30, 2013. He was 94. After a medical residency at the Hartford Hospital in Connecticut, he moved to the Mayo Clinic in Rochester, Minn., for a fellowship in rheumatology. He later opened the first rheumatology practice in Minneapolis and was a founding member of the National Society

of Clinical Rheumatology. He was recognized as a master of the American College of Rheumatology in 1992. Dr. Bilka also was an inspiring teacher, establishing the first rheumatology training program at the University of Minnesota. Dr. Bilka also produced several educational films on joint examination and joint aspiration-injection techniques distributed to medical schools, both American and foreign. He and his wife, Madge, who preceded him in death, established endowed funds and scholarships at Trinity College, his undergraduate alma mater, Carleton College, Case Western School of Nursing, the Mayo Clinic, the Abbott Northwestern Hospital Medicine Clinic Department of Medical Education, and P&S.

1944

Charles "Dave" Price, a retired surgeon, died May 3, 2014. Dr. Price, the great-grandson of Florida pioneers, lived through the Great Depression, World War II (he served in the U.S. Army Medical Corps), and the Korean conflict (he served as chief of surgery at Keesler Air Force Base in Biloxi, Miss.). Before attending medical school

he earned a master's degree in parasitology from New York University and worked with the New York Zoological Society. For many years he served as chief of staff and board member of Winter Park Memorial Hospital in Orlando, Fla. In his spare time he played piano and pipe organ. Preceded in death by his wife, Frances, he is survived by two sons, four grandchildren, and five great-grandchildren.

Gene H. Stollerman, a pioneer in geriatrics and renowned researcher in rheumatic, immunologic, and infectious diseases, died of heart failure Aug. 1, 2014, at age 93. Dr. Stollerman taught on the faculties of numerous institutions, including the University of Tennessee, where he served as Goodman Professor and chairman for more than 15 years; Northwestern University; and Boston University, where he was emeritus professor of medicine and public health. He was affiliated with Irvington House at New York University and the VA Medical Center in Vermont. He helped in the development of a safe and effective multivalent streptococcal vaccine. His research received more

than 40 years of uninterrupted funding from the NIH. A past president of the Association of Professors of Medicine and of the Central Society for Clinical Research, he was a master, regent, and vice president of the American College of Physicians, a master of the American College of Rheumatology, and a founder of the Infectious Disease Society of America. He served for 25 years as editor of *Advances in Internal Medicine* and of *Hospital Practice Magazine* and for six years as editor of the *American Journal of Geriatrics*. The author of more than 200 peer-reviewed publications, including textbook chapters, articles, and a monograph, he also published a memoir, "Medicine: A Love Story," included in the Spring 2013 issue of *Columbia Medicine*. Among countless honors, a chair was endowed in his name at the University of Tennessee and he received the Mentor Award of the Infectious Disease Society in recognition of a lifetime of service as mentor of infectious disease professionals. Preceded in death by his first wife, Corynne, his second wife, Vita, and a daughter, he is survived by a daughter, a son, and three grandchildren.

1945

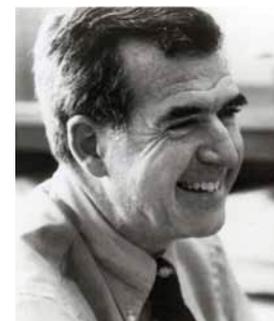
Albert Stunkard, a psychiatrist and pioneer in eating disorders and obesity research, died July 12, 2014, at age 92. Emeritus professor of psychiatry at the University of Pennsylvania, Dr. Stunkard was best known for his landmark studies proving the genetic basis for obesity in humans. As an investigator, he studied the efficacy of more than a dozen therapies for obesity and is considered one of the fathers of behavior modification as an effective treatment regimen. The author of nearly 400 papers, he was responsible for advances in the classification and understanding of such life-threatening eating disorders as bulimia and purging. A lifelong investigator of deviant eating patterns, he was the first to describe binge eating and to develop a treatment. He was the recipient of many awards, including an honorary MD from the University of Edinburgh, the Order of Leopold II of Belgium, the Distinguished Service Award of the American Psychiatric Association, the Samat International Prize of the Institute of Medicine, and the Gold Medal for Distinguished Achievements in Medicine of the P&S

Alumni Association. He is survived by his wife, Margaret, a stepdaughter, and two stepgrandchildren.

