STEM CELL RESEARCH
A View of Medicine’s Next Big Step
P&S is available online at:
www.cumc.columbia.edu/news/journal

On the cover:
P&S scientists study naturally occurring embryonic stem cells, adult stem cells, and induced pluripotent stem cells through a revitalized Columbia Stem Cell Initiative that represents multiple approaches but a shared goal – to turn findings from the lab into treatments for patients. Article, Page 14. Cover illustration by Gustavo Valladares, using a neuron stem cell image courtesy of Tom Maniatis and his lab.
Dear P&S readers,

The P&S legacy is defined by our core commitment to education as the bedrock of our school. Every other aspect of our academic medicine mission – research, patient care, and community service – depends on the strength of our education of physicians and scientists. This year has been a turning point in strengthening this foundation as the programs we have put into place across the spectrum of our educational mission have affected everyone from the students we recruit and enroll to the doctors we graduate.

The Class of 2013 is nearing the end of its first year in the “new curriculum” that emphasizes small group, team-based learning. The second-year class continues in the “classic curriculum,” with our undiminished commitment to an outstanding experience that is informed and improved by what we learn as we implement the innovative aspects of the new curriculum. All students are benefiting from our new educational space – two floors of modern teaching classrooms and small group rooms conducive to small group education and learning. We are drawing up plans for a new education building, to be located near Bard Hall, with the hope that we will move from architectural renderings to construction in the near future.

We also have recruited the first 10 students for our new Columbia-Bassett Program, in which students will study, learn, and live in Washington Heights alongside their classmates in the Class of 2014 for 18 months then spend most of their last 2½ years at Bassett Healthcare in Cooperstown, learning clinical medicine in a non-urban setting, with an emphasis on longitudinal patient care. We owe a great deal to Tom Morris’58, currently chair of Bassett’s Board of Trustees, former P&S interim dean, and former president of Presbyterian Hospital, for his key role in the establishment of this program, which will expand our educational mission and share the excellence that makes P&S great.

With best wishes,

Lee Goldman, M.D., Dean
lgoldman@columbia.edu
PENICILLIN’S INFLUENCE

Dear Editor,

I read with great interest several articles appearing in past issues of the P&S Journal pertaining to the role played by P&S in the development of penicillin.

It put me in mind of an 18-year-old infantryman in 1944 awaiting embarkation to Europe during the horrendous Battle of the Bulge. Several days prior to deployment he developed a purulent otitis media and was hospitalized at the base hospital at Camp Maxey, Texas. He was begun on sulfa drugs, the only antimicrobial available at that time, and interestingly developed in Germany 10 years prior. After several weeks on this regimen, the infection had spread to the meninges and with a diagnosis of progressive staphylococcal meningitis, a telegram was sent to his family advising them of his probable demise.

Fortunately a young medical officer involved in his care had read of this new “Wonder Drug” available at that time only to the military and in small amounts. He requested a small supply be flown to the base hospital from Brooke General Hospital at Fort Sam Houston in San Antonio, Texas.

A regimen of intramuscular injections every three hours for two weeks was begun. (The frequency was necessary because of the rapid renal excretion of the drug which had yet to be addressed.) After one week and 56 painful injections there was marked clinical improvement. After the second week, there was no longer any sign of infection. Shortly afterward he was discharged back to duty, now as laboratory technician instead of an infantryman.

Of course I was that young man. Because I had experienced a service-connected illness, I was entitled to the benefits of Public Law 16 which entitled the veteran to all expenses toward whatever profession he chose. Without that I could never had afforded medical school.

Several years later on a trip to London I visited the burial place of Sir Alexander Fleming at St. Paul’s Cathedral. I whispered a few words of thanks for affording me my life, and indeed my livelihood. I took a step back... and saluted him.

Oscar J. Krieger ’53 /// By e-mail

Oscar J. Krieger
Dear Editor,

I greatly enjoyed the three letters from P&S graduates in the 40’s (Fall 2009 P&S). I recently was invited to present the first “John W. Severinghaus Annual Lecture on Translational Science” to the American Society of Anesthesiologists at its annual meeting in Orlando (October 2008). I included in that lecture some of the influences that led to my career in developing monitoring devices for health care, especially blood gas analysis, using my training as a physicist at MIT before medical school. Portions of that lecture related to P&S from 1949-51, including a two-year internship at Bassett Hospital in Cooperstown.

My third year [at P&S] started with a bang: assignment to an externship in Cooperstown, Bassett Hospital. It was one of three choices for third-year year students (the others in New York City hospitals). The other rotating P&S extern in Cooperstown was Ann Davis, minister’s daughter from New Jersey, very attractive and skilled. Externs roomed on the top floor of the hospital. Ann and I enjoyed our month with hikes in the hills east of Lake Otsego and dancing on the lake shore on Saturday evenings. Administration decided it was unseemly for us to be in adjacent rooms, unsupervised, and moved some interns up with us. I was very impressed by the teaching skills of Joe Ferabee. He was an internist who also was in charge of the clinical laboratory. The month ended too soon.

John W. Severinghaus ’49 // Ross, Calif.

Dr. Severinghaus is professor emeritus of anesthesiology, University of California San Francisco’s Cardiovascular Research Institute. More of his lecture relating to P&S and Bassett can be found in P&S Journal’s new online archive of P&S remembrances at www.cumc.columbia.edu/news/journal.