1946

Arnold S. Relman, former editor of the *New England Journal of Medicine* and a passionate voice in the debate about the American health care system, died June 17, 2014, his 91st birthday. The cause of death was melanoma. Committed to the end, he was correcting the galley of his last article at the time of his death. For 13 years Dr. Relman served as editor-in-chief of *NEJM*, the oldest continuously published medical journal in the world. He expanded the journal to include a forum for debate of economic, ethical, and public policy issues, and readership soared under his leadership. In an early editorial he wrote, "We should not allow the medical-industrial complex to distort our health care system to its own entrepreneurial ends." He believed that medicine should be practiced without financial incentives with the goal of doing what is best for the patient and predicted the need for a federal umbrella for health care. Graduating from Cornell University, where he majored in philosophy, Dr. Relman embraced medicine as a humanistic calling. Teach-

ing on the faculties of the Department of Medicine at Boston University, where he was appointed the Conrad Wesselhoft Professor of Medicine, and the University of Pennsylvania, where he was named chairman of medicine, he subsequently moved back to Boston and became professor of medicine at the Harvard Medical School and senior physician at the Brigham and Women's Hospital. His research in nephrology and electrolyte and acid-base balance was documented in numerous publications, including chapters in textbooks. He co-edited with F.J. Ingelfinger and M. Finland two editions of "Controversy in Internal Medicine," in 1966 and 1974. A former editor of the *Journal of Clinical Investigation* (1962-1967), he took the reins of *NEJM* in 1977 and retired in 1991. His many encomia included honorary degrees from the University of Pennsylvania, the Medical College of Wisconsin, Brown University, Union University, the State University of New York, the Medical College of Ohio, Temple University, Mount Sinai Medical School; the Alumni Gold Medal of the College of Physicians and Surgeons of Columbia University in 1981; and the 2002 Polk Journalism Prize, shared with his wife,



Arnold "Bud" Relman '46

Dr. Marcia Angell, who survives him, with whom he co-authored a study of the pharmaceutical industry. In 1993 he served on the Health Professionals Review Group for the White House. In 1995 he was appointed to the Board of Registration in Medicine of the Commonwealth of Massachusetts and chaired the board's Quality of Care Committee for the next six years. Divorced from his first wife, Harriet Vitkin, he is also survived by a daughter, two sons, two stepdaughters, six granddaughters, and four stepgrandsons.

1947

Stanley B. Braham died March 27, 2014. He was a well-known urologist and associate professor of urology at P&S who helped train many of the most accomplished urological surgeons. He also was an innovator in surgical techniques. Dr. Braham was a passionate golfer and co-founder of the World of Golf, which grew to become the largest golf retailer in New York City. He is survived by three children.

Hiroemishi Tsuda Narahara, a retired internist and research endocrinologist, died March 20, 2014, at age 90. A native of Tokyo, Dr. Narahara grew up in New

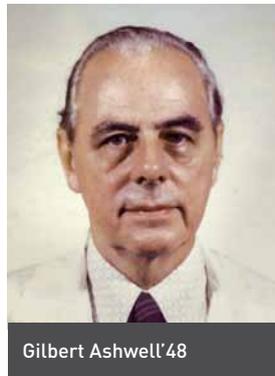


Hiromishi Tsuda Narahara '47

York City and attended Columbia College. He taught on the faculties of the University of Washington and Washington University in St. Louis, where he was a member of the research team headed by Nobel laureate Carl Cori. He later pursued research in endocrinology and toxicology in the laboratories division in the New York State Health Department in Albany. Preceded in death by his wife, Ruth, Dr. Narahara is survived by a daughter, three sons, and seven grandchildren.

1948

Gilbert Ashwell, a renowned researcher at the NIH, died June 27, 2014. For much of his career Dr. Ashwell served as chief of the Laboratory of Biochemistry and Metabolism at the Institute of Arthritis, Metabolism, and Digestive Diseases, where he was best known as the co-discoverer of the asialoglycoprotein receptor in the liver, now also known as the Ashwell-Morell receptor and perhaps the first receptor ever described. Researchers worldwide use the basis of Dr. Ashwell's work with Anatol G. Morell to deliver drugs specifically to the liver. An earlier focus of Dr. Ashwell's research was intermediary metabolism. He is credited with the



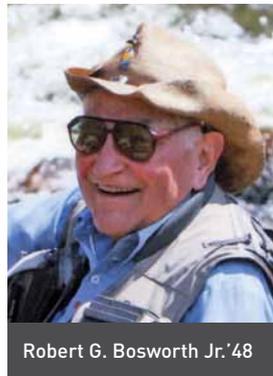
Gilbert Ashwell '48

discoveries of D-xylulose phosphate as an intermediate in the pentose cycle; several intermediates in the catabolism of vitamin C; and beta-ketogulonic acid as an intermediate in the synthesis of L-xylulose, the key sugar in pentosuria, a carbohydrate metabolism disorder. He received the Gairdner Foundation Prize, the ASBC-Merck Prize, an honorary degree from the University of Paris, and the Alexander von Humboldt Foundation Senior Scientist Award. He was a member of the National Academy of Sciences. Survivors include a daughter, a son, and two grandchildren.

Robert G. Bosworth Jr., a retired internist, died April 29, 2014, at age 90. A native of Denver, he returned there after medical school to pursue a private medical practice, specializing in diabetes. A past president of the Colorado Medical Society, he was a life member of the American College of Physicians. Dr. Bosworth served in the U.S. Army during the Korean conflict. Survivors include his wife, Alice, two daughters, and three sons.

1950

Israeli A. Jaffe, professor emeritus of clinical medicine at P&S and a revered



Robert G. Bosworth Jr. '48

rheumatologist, died Sept. 24, 2014. A member of the P&S faculty for many years, he was a former director of medical education at Roosevelt Hospital. He served for close to two decades as director of the rheumatic diseases service at New York Medical College. He was credited with the discovery of the use of D-penicillamine, a medication used to treat rheumatoid arthritis. Widely published in the top medical journals, including the New England Journal of Medicine and Lancet, he received the Lifetime Achievement Award from the Arthritis Foundation and was a Master of the American College of Rheumatology. His passions outside of medicine included classical music and fine wines. He was compelled to retire, incapacitated by an infected prosthetic hip. Survivors include his wife, Judith, three daughters, and two grandchildren.

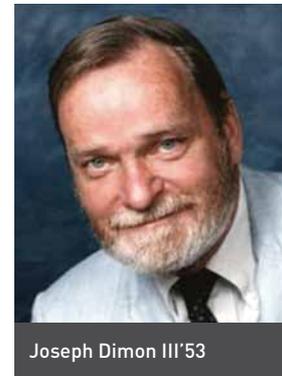
1951

Nicholas P. Christy, a distinguished endocrinologist, longtime professor of medicine at P&S, and eloquent medical man of letters, died April 26, 2014. He served in the U.S. Naval Reserve from 1942 to 1946, stationed in the South Pacific and the Western Theater. Dr. Christy served



Nicholas P. Christy '51

for more than a decade as director of the Department of Medicine at Roosevelt Hospital, then as chief of staff at the VA Medical Center in Brooklyn. A former editor-in-chief of the Journal of Clinical Metabolism and editor and co-author of "The Human Adrenal Cortex," published by Harper & Row, he co-authored more than 100 peer-reviewed articles in the New England Journal of Medicine, the American Journal of Medicine, the Journal of Clinical Endocrinology, JAMA, and other prestigious publications. He also wrote about medical aspects of musicology, one of his abiding passions, including a paper on the cause of death of Austrian composer Gustav Mahler. Ever adamant about the need for clarity in writing, particularly medical writing and all communications between doctor and patient, Dr. Christy received the 1989 Harold Swanberg Award for contributions to medical communication from the American Medical Writers Association. His regular profiles of illustrious P&S professors were for years a popular feature in *P&S* (now known as *Columbia Medicine*). A past president of the Century Association, he presided over the



Joseph Dimon III '53

admission of women to the organization. Preceded in death by his first wife, Beverly, he is survived by his second wife, Caroline, a daughter, a son, a stepdaughter, two stepsons, and three grandchildren.

1953

Joseph Dimon III died March 24, 2014, at his home in Atlanta. Dr. Dimon was one of three doctors who founded the Peachtree Orthopedic Clinic, where he practiced for 40 years. From 1969 to 1975, he also worked as team physician to the Atlanta Hawks and, more recently, served as chief of orthopedic surgery at Piedmont Hospital. Dr. Dimon's achievements included serving as state chairman of the Georgia Orthopedic Research and Education Foundation. He was clinical professor of orthopedics at Emory University, professor and chair of orthopedic surgery at the Medical College of Georgia, and chair of the Education Committee at Piedmont Hospital. He also served as president of the Georgia Orthopedic Society, the Atlanta Orthopedic Society, the Association of Bone and Joint Surgeons, and the Society for Arthritic Joint Surgery. He was a member of the American Academy of Orthopedic

Surgeons and the American Orthopedic Association. A generous supporter, teacher, and advocate of numerous causes, Dr. Dimon went on rotation with his clinic partners to work in Haiti over the course of 35 years. He also was a visiting professor to India, Mexico, and the Dominican Republic. He was involved in the professional training and development of orthopedic nurses and was a member of the Board of Directors of Medicine and Ministry. He is survived by his wife of 63 years, Annie Mitchell Dimon, five children, and five grandchildren.

Herbert E. Poch died March 18, 2014. After graduating from P&S, he completed his pediatric training at Babies Hospital. Remembering his modest roots, he was deeply committed to service within the community. In the days before development of substantial insurance options, he cared for a large number of patients pro bono. From the time of his graduation, he taught medical students as a volunteer at P&S. He was preceded in death by his wife, Leila Kosberg, and is survived by three children.

Benjamin M. Wright, a retired internist and former director of occupational medicine at Princeton

University, died Feb. 24, 2014. Dr. Wright served in the U.S. Army during World War II, sailing on the troop carrier S.S. America to Naples, Italy, and later landing in the Philippines on V.J. Day. Following his military service he joined the Princeton Medical Group, a group practice to which he belonged for close to three decades. He also served as medical director of the Merwick Nursing Home Unit. In 1985 he became the founding director of the occupational medicine section of Princeton University Health Services, where he treated students, identified potential health hazards in the workplace, and promoted the creation of smoking cessation groups for university employees. He was a founding member of the P&S Bards, a medical student glee club, which sang at the group's 50th reunion in 1998. Dr. Wright is survived by his wife, Lieske, two daughters, two sons, and 11 grandchildren.