EDGAR HANKS’ INFLUENCE

Dear Editor,

I saw that Dr. Edgar Hanks [professor emeritus of clinical anesthesiology] passed away recently (Fall 2009 issue). That brought back many memories and reminded me of what I owe him.

In early 1960, closed chest heart massage had not yet been reported in the literature. Dr. Hanks taught a course in open-chest cardiac resuscitation. In March of that year I was to have a minor surgical procedure on my nose, correction of a deviated nasal septum for post nasal drip. I was in the Presbyterian OR, sedated.

In those days the standard ENT setup consisted of adrenalin, a clear liquid, used topically to stop bleeding, and xylocaine, a clear liquid, injected for local anesthesia. Both these clear liquids were put in clear glass cups on the surgical tray. These two liquids were distinguished by a safety pin placed in one of the cups.

I remember receiving an injection in my nose of what the surgeon thought was xylocaine. In his note he said that he had administered 10-12cc of 1/1,000 xylocaine. I promptly developed a severe headache and thought I was going to pass out. I felt my pulse and said, “No pulse. Feel my pulse.” For any skeptics, when you’re erect and your heart stops you lose consciousness in 5 seconds. But when you’re supine, you lose consciousness in 15 seconds. So I maintain that I diagnosed my own cardiac arrest. The surgeon told me later, though, that I had a thready pulse at that point. A tonic/clonic convulsion followed a second or two later, after which I indeed was found to be in cardiac arrest. The surgeon no doubt was stunned. A nurse’s aide went running out of the operating room saying, “We have a cardiac arrest in here.” Dr. Hanks, who happened to be walking down the hall, strode into the suite, grabbed a scalpel, made an incision between the ribs and began open-chest cardiac massage with his bare hands. They paged Dr. McAllister, the cardiac surgeon, who took over from Dr. Hanks, converted me after 45 minutes, and subsequently insisted that the contents of the syringe be analyzed. They found, in fact, that the syringe contained 1/1,000 adrenalin. Dr. Papper, the chief of anesthesiology, introduced Dr. Hanks to me in the recovery room as “the man who saved your life.”

I’m also grateful to Dr. Humphreys, chief of surgery, and to Dr. McAllister who operated on me for cardiac tamponade a few weeks later.

Afterwards I was circumspect lest someone think I had brain damage. I was unsure myself. On subsequent tests, though, including the radiology board exams, I made higher grades than I ever had in medical school. Naturally, I had studied harder. I have had some cardiac problems related to the events, but it has been a small price to pay for Dr. Hanks’ gift to me.

In December of that year the first description of the closed-chest resuscitation technique appeared in the literature.

I suppose we all have had a chance to save a life from time to time, and that it was all in a day’s work for Dr. Hanks.

Richard D. Anderson ’60 // Charlotte, N.C.
New Chair for Surgery

Dr. Smith joined P&S in 1982 as a fellow in cardiothoracic surgery and helped establish Columbia’s preeminent heart transplant program.

Craig R. Smith, M.D., a cardiac surgeon who has served in a number of leadership roles at P&S and NewYork-Presbyterian Hospital, has been named chair of the Department of Surgery after serving as interim chair since 2007.

At the hospital, Dr. Smith will be surgeon-in-chief for the Columbia campus and head its new Vivian and Seymour Milstein Family Heart Center, which opened this year. Dr. Smith, who joined Columbia in 1982 as a fellow in cardiothoracic surgery, helped establish the medical center’s pre-eminent heart transplant program. He is considered one of the nation’s leading cardiac surgeons.

Dr. Smith, whose appointment as chair made him the Johnson & Johnson Distinguished Professor and Valentine Mott Professor of Surgery, is an authority in cardio-pulmonary bypass surgery. He developed a surgical approach that allows neurosurgeons to treat otherwise inoperable intracerebral aneurysms by inducing deep hypothermia with circulatory arrest. His research interests include mitral valve repair, long-term heart transplantation outcomes, preoperative risk factors for stroke after bypass surgery, and adaptation in heart transplantation.

He is co-principal investigator for the multicenter PARTNER aortic transcatheter valve trial, focused on the treatment of patients who are at high risk or not suitable for open-heart valve replacement surgery.

The Department of Surgery has nearly 100 full-time faculty members with specialties ranging from basic science research to the most advanced robotic surgical procedures and 89 fellows and residents.

Dr. Smith, who received his M.D. degree from Case Western Reserve University in Cleveland, was appointed associate director of the medical center’s heart transplant program in 1984. He was appointed chief of the Division of Cardiothoracic Surgery and chief of the Section of Cardiac Surgery in 1996. He became a full professor of surgery in 1998 and was named the Calvin F. Barber Professor in 2001.

Dr. Smith completed an internship and residency in general surgery at the University of Rochester/Strong Memorial Hospital, where he also completed a fellowship in vascular surgery.

In 2004, Dr. Smith received the NewYork-Presbyterian/Columbia “Practitioner of the Year” award and was inducted into the American Surgical Association, one of the nation’s oldest and most prestigious surgical organizations. He is a member of several professional societies, including the American Heart Association, the American Medical Association, and the American College of Surgeons. The author of more than 170 scientific publications, Dr. Smith has a strong history of fellowship and grant support. Currently vice president of the American Association for Thoracic Surgery, he will become president in May 2011.
New Dean for Nursing

Dr. Berkowitz's appointment is effective Sept. 1, 2010. In addition to her title of dean, she will be the Mary O’Neil Mundinger, DrPH Professor of Nursing and senior vice president at Columbia University Medical Center.