1954

Philip W. Brickner died March 24, 2014, at age 85. The cause was prostate cancer. He had a 40-year career as founding chair of the Department of Community Medicine at St. Vincent's Hospital and as

director of tuberculosis studies at Mount Sinai Hospital, both in New York City. In an obituary in the New York Times, Dr. Brickner was lauded for his efforts to modernize home care. At St. Vincent's, he established a groundbreaking program for the homeless residing in single room occupancy hotels. An interview with Dr. Brickner, published by the National Health Care for the Homeless Council, described how he and another doctor found 1,200 men housed in an SRO hotel in Greenwich Village in 1969. "About 200 men were elderly men on small pensions or Social Security income, who had lived there for decades. About 400 men were deteriorated alcoholics of middle age, and about 600 men were drug addicts, younger men, placed there by New York City following their discharge from Riker's Island, where many had been incarcerated for drug-related crimes." The hotel proprietor gave the doctors three rooms to use as a clinic. "We established a free clinic, staffed three days a week by physicians from St. Vincent's. We saw any man who wanted health care." The program grew to other locations and in 1983, Dr. Brickner directed the Health Care for



Herbert E. Poch '53



Benjamin M. Wright '53

the Homeless Demonstration Program of the Robert Wood Johnson Foundation, the Pew Memorial Trust, and the U.S. Conference of Mayors. The team oversaw the implementation of projects in 19 cities, based on Dr. Brickner's work in New York. That work became the basis of a federal program that now funds 249 homeless health care projects throughout the nation. "The Department of Community Medicine greeted our homeless men and women with open arms. We take health care to where people are located," Dr. Brickner said. He also worked with collaborators to fight a resurgence in tuberculosis in homeless shelters using ultraviolet light to kill germs, an approach dating from the 1930s. Even after antibiotics were developed to kill the bacteria that cause TB, the disease reappeared among the homeless. His work with the Harvard School of Public Health and other collaborators earned two patents for devices to generate germ-killing ultraviolet light. He is survived by his wife, Alice, three children, and seven grandchildren.

John Bingham Ellison, a retired general surgeon, died March 22, 2014, in Chester, Conn., at age

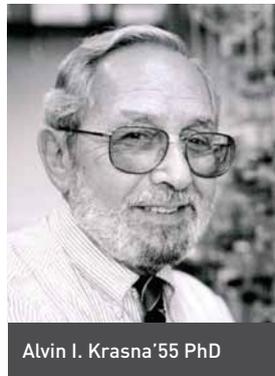
88. He served in the U.S. Army in the Philippines during World War II. Dr. Ellison, who took pride in being the first left-handed surgeon to graduate from P&S, trained in surgery at St. Luke's Hospital, then moved to Middletown, N.Y., where he began a private practice and maintained a longstanding affiliation with Horton Memorial Hospital. He served several terms as chair of the Department of Surgery, served as chief of staff, and performed the hospital's first pacemaker implant. He served on the executive board of the South Winds Retirement Home. Preceded in death by his first wife, Louise, he is survived by his second wife, Patricia, one daughter, four sons, and seven grandchildren.

1955

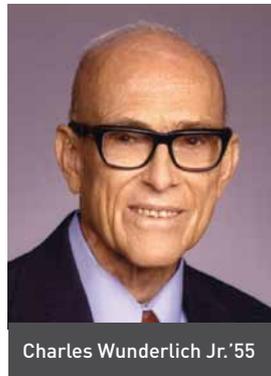
Harold F. Spalter, professor emeritus of clinical ophthalmology at P&S, died July 4, 2014. A captain in the U.S. Air Force, he was the first ophthalmologist assigned to USAF Third Air Force stationed in London. Best known for early research on laser treatment for diabetic retinopathy, Dr. Spalter was awarded the Dunnington Medal of the Edward S. Harkness Eye



John B. Ellison '54



Alvin I. Krasna '55 PhD



Charles Wunderlich Jr. '55



Joseph Sweeting '56



Alice Brandfonbrener '57

Institute for outstanding ophthalmic achievement. He chaired the Scientific Advisory Panel of Research to Prevent Blindness and was a member of the Board of Trustees and Medical Advisory Board of Helen Keller Worldwide. Preceded in death by his first wife, Josie, he is survived by his second wife, Diane, a daughter, and three sons.

Charles Wunderlich Jr., a retired pediatrician, died May 1, 2014. He pursued a private practice at Suncoast Medical Clinic, where he specialized in children's developmental issues. Dr. Wunderlich later became a pioneer in nutritional medicine. He was the author of books and articles on issues relating to nutrition and health. Preceded in death by his wife, Elinor, he is survived by two daughters, two sons, and six grandchildren.