Bobbie Berkowitz, Ph.D., R.N., FAAN, has been appointed dean of the Columbia University School of Nursing, succeeding Mary O’Neil Mundinger, DrPH, who has led the school for 24 years.

Dr. Berkowitz's appointment is effective Sept. 1, 2010. In addition to her title of dean, she will be the Mary O’Neil Mundinger, DrPH Professor of Nursing and senior vice president at Columbia University Medical Center.

Dr. Berkowitz joins Columbia from the University of Washington, where she is the Alumni Endowed Professor of Nursing and adjunct professor in the School of Public Health. She is former chair of the Department of Psychosocial and Community Health at UW and led the national program office of the Robert Wood Johnson Foundation's Turning Point Initiative as director and principal investigator. Before joining UW, she held leadership positions in state and local government, as deputy secretary in the Washington State Department of Health and as chief of nursing for the Seattle-King County Department of Public Health.

Dr. Berkowitz received her Ph.D. in nursing science from Case Western Reserve University and her master's and bachelor's degrees in nursing from the University of Washington. She is an elected member of the prestigious Institute of Medicine, a member of the board on Population Health and Public Health Practice, an elected fellow of the American Academy of Nursing, and a member of the American Academy of Nursing's Board of Directors. Dr. Berkowitz chairs the board of trustees of Group Health Cooperative. In addition to serving on the board for several journals, she has authored books on public health nursing leadership, nursing management, and communications in health care organizations.

Dr. Berkowitz's research focuses on health policy and public health system reform, primarily at the state level, as well as systems-level efforts to eliminate health disparities. Her scholarship is directly informed by her rich firsthand knowledge of the politics of policy creation and implementation and by her experience in building public health systems.

Dr. Mundinger's tenure as dean set a new standard in nursing education. She led the development of two doctoral degree programs, the Doctor of Nursing Practice (DNP) and the Ph.D. in nursing. When she was named the Centennial Professor in Health Policy in 1995, she held the first chair of health policy in a nursing school nationwide. Her leadership in championing advanced practice nursing, creating the school's first research program, pioneering an expanded role for nurses, creating a new clinical doctoral degree that has been emulated at universities around the country, and increasing the school's endowment from less than $3 million in 1986 to more than $100 million in 2008 provides Columbia with a legacy of distinguished service and the nursing school with a strong foundation for future growth.
Columbia-Bassett Track Recruits First 10 Students

P&S leadership and faculty involved in recruiting students to the new Columbia-Bassett Program did not know what to expect when the initial application period and interview season neared, but all now agree that interest in the program and the caliber of students who applied have exceeded every measure of success.

The numbers offer one measure of the program’s appeal: 758 men and women applied for the 10 slots in the new program; another 29 expressed initial interest but did not complete the required secondary application. After the 758 applications were screened, 105 individuals were invited for personal interviews on the two campuses involved in the program. Based on a review of applications, this program appealed to students across the nation. Applications were received from students from at least 217 colleges, from all states (except Hawaii), and from Canada and Australia. Schools represented by 10 or more applicants were Columbia, Cornell, Dartmouth, Duke, Harvard, Johns Hopkins, Stanford, UC Berkeley, UCLA, UCSF, and Williams. Students in the Columbia-Bassett Program will spend their first 18 months learning the basic science curriculum with the rest of their class in Manhattan, but their clinical training for the following two and a half years will be based at Bassett Healthcare in Cooperstown, N.Y.

The ratio of applicants to positions available in the new program exceeds last year’s ratio of applicants to P&S. For the Class of 2013, which entered in August 2009, 5,500 applicants vied for 153 positions: 36 applicants per slot. For the Columbia-Bassett Program, whose students will be in the Class of 2014, 76 students applied for each of the 10 slots. P&S, which expanded its usual class size of 150 to accommodate the additional 10 Columbia-Bassett students, plans to offer places to up to 14 students next year.

The interview season began in September 2009 and finished in early February 2010. As of mid-February, 11 offers had been extended to applicants, with one opting for consideration to the traditional P&S track only. The other 10 accepted with an enthusiasm that suggests they are unlikely to change their minds before May 15, the deadline for withdrawing. “Almost all of the students we offered a place to have said they have already withdrawn from other schools where they were accepted,” says Stephen Nicholas, M.D., assistant dean for admissions at P&S. “This elite group of students who have diverse interests, including primary care medicine and non-urban health care delivery systems, seem motivated and committed to this program.”

The standards P&S applied to Columbia-Bassett applicants were just as rigorous as those applied to other applicants, and the 10 students selected are just as well-rounded as their fellow students, showing interests in music and athletics and excelling in multiple areas of their lives. The grade point averages and MCAT scores for the students applying to the Columbia-Bassett Program are higher than the mean of last year’s enrolled class, Dr. Nicholas says. “These are exceptionally gifted individuals who will be leaders in health care, just as their fellow P&S students who spend four years in New York City will be.”

The hope is that the program will prepare the students for a different kind of health care leadership, the kind Bassett is renowned for, Dr. Nicholas says. Commonly thought of as a program to address the shortage of rural physicians — in New York and elsewhere — the Columbia-Bassett Program is just as intent on training a new generation of doctors capable of leading health systems that promote both quality and cost-effective delivery of care.
Columbia-Bassett students will manage the care moving from one set of patients to the next, instead of having blocks of clinical experiences, in outpatient clinics, and see patients in the hospital. They will be exposed to health care features not usually part of the medical school curriculum, such as finance, risk management, patient safety, quality improvement, and medical informatics. Bassett uses advanced computer technology and an electronic medical record that links the Bassett network across 5,000 square miles. Bassett also provides a unique opportunity to learn medicine at both the individual and the population level as it serves an entire region of New York state.

In announcing a clinical campus at Bassett, Lee Goldman, M.D., executive vice president for health and biomedical sciences and dean of the faculties of health sciences and medicine at Columbia, put it this way: “Our goal is to encourage outstanding medical students to practice in rural areas and help them develop the skills necessary to shape the health care systems of the future. This innovative new campus may be the demonstration model for a much-needed new paradigm, which will catalyze care that is at once safer and less costly and inspire other medical schools to emulate and improve upon our example.”

“This program provides two unique learning experiences,” says Ronald Drusin’66, vice dean for education at P&S. “The mission of the College of Physicians and Surgeons is to develop future leaders in patient care, research, and policy. The Bassett campus additionally provides students with learning opportunities in a rural setting with an emphasis on longitudinal patient relationships.”

Columbia-Bassett students will have a major clinical year that includes longitudinal integrated clerkships in which they will build a panel of patients throughout the year, follow patients in ambulatory clinics, and see patients in the hospital. Instead of having blocks of clinical experiences, moving from one set of patients to the next, Columbia-Bassett students will manage the care of individual patients over time and through different types of medical problems. They will get to know their patients as people and see a disease as a process, not a snapshot.

While some medical schools excel at preparing primary care physicians and others are known for preparing specialists, few have tried to do both in a combined urban-rural setting. The closest comparable program may be the “Maine Track” at Tufts University. The track at Tufts offers medical students – with preference shown to Maine residents – clinical training experiences in Maine with exposure to the unique aspects of rural practice plus training at Tufts Medical Center in Boston. Maine Track students spend their first two years primarily on the Boston campus, with some activities in Maine, then move to Portland, Maine, for the entire clerkship period in their third year and portions of the monthly rotations in the fourth year.

For two students accepted into the Columbia-Bassett Program – one from South Dakota, one from Kansas – the new Columbia program has no peer. “The tour at Bassett was the most impressive tour I’ve been on,” says Haley Masterson, a University of Kansas senior who was among the 10 accepted to the program. After spending two days interviewing in Cooperstown and New York City, she says, “I was set in my mind. I could not hope to do better than getting accepted to the Columbia-Bassett Program.” After she received her offer from Columbia, she withdrew from all other schools that had accepted her before celebrating the acceptance by her No. 1 choice. “It was a great end to a year of applying and interviewing for medical school.”

Unlike most other applicants to P&S, Blake Alberts, a senior at the University of South Dakota, has had a medical school seat in South Dakota waiting for him since graduation from high school. He was accepted into an accelerated program at USD’s medical school, which focuses on rural medicine in a mostly rural state. The accelerated program exposed him to rural medicine seminars and pre-medical school clinical experiences, including six weeks in a rural hospital in Custer, S.D., and an experience at Baylor College of Medicine. His rotation at the large academic medical center in Texas made him wonder what other medical schools beyond South Dakota could offer him. In the Columbia-Bassett Program, Mr. Alberts sees an opportunity to attend a top medical school and also see medical care delivery in an upstate New York hospital with a mission similar to South Dakota hospitals.

“Bassett has the same mission but is 180 degrees opposite in how it approaches health care,” says Mr. Alberts. “That’s the biggest thing I’m excited about: Being able to see a different approach to health care is invaluable.”

His interest in medicine stems from an interest in science. “I always enjoyed science, but engineering didn’t appeal to me so I felt medicine provided the best blend of personal interaction and science. Being in the accelerated program helped me grasp the complexities of the roles a physician assumes.”

Haley Masterson

Expansive New York area covered by Bassett Healthcare
In the inaugural class of the Columbia-Bassett Program, Mr. Alberts and Ms. Masterson will join students from Oregon, Arizona, California, New Hampshire, upstate New York, and Australia (by way of Cornell). During the first recruitment season, Bassett faculty traveled to 18 Northeast schools to discuss the program with college students and their pre-health advisers, although most students found the program through their own online research of medical schools.

Dr. Franck adds, “The recruitment success can also be attributed to Dr. Goldman’s letter to all pre-health advisers in the United States announcing the new program, to our participation in pre-medical student fairs, and to the creation of a Bassett-hosted Web site describing the program, complemented by the P&S home page and a link from there to Bassett’s.”

As a teaching affiliate of P&S since 1947, Bassett has long served as a site for P&S medical student clinical rotations and postgraduate residency training. Informal collaborations date back to 1927, according to the Cupola, a Bassett Healthcare publication.
Hospital Opens New Heart Center

NewYork-Presbyterian Hospital cut the ribbon in January for the new Vivian and Seymour Milstein Family Heart Center on the Columbia campus. The state-of-the-art facility, which welcomed patients in February, features advanced diagnostic technology and treatments that are frequently less invasive, more accurate, and require less healing time.

The new center was made possible by a $50 million gift from the Vivian and Seymour Milstein family. The six-story, 142,000-square-foot building was designed by award-winning architects Pei Cobb Freed & Partners and daSilva Architects. Located at Fort Washington Avenue and 165th Street and adjacent to Milstein Hospital Building and the Herbert Irving Pavilion, it features a dramatic glass curtain façade and offers sweeping views of the Hudson River. The building will consolidate advanced inpatient and outpatient cardiac care, including new minimally invasive treatment options, under one roof.