1955 PhD

Alvin I. Krasna, professor emeritus of biochemistry & molecular biophysics at P&S, died Jan. 27, 2014. He was associated with the biochemistry department for more than 60 years, beginning as a graduate student with Dr. David Rittenberg. Dr. Krasna received a BA degree summa cum laude from Yeshiva University in 1950

before earning a doctorate from Columbia. He twice served as acting chair of the Department of Biochemistry, from 1977 to 1978 and from 1988 to 1990; he also served as the department's vice chair for more than 30 years. Dr. Krasna was voted Teacher of the Year by first-year P&S classes in 1982 and 1985, and he received the Charles W. Bohmfalk Award for Distinguished Contributions to Teaching in the Preclinical Years in 1992. After his official retirement in 2005, Dr. Krasna was appointed a special lecturer, and at the time of his death he had just finished teaching General Biochemistry G4021, a course he taught since 1960. Dr. Krasna's research career was devoted to understanding the enzyme hydrogenase, which catalyzes uptake and evolution of hydrogen gas in bacteria and algae. Between 1952 and 1990, Dr. Krasna published more than 60 papers, many of which continue to garner citations in the literature.

1956

Joseph Sweeting, a respected gastroenterologist, longtime professor of clinical medicine at P&S, and revered mentor to generations of physicians, died April 29, 2014, at age 84.

He was an icon in the halls of Presbyterian Hospital, partly on account of his height, but also because of his clinical acumen, gentleness, patience, and soft spoken manner, making him a favorite among patients, house staff, and medical students. The first in his family to graduate high school, he attended the College of the Holy Cross in Worcester, Mass. In lieu of military service he served in the Indian Health Service, first at the Kiowa Indian Hospital in Oklahoma and then at Fort Belknap Indian Reservation in Harlem, Mont. Returning to New York, he pursued a private practice in internal medicine and joined the faculty of the Department of Medicine at P&S. He served as a chief of service at Presbyterian Hospital, Harlem Hospital, and the Allen Pavilion for more than 25 years. Dr. Sweeting was a prolific writer of peer-reviewed articles on intestinal themes and a past president of the New York Gastroenterological Association. He received the first Distinguished Clinician Award offered by the American Gastroenterological Association in 1997. Officially retiring in 2006, he continued to teach as the H. William

Harris Visiting Professor in several hospitals in China and Taiwan, where he helped introduce bedside teaching methods. CBS News medical correspondent Jonathan LaPook'80 saluted his former professor as "the epitome of patience, a calming, supportive teacher with a pinch of psychiatrist thrown in for good measure, a perfect blend of humility, expertise, and kindness." Dr. Sweeting is survived by his wife, Patricia, six sons, and seven grandchildren.

William "Peter" Weiss died Jan. 14, 2014, in Germantown, N.Y. He also earned an MPH degree from Johns Hopkins. Before entering private practice in Vermont in 1974, he worked as a research scientist at the NIH. His hobbies included designing and building his own home in the Chester Woods. He participated in the Civil Rights Movement of the 1960s and promoted women's rights. He is survived by his wife of 53 years, Joan, four children, and seven grandchildren.

1957

Alice Brandfonbrener, a retired internist who specialized in the care of

performing artists, died May 31, 2014, at 83. She served for some years as a staff physician in the Student Health Service at Northwestern University, where she subsequently specialized in the medical care of instrumental musicians and was appointed assistant professor in the Department of Physical Medicine and Rehabilitation. Dr. Brandfonbrener lectured extensively on the medical problems of musicians and dancers. Co-editor of the "Textbook of Performing Arts Medicine," she also published 12 book chapters on musculoskeletal problems of instrumental musicians. Preceded in death by her husband, Martin Brandfonbrener, MD, she is survived by four children, two of whom are professional string instrumentalists.

1958

Thomas J. Theobald, a retired internist, died July 17, 2013, at 83. He completed a research fellowship in hematology and radiation biology under the tutelage of Nobel Laureate L. Donnell Thomas in Cooperstown, N.Y. After serving in the U.S. Air Force in Wiesbaden, Germany, he settled in Streator, Ill., where he practiced internal medicine. He maintained an

affiliation with Streator Hospital, setting up the hospital's first coronary care unit, and with St. Mary's Hospital, placing the first cardiac pacemakers in patients. Also certified in transactional analysis, he and his wife, Doreen, who survives him, practiced psychotherapy. Other survivors include two daughters, two sons, 16 grandchildren, and six great-grandchildren.

Donald F. Wilcox died Feb. 20, 2014, at age 84.

He trained in ob/gyn at Stanford Hospital in California after serving as an Army doctor in the Howitzer Battalion 75th Artillery in Germany. He joined the San Rafael Medical Group and served as chief of the Department of Obstetrics & Gynecology at Marin General Hospital. He also was past president of the San Francisco Gynecology Society and past president of the UCSF Clinical Faculty Association. He is survived by his wife, Sha-

ron, two daughters, and two granddaughters.

1960

Joshua Hollander, professor emeritus of neurology at the University of Rochester and a longtime medical director of the stroke unit of Rochester General Hospital, died July 22, 2014, at age 77. Dr. Hollander pioneered the use of the clot-busting drug tPA to treat stroke and was a proponent of the team approach to neurological care. His fields of research

included the study of stroke prevention among African-Americans and the use of medications to prevent a second stroke. In his free time Dr. Hollander was an active member of the Genesee Region Orchid Society. He is survived by his wife, Sheila, a daughter, and two sons.

1962

Robert B. Winslow, a plastic surgeon, died July 15, 2014. He served in the U.S. Air Force and for many years pursued a private practice in Raleigh, N.C. He taught on the faculty in the Division of Plastic and Reconstructive Surgery of the University of North Carolina in Chapel Hill and later moved to Lake Tahoe, Calif., where he practiced until his retirement. He is survived by his wife, JoAnne, two daughters, a son, and eight grandchildren.

1963

Dean Scott Wood died March 21, 2014, at age 76. After two years of postgraduate training in medicine, he served in Vietnam, assigned to the 85th Evacuation Hospital near the city of Qui Nhon. Of 14,000 admissions, half were medical problems, such as malaria, and half were related to battle

wounds. He practiced family medicine in the San Fernando Valley for 17 years. His career changed when he joined a "doctor house call practice" from which he retired in 2002. He is survived by his wife, Jaren, a daughter, and many grandchildren.

1965

Virginia Biddle died March 28, 2014, at age 84 after a long illness. She became a medical technician and took a job in Nagasaki, Japan, as a medical director of a research laboratory for the Atomic Bomb Casualty Commission. In Falmouth, Mass., she opened her own practice, was director of a nursing home, and directed continuing medical education at Falmouth Hospital. Before retiring in 2006, she practiced medicine in Ellsworth, Maine. Her spare time was devoted to horseback riding, skiing, and sailing. She is survived by two sisters and one brother.

Robert F. Bohnen died Feb. 28, 2014, in Klamath Falls, Ore. His postgraduate training was in hematology/oncology at the University of Utah. He served for two years in the Peace Corps and the Public Health Service. He



Jonathan Tang '16

Third-year medical student Jonathan "Jon" Tang died in a September kayaking accident in upstate New York.

Lisa A. Mellman, MD, senior associate dean for student affairs, called Mr. Tang someone who brought people together using his uplifting and cheerful personality. "Over the years, he grew close to many students and faculty. Growing up in an economically disadvantaged background in Brooklyn, Jonathan worked in Chinese kitchens cleaning pots and cutting vegetables. He excelled at Stuyvesant High School and New York University, where he studied chemistry and was a varsity fencer," says Dr. Mellman.

As president of the Asian Pacific American Medical Students Association and through the Health and Education for the Asian Liver Project, says Dr. Mellman, "Jon often took time out of his schedule to teach high school students and other members of the community about hepatitis B vaccination and screening. He was also active in helping P&S students connect with mentors from the community keen on collaborating towards his mission of serving his home community."



Joshua Hollander '60



Robert B. Winslow '62



Virginia Biddle '65



David McDowell '89

served on the volunteer faculty at UC Davis Medical School and as medical director of the Hospice of Roseville. His free time was spent with the church choir and thespian activities. He is survived by his wife, Mollyn, one daughter, two sons, and one granddaughter.

1966

Henry Arthur Selvey of Marietta, Ga., died March 21, 2014, at age 73. He grew up in South Nyack, N.Y. He spent two years as chief of the Department of Psychiatry at Fort McPherson Army Hospital in Atlanta. Before retiring in 2000, Dr. Selvey spent nearly 30 years in private practice. He is survived by his wife, Bonnie, a son, a stepdaughter, and a granddaughter.

1967

Anthony Imbembo, a general and cardiothoracic surgeon, died Feb. 21, 2014, at 72. Dr. Imbembo was professor and vice chair of surgery at Case Western Reserve University and director of surgery at Cleveland Metropolitan General Hospital. He was a past president of the Association for Surgical Education. His bibliography covers a wide range of subjects, including surgery for obesity and the development of an implant-

able medication system for the control of diabetes. He also wrote multiple chapters for a textbook, "Surgery of the Alimentary Tract." He is survived by a brother, a niece, and a nephew.

Sally F. Wiseley, a specialist in rehabilitation medicine, died May 30, 2014, from complications of diabetes. She initially pursued graduate study on the Renaissance Italian poet Ludovico Ariosto before falling ill with diabetes and opting to study medicine. She trained in rehabilitation medicine at the VA Hospital in the Bronx, then moved to Vassalboro, Maine, where she pursued a solo practice until her retirement in 1995. She loved to garden and studied Spanish and the Mayan culture.