The building has two hybrid operating rooms with high-tech imaging equipment that allows surgical and catheter-based procedures to be performed in the same room, resulting in less-invasive procedures and making treatment available to patients with more complex conditions, says Allan Schwartz, M.D., physician-in-chief at the Vivian and Seymour Milstein Family Heart Center, chief of cardiology at NewYork-Presbyterian Hospital/Columbia, and the Harold Ames Hatch Professor of Medicine at P&S. "Patients will also have access to promising new medical treatments such as stem cell therapy to repair blood vessels and heart muscle following a heart attack," says Dr. Schwartz.

Surgeon-in-chief will be Craig R. Smith, newly appointed chair of the Department of Surgery at P&S and the Johnson & Johnson Distinguished Professor and Valentine Mott Professor of Surgery. “The Heart Center will allow NewYork-Presbyterian to continue on its path of advancing new treatments, a road that saw this hospital perform the first successful pediatric heart transplant operation, the country’s first robotically assisted open-heart procedure to be completed with a totally closed chest, and the country’s first robotically assisted, totally endoscopic coronary artery bypass surgery, along with many other breakthroughs in cardiovascular research and patient care,” says Dr. Smith.

The heart center will have 20 new cardiac ICU beds and offer non-surgical alternatives as a world center for interventional cardiology and development of non-surgical procedures for conditions that previously required complicated high-risk surgery. A dedicated diabetes and heart education center will feature an educational area where nurse educators will help patients learn about their condition and the best ways to ensure their health. A preventive cardiology program will screen family members for cardiovascular disease and offer tools for lowering their risk.

The center’s Goldstein Education & Conference Center and Daniels Auditorium are connected by sophisticated communications links to operating rooms and cardiac catheterization labs to enhance training for physicians and surgeons.

The building was designed to reduce waste and cost by featuring recycled materials and by being an estimated 30 percent more energy efficient than a standard structure.

The hospital’s cardiology and cardiac surgery program consistently ranks first in New York and among the top 10 in the country in U.S. News & World Report hospital rankings and has among the lowest mortality rates in the nation for patients diagnosed with heart failure and heart attack. The hospital performs more heart transplants than anywhere else in the country and is a leader in cardiac research.
Four Elected to IOM

Four faculty members, including the newest faculty member to join P&S from Harvard, have been elected to the prestigious Institute of Medicine.

Election to the IOM is one of the highest honors in the fields of medicine and health. The four representing Columbia are Wafaa El-Sadr, M.D., M.P.H.; Jeanne Brooks-Gunn, Ph.D.; Martin Chalfie, Ph.D.; and Megan Sykes, M.D. They were among the 65 new IOM members announced in October 2009. CUMC now has 50 members in the IOM.

Dr. El-Sadr is professor of medicine at P&S and of epidemiology in the Mailman School of Public Health and global director of the International Center for AIDS Care and Treatment Programs at Mailman. Dr. El-Sadr is also known widely for research studies to identify effective prevention and management interventions for HIV and tuberculosis.

Dr. Sykes, an expert in transplantation biology and until this year the Harold and Ellen Danser Professor of Surgery and professor of medicine at Harvard Medical School, has joined P&S as director of the Center for Translational Immunology and director of research for the growing Transplant Initiative at CUMC and New York-Presbyterian Hospital/Columbia. Dr. Sykes also will direct bone marrow transplantation research in the Department of Medicine’s Division of Hematology/Oncology.

Dr. Brooks-Gunn is the Virginia and Leonard Marx Professor of Child Development and Education at Teachers College and adjunct professor of child development (in pediatrics) at P&S. She designs and evaluates programs for children and youth with a focus on at-risk children and directs the National Center for Children and Families and the Columbia Institute of Child and Family Policy.

Dr. Chalfie, the William R. Kenan Jr. Professor of Biological Sciences and chair of the Department of Biological Sciences at the Morningside campus, won the 2008 Nobel Prize for Chemistry. He is part of the interdepartmental and inter-campus neurobiology and behavior Ph.D. program at CUMC.

The Institute of Medicine is part of the National Academies, which also includes the National Academy of Sciences, National Academy of Engineering, and National Research Council.

More Online

More news you can find online at www.cumc.columbia.edu/news/journal:
- 2010 residency match results
- New M.S. degree in bioethics
- New documentary about Eric Kandel
- Donation of microscopes to schools and aid organizations
- HHMI grant to help Ph.D. students gain more clinical experience
Four faculty members from P&S and the Mailman School of Public Health were elected to the newest class of Fellows of the American Association for the Advancement of Science. They were among 531 members selected to fellowship in December 2009. The four are Jeffrey A. Lieberman, M.D., the Lieber Professor of Psychiatry, the Lawrence C. Kolb Professor of Psychiatry, and department chair; W. Ian Lipkin, M.D., the John Snow Professor of Epidemiology at Mailman and professor of neurology and pathology at P&S; Stephen S. Morse, Ph.D., professor of clinical epidemiology at Mailman; and Lorraine S. Symington, Ph.D., professor of microbiology.

Columbia University awarded the 2009 Louisa Gross Horwitz Prize to longtime collaborators Victor R. Ambros, Ph.D., and Gary Ruvkun, Ph.D., for their discovery of microRNAs, small molecules that are critical to gene regulation. The awardees gave lectures and were honored at an awards ceremony in November. Drs. Ruvkun and Ambros were fellows in the MIT laboratory of Nobelist H. Robert Horvitz in the early 1980s and have since established their own laboratories. Dr. Ruvkun is now at Harvard and Massachusetts General Hospital and Dr. Ambros is now at the University of Massachusetts.

The Augustus C. Long Health Sciences Library at Columbia University Medical Center is a partner in a multi-center grant to digitize materials in the history of medicine. The Open Knowledge Commons, a Cambridge, Mass.-based non-profit organization dedicated to building a universal digital library for democratic access to information, received a $1.5 million award from the Alfred P. Sloan Foundation to launch its first major collaborative digitization initiative, a digital Medical Heritage Library project. The first round of funding will support collaborative digitization of approximately 30,000 volumes of public domain works from the collections of some of the world’s leading medical libraries. Other libraries involved in the project are the National Library of Medicine, Harvard Medical School’s library, Yale University’s medical library, and the New York Public Library. Columbia’s Health Sciences Library holds comprehensive collections in the history of the health sciences but is particularly strong in anatomy, physiology, surgery, and dentistry. Other subject strengths include medical Americana, medical education, and European spa books from the 18th and 19th centuries.

ARRA Funding: Nearly $90 Million and Growing

Although Columbia continues to receive competitive stimulus funds available through the American Recovery and Reinvestment Act (ARRA), the total received for medical research at the medical center and New York State Psychiatric Institute has already reached $89 million.

CUMC received funds for research over the course of the next two years that includes investigation of the causes of Alzheimer’s, the connection between heart disease and depression, new treatments for cancer and AIDS, how adult stem cells in the brain make new neurons, and how prenatal exposure to pollution affects the health of children. Federal agencies providing ARRA funds include the NIH, the National Science Foundation, and the Department of Energy.

About 60 of the awards support new research, another approximately 85 grants supplement existing projects, another dozen grants are renewals of existing grants. CUMC researchers were successful in competing for the largest grants available through ARRA funding, achieving a 7 percent success rate in competing for Challenge Grants, compared with a 4 percent success rate nationally. CUMC faculty scored a remarkable 39 percent success rate in competing for GO Grants, compared with an approximate 16 percent success rate among all applicants.

ARRA funds have gone to about 135 CUMC investigators, and some faculty received multiple awards. Columbia University submitted 835 ARRA applications and received 272 awards, totaling more than $139 million for the medical center, Morningside, Lamont, and Nevis campuses.

NEWS IN BRIEF

Four faculty members from P&S and the Mailman School of Public Health were elected to the newest class of Fellows of the American Association for the Advancement of Science. They were among 531 members selected to fellowship in December 2009. The four are Jeffrey A. Lieberman, M.D., the Lieber Professor of Psychiatry, the Lawrence C. Kolb Professor of Psychiatry, and department chair; W. Ian Lipkin, M.D., the John Snow Professor of Epidemiology at Mailman and professor of neurology and pathology at P&S; Stephen S. Morse, Ph.D., professor of clinical epidemiology at Mailman; and Lorraine S. Symington, Ph.D., professor of microbiology.

Columbia University awarded the 2009 Louisa Gross Horwitz Prize to longtime collaborators Victor R. Ambros, Ph.D., and Gary Ruvkun, Ph.D., for their discovery of microRNAs, small molecules that are critical to gene regulation. The awardees gave lectures and were honored at an awards ceremony in November. Drs. Ruvkun and Ambros were fellows in the MIT laboratory of Nobelist H. Robert Horvitz in the early 1980s and have since established their own laboratories. Dr. Ruvkun is now at Harvard and Massachusetts General Hospital and Dr. Ambros is now at the University of Massachusetts.

The Augustus C. Long Health Sciences Library at Columbia University Medical Center is a partner in a multi-center grant to digitize materials in the history of medicine. The Open Knowledge Commons, a Cambridge, Mass.-based non-profit organization dedicated to building a universal digital library for democratic access to information, received a $1.5 million award from the Alfred P. Sloan Foundation to launch its first major collaborative digitization initiative, a digital Medical Heritage Library project. The first round of funding will support collaborative digitization of approximately 30,000 volumes of public domain works from the collections of some of the world’s leading medical libraries. Other libraries involved in the project are the National Library of Medicine, Harvard Medical School’s library, Yale University’s medical library, and the New York Public Library. Columbia’s Health Sciences Library holds comprehensive collections in the history of the health sciences but is particularly strong in anatomy, physiology, surgery, and dentistry. Other subject strengths include medical Americana, medical education, and European spa books from the 18th and 19th centuries.
Perfecting a Cure for Arrhythmia in Children

By Susan Conova

Two years ago Jason Ferriera was in Portugal visiting his grandparents when his heart started beating wildly. His grandparents could see his neck pulsating from the rhythm.

Though Jason, now 18, was used to occasional episodes of heart palpitations – he was diagnosed after birth with an extra electrical pathway in his heart that triggers the episodes – he wasn't used to having them thousands of miles from home. So he decided to have a procedure that would most likely stop his arrhythmic episodes for good.

"The situation in Portugal was really stressful for my parents, and that's when I decided to have an ablation. Going to college was a big deciding factor. I wanted to go off and do my own thing and live in a dorm. I didn't want to worry my family that something would happen while I was away."

Jason was referred to Leonardo Liberman, M.D., associate clinical professor of pediatrics in the Pediatric Cardiology Division at Morgan Stanley Children's Hospital, who performs about 100 electrophysiologic procedures every year, the most in the New York City region. This was the first institution in the New York metropolitan area to perform this type of procedure in a child when Alan Hordof, M.D., professor of clinical pediatrics, pioneered the technique in 1991.

Back then, cardiologists reserved this type of treatment for children with intractable or dangerous arrhythmias. For most children, arrhythmias are not life-threatening, but they are life-altering. "The patient feels palpitations, like if the heart is coming out of the chest; this feeling could last several hours until the patient goes to the hospital," says Dr. Liberman. Patients can faint or become light-headed or short of breath. For some patients with Wolff-Parkinson-White syndrome, like Jason, or unusual heart anatomy, the episodes can sometimes even become life-threatening.

Now, with the safety and effectiveness of the procedure firmly established in children as young as small infants, patients and families are given more of a choice and can proceed straight to an ablation if they do not want to try medications.

At first, Jason and his family were content to deal with the episodes as they occurred, usually every one or two years. "I would just go to the emergency room, and they'd stop the arrhythmia by pressing bags of ice on my face or, more recently, with adenosine, which would bring my heart rate down in a matter of seconds."

Jason took no medications but restricted his sugar intake and stayed away from caffeinated beverages. "Other than that, it didn't really affect my life. I went to school, played sports, or played outside with friends."

Two years ago, the episodes started coming on more frequently, one every three weeks. He started medications to prevent the arrhythmias, but frequency only decreased slightly, to an episode every two weeks. "They happened during school and started becoming a real hindrance to my daily activities. And it was always in the back of my mind that this could get worse. I didn't want to chance it."

At Columbia University, Dr. Liberman evaluated Jason and performed a routine ablation procedure. Unlike most other institutions, Columbia performs the procedure with a dedicated pediatric anesthesiologist, who gives the patient general anesthesia to avoid discomfort. Cardiologists then steer several catheters into the heart from insertions in the veins of the neck and groin. Through the catheters, the cardiologists provoke arrhythmias to determine where the abnormal electrical tissue lies. Once found, pulses of radiofrequency energy heat the tissue and destroy the cells responsible for conducting the arrhythmia. In certain cases, cryoenergy, or a freezing technique, could be used.

At a checkup 18 months after the ablation, Dr. Liberman determined that Jason – like 95 percent of radiofrequency ablation patients – was cured. "By cured I mean fixed, done, unlikely to ever come back," Dr. Liberman says.

Now in college studying computer science, Jason is free of arrhythmic episodes and free to indulge in late night, caffeinated study sessions. "I feel much better. It's nice to have a Coke here and there and have nothing happen."

"By cured, I mean fixed, done, unlikely to ever come back"
Making the Inoperable Operable

By Dan Harvey

Tomoaki Kato, M.D., is medicine’s marathon man. An expert in ex vivo resection, Dr. Kato has pioneered a combined ex vivo resection/autotransplantation surgical procedure that targets locally invasive tumors. The innovative procedure can take more than 40 hours to accomplish, as it can involve removal and reimplantation of multiple organs.

Dr. Kato, professor of surgery and surgical director of liver and gastrointestinal transplantation programs, has led surgical teams during four challenging procedures that lasted 23 hours or more. The first, in 2009, involved a 7-year-old Long Island girl and lasted 23 hours – and it made medical history as the first pediatric case of its kind. The second involved an adult male and lasted more than 40 hours. The third, which involved a 31-year-old woman from Nebraska, lasted 39 hours. A fourth procedure, for an 8-year-old girl, lasted more than 24 hours. Throughout the procedures, Dr. Kato demonstrated remarkable stamina by providing hands-on participation and directing surgical teams.

While arduous and time-consuming, the procedure offers significant benefits. Most importantly, it circumvents organ necrosis and makes inoperable tumors surgically treatable. “Vessels supplying blood to the organ become enwrapped around the tumor. If you simply resect the tumor, the organ’s blood supply shuts down,” explains Dr. Kato, who participated in the first such surgery in Miami in March 2008. “With this alternative, we remove the organ, resect the tumor outside of the body and then replace the organ, repairing and reconstructing blood vessels with synthetic material such as Goretex.”

Further, the technique precludes the need for a donor organ and postoperative immunosuppressive drugs. “The procedure may be the patient’s only chance for survival,” says Dr. Kato.

In one of the adult cases, the man suffered a rare liposarcoma. Other doctors decided surgery was too dangerous because of blood vessel entanglement. They tried shrinking the tumor with chemotherapy and radiation, but the tumor grew as large as a football. “We needed to remove two-thirds of the distal stomach, as well as the duodenum, the pancreas head, and the entire liver,” says Dr. Kato.

The patient’s death four months after the surgery illustrates the uncertainty associated with these procedures. Dr. Kato also concedes that such lengthy and complex procedures raise inevitable questions about appropriate deployment of medical resources. Experience, he adds, will lead to refinement and efficiency. “When you look back at liver transplants, the early procedures lasted 12 to 15 hours. Now, clinicians can accomplish the procedure in around four hours,” he says. “So, you learn as you do.”

Meanwhile, Dr. Kato credits Columbia for providing an environment that fosters innovation. “Its culture encourages a surgeon to develop and then refine new techniques. It’s very satisfying to be involved in a place that embraces independence and innovation.”

Tomoaki Kato, M.D., is medicine’s marathon man. An expert in ex vivo resection, Dr. Kato has pioneered a combined ex vivo resection/autotransplantation surgical procedure that targets locally invasive tumors. The innovative procedure can take more than 40 hours to accomplish, as it can involve removal and reimplantation of multiple organs.