1968

Ronald Li, a retired urologist and real estate developer, died July 19, 2014, at age 70. A native of Kunming, China, he emigrated to the United States in 1945. He served in the U.S. Air Force, stationed at Wright-Patterson Air Force Base in Dayton, Ohio. He also held a master's degree in business administration from the University of Dayton. Dr. Li practiced urological surgery in the

U.S. Air Force, first in the Rochester, N.Y., area, then in Milledgeville, Ga., for more than 25 years. He eventually left the practice of medicine to run a home building business in Hilton Head and Bluffton, S.C. He is survived by his wife, Janet, a daughter, a stepdaughter, a stepson, and five grandchildren.

1971

J. Steven McDougal died April 6, 2014, at age 68. He joined the CDC in 1974 as a medical officer in the U.S. Public Health Service, becoming chief of the HIV/AIDS Immunology and Diagnostics Branch with an appointment at Emory University. He dedicated his career to HIV/AIDS research and made important contributions, including the identification of CD4 as the primary receptor for HIV with gp120 as the viral binding protein. Transmission of HIV through blood and blood products was curtailed by his discovery that HIV could be inactivated by heat. He developed assays to detect and distinguish between recent and long-term HIV infections to identify high-risk populations to better target treatment resources to reduce HIV transmission. He volunteered in home-

less shelters and coached children's baseball. No task was too big, including renovating his house and designing and building a rock garden with pond and waterfall. He is survived by his wife and three children.

1981

Nannette Goldstein Sternberg, a psychiatrist, died of metastatic breast cancer on April 28, 2014. Dr. Goldstein taught for a time at P&S while treating adults in a private psychiatry practice. She later became chair of the Department of Psychiatry at Saint Michael's Hospital in Newark, N.J., and then medical director at the Newton Memorial Hospital in Newton, N.J. In 1985 she received the Sandoz Award for administrative psychiatry. She is survived by her husband, Ronald Sternberg, a daughter, and a son.

1989

David McDowell, a psychiatrist and specialist in substance abuse, died June 4, 2014. When he was a member of the psychiatry faculty at P&S, he worked in the Division on Substance Abuse with his mentor, Dr. Herbert D. Kleber, former assistant drug czar under President George W. Bush. With

Dr. Kleber, Dr. McDowell co-founded STARS, the Substance Treatment and Research Service, and served as medical director and, later, as senior medical adviser. Dr. McDowell also founded the buprenorphine program, the first opiate treatment program of its kind in the country. Author of "Substance Abuse: From Principles to Practice," a standard text in the field, he also wrote many articles on substance abuse and on psychiatric issues concerning sex and sexuality. He was the longest serving member, former vice chair, and acting chair of the American Psychiatric Scientific Program Committee. A distinguished fellow of the American Psychiatric Association, he was named to Best Doctors of America. In 2008 he joined the psychiatry faculty at Mount Sinai Medical Center, where he won Teacher of the Year awards in 2013 and 2014 and the Excellence in Residency Education Award in 2014. A past president of the P&S Class of 1989, he remained popular and was honored in 2014 at his 25-year reunion with two chairs in the new Medical and Graduate Education Building. He is survived by his life partner, Carlos Moreira, his mother, a sister, and three brothers.

InnovateMED 2014

A choreographer who taught a man with cerebral palsy to dance. A 16-year-old high school student who invented an iPhone case that doubles as a visual stethoscope. A writer who investigated the connections between human and animal diseases. These innovators, along with eight others, spoke at the Sept. 27 InnovateMED conference hosted by students of the P&S Innovative Medicine Interest Group.

However, the speakers in the P&S Alumni Auditorium were not the only attendees who were able to share their ideas. The audience of 200, including students, faculty, staff, and members of the public, was prompted by interactive audience response questions to engage with friends and neighbors about the content of the talks and their implications for the future.

Raaka Kumbhakar, a second-year medical student at P&S, says, “I was proud to be a part of the conference—I was proud of my classmates who organized it, the faculty who spoke at it, and this school that hosted it.”

More information about InnovateMED and recordings of the conference can be found at www.innovatemed.org. Now that the first InnovateMED conference is past, the Innovative Medicine Interest Group is working on next year’s conference.

—Sarah K. Sherwood’17



1: Teenager Suman Mulumudi demonstrates how Steth IO, a digital stethoscope he invented, visually records his own heartbeat.

2: Columbia theoretical physicist, Raul Rabadan, takes the stage to talk about cancer research.

3: Choreographer Tamar Rogoff and actor Gregg Mozgala describe how they conquered Gregg’s disability with dance and movement.

4: The InnovateMED Team, clockwise from top left: Rachel Caplan ’17, Ashwini Dhokte ’17, Gloria Sheng ’17, Ravi Shah ’17, Gabrielle Bromberg ’17, Ryan England ’17, Thomas Graf ’17, Sarah Sherwood ’17, Jasper Yan (Mailman Class of 2015), and Patricia Pop ’17.

Photographs by Michael Hernandez’17

Helen Ranney, MD: Scientist, Mentor, Pioneer

No doubt Helen Ranney would have scoffed at being described as a pioneer, but it is hard to think of someone for whom the description is more apt. A 1941 Barnard graduate, she briefly considered going to law school, but her time as a technician at Presbyterian Hospital changed her mind—and helped her secure admission to P&S.