Dr. Kato, professor of surgery and surgical director of liver and gastrointestinal transplantation programs, has led surgical teams during four challenging procedures that lasted 23 hours or more. The first, in 2009, involved a 7-year-old Long Island girl and lasted 23 hours – and it made medical history as the first pediatric case of its kind. The second involved an adult male and lasted more than 40 hours. The third, which involved a 31-year-old woman from Nebraska, lasted 39 hours. A fourth procedure, for an 8-year-old girl, lasted more than 24 hours. Throughout the procedures, Dr. Kato demonstrated remarkable stamina by providing hands-on participation and directing surgical teams.

While arduous and time-consuming, the procedure offers significant benefits. Most importantly, it circumvents organ necrosis and makes inoperable tumors surgically treatable. “Vessels supplying blood to the organ become enwrapped around the tumor. If you simply resect the tumor, the organ’s blood supply shuts down,” explains Dr. Kato, who participated in the first such surgery in Miami in March 2008. “With this alternative, we remove the organ, resect the tumor outside of the body and then replace the organ, repairing and reconstructing blood vessels with synthetic material such as Goretex.”

Further, the technique precludes the need for a donor organ and postoperative immunosuppressive drugs. “The procedure may be the patient’s only chance for survival,” says Dr. Kato.

In one of the adult cases, the man suffered a rare liposarcoma. Other doctors decided surgery was too dangerous because of blood vessel entanglement. They tried shrinking the tumor with chemotherapy and radiation, but the tumor grew as large as a football. “We needed to remove two-thirds of the distal stomach, as well as the duodenum, the pancreas head, and the entire liver,” says Dr. Kato.

The patient’s death four months after the surgery illustrates the uncertainty associated with these procedures. Dr. Kato also concedes that such lengthy and complex procedures raise inevitable questions about appropriate deployment of medical resources. Experience, he adds, will lead to refinement and efficiency. “When you look back at liver transplants, the early procedures lasted 12 to 15 hours. Now, clinicians can accomplish the procedure in around four hours,” he says. “So, you learn as you do.”

Meanwhile, Dr. Kato credits Columbia for providing an environment that fosters innovation. “Its culture encourages a surgeon to develop and then refine new techniques. It’s very satisfying to be involved in a place that embraces independence and innovation.”

Columbia’s culture encourages a surgeon to develop and then refine new techniques.
STEM CELL RESEARCH: Potential and Progress

P&S Researchers Study Stem Cells During Embryonic Development, in Virtually Every Organ, and in Cancer and Disease. Others are Involved in Clinical Trials.

When Tom Maniatis, Ph.D., a scientist with a career spanning three decades, talks about the promise of stem cell research in helping to better understand and develop treatments for the neurodegenerative disease amyotrophic lateral sclerosis, or Lou Gehrig’s disease, he becomes as passionate as a young graduate student obtaining his or her first important experimental results. His sister’s ALS diagnosis in 1996 motivated Dr. Maniatis – a pioneering scientist who has studied the regulation of genes for more than 30 years and who co-wrote the manual of molecular cloning in 1982 – to devise new approaches, including stem cell methods, to advance ALS research, in collaboration with the ALS Association and colleagues throughout the world.

ALS is a progressive disease that attacks nerve cells, called motor neurons, that extend from the brain to the spinal cord and from the spinal cord to the muscles in the body. The motor neurons gradually die, preventing the brain from controlling muscle movement and eventually resulting in paralysis and death. “ALS is one of the most horrible diseases you can imagine,” says Dr. Maniatis, whose sister died in 1999. “You lose use of your arms and legs and you slowly stop breathing, while your sensory and cognitive abilities remain intact. You become trapped in a dying body.”

When the opportunity arose to become chair of biochemistry & molecular biophysics at P&S, Dr. Maniatis, then at Harvard, grabbed the chance in 2009. Having embarked on stem cell research in ALS several years ago, he knew that Columbia has some of the finest research employing stem cells and other methods to understand the motor neuron deterioration in ALS.

The Range of Stem Cell Research at Columbia

Besides the extraordinary stem cell work in motor neuron biology and ALS, Columbia has more than
75 laboratories actively involved in stem cell research. They study stem cells during development in the embryo, in virtually every organ system – including bone, blood, skin, heart, pancreas, eye, gut, tooth, and brain – in the growing and adult body, and in cancer. They also investigate similarities and differences among the various stem cells and the potential use of stem cells in understanding and treating diseases. Some Columbia researchers already are involved in clinical trials with stem cells to treat a variety of diseases.

An embryonic stem cell is pluripotent, which means that it can generate both a copy of itself and all of the cell types in an entire organism. An adult stem cell in an organ also can make a copy of itself and under normal circumstances can differentiate into a specific cell type. How stem cells decide to divide, or differentiate, is an intense topic of research.

In addition to studying naturally occurring embryonic and adult stem cells, scientists recently discovered a way to convert adult cells, such as skin fibroblasts, into embryonic stem cells, thus reversing the differentiation process. These so-called induced pluripotent stem cells (iPS cells) can then be converted into almost any cell type in a culture dish. This approach allows researchers to take skin cells from patients with any disease, turn them into iPS cells, and from them generate specific cell types (neurons, muscles cells, etc), then potentially study the pathology that arises in any tissue in a culture dish. iPS methods do not have the ethical issues associated with human embryonic stem cells