She graduated in 1947 and went on to a career of extraordinary accomplishment—as a physician-scientist, publishing close to 100 papers in her field, hematology; as a leader, the first woman to chair a Department of Medicine (at UC San Diego, where she led the department for 13 years from its inception in 1973); as a clinician, renowned for her bedside manner and her encyclopaedic knowledge; and, perhaps most enduringly, as a mentor.

Having taught at P&S, the Albert Einstein College of Medicine, and UCSD, Dr. Ranney influenced generations of medical students, shaping their careers—in the classroom and by example—with her insight, empathy, and work ethic. Her niece, Alesia Ranney-Mirinelli, recalls, “If you tried, and tried your best, you were always on her good side. She valued hard work, she valued people who would defer pleasure for the moment to study, and study hard.”

Which is why it came as no surprise that Dr. Ranney named P&S as her beneficiary of choice for a charitable contribution program at Bristol-Myers Squibb, where she served on the Board of Directors, and that in 2010, after Dr. Ranney’s passing, her will left a bequest for scholarship support at P&S. She valued ambition, critical thinking, and commitment to science and medicine, attributes she embodied and thought should be rewarded in others. Her planned gift makes it possible for P&S students to honor and build upon her formidable legacy.



HELEN RANNEY, MD
P&S CLASS OF 1947

To learn how you too can create opportunity for tomorrow's doctors with a planned gift, please contact:

Laura Tenenbaum
Senior Director of Development
212.342.2108
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“In connection with my pastimes of model building and work with machinery I have become more impressed with the superiority of the human machine over anything similar that man could make.”

— John Kingsley Lattimer in his application to medical school, Feb. 9, 1934

Dr. Lattimer, who was born 100 years ago (Oct. 14, 1914), was a human who racked up superior accomplishments inside P&S and out. The 1938 P&S graduate established the field of pediatric urology and spent many years on the faculty, including 25 years as chair of urology. He also was known for his ballistics expertise and historical collections: He examined President John Kennedy’s autopsy materials, he had a role in the Nuremberg trials, and he collected materials from the Lincoln assassination. He also was an athlete, competing in track and field during his Columbia College years and in the GI Olympics. When he died in 2007, the New York Times obituary headline said it all: “John K. Lattimer, Urologist of Varied Expertise, Dies at 92.”

Read more about Dr. Lattimer in the magazine’s Spring 2000 profile, “John K. Lattimer: Urologist, Historian, Collector, Sleuth—A Medical Man for All Seasons,” on the magazine website, www.columbiamedicinemagazine.org.

Lattimer, J. K.

Note: Please write as legibly as possible and sign at bottom of second page

PERSONAL INFORMATION SHEET
for
APPLICANTS FOR ADMISSION
to
COLLEGE OF PHYSICIANS AND SURGEONS, COLUMBIA UNIVERSITY

1. How did you get interested in the idea of studying medicine?
My grandfather was an enthusiastic physician and interested me in it by taking me around on his cases - medicine has appealed to me as a profession with great intellectual fields where one can specialize and keep improving both in technical and with new knowledge. The opportunity and need for constructive work with the ailments of people is limitless. My family has always favored medicine.

2. How long ago did you make up your mind to undertake it?
Five or six years ago - after gradually becoming interested in the problems of the medical profession as I saw them in my grandfather's practice. In connection with my pastimes of model building and work with machinery I have become more impressed with the superiority of the human machine over anything similar that man could make.

3. What are your arrangements to cover the cost (about \$1,500 per year)?
Family finances are adequate.

4. Have you any relatives who are physicians? If so, what relation?
*Yes: Grandfather
 One Uncle
 Two Grand Uncles
 Three second cousins
 One Great Aunt
 One third cousin*

5. If you have any preference, what branch of medical work appeals most to you, Practice, Research or Teaching?

6. Have you any ideas about what you expect to do after graduating from medical school?
Nothing definite. It depends, of course, on what develops. My grandfather's office and equipment are available in Michigan if that should be desirable. I think I would prefer to live in the West or Middle-west.

7. What extra-curricular activities did you engage in at college?
*Varsity and Freshman track teams (had never run before)
 Varsity letter in sophomore year
 National Treasurer of Epikid Club Society
 University Pentathlon (all round) Champion
 Chairman Junior Class Committee for Pre-Med. Bouquet
 College Champion Baseball team
 Twice on University Champion Football team
 ALL UNIVERSITY Quarterback
 Varsity "C" Club*

8. About how many hours per week, if any, did you put in on gainful work to help pay your way through college?
NONE. Committed daily from Long Island to save expense.

9. What sort of work did you do? How much did you earn (about) per year?

10. Was your health good while at college?
Yes, excellent. Was used by Dr. McCauley in chin culture.

Top: John Lattimer '38 at Parents' Day 2006, giving one of his many talks about P&S history
Right: Dr. Lattimer's 1934 application to P&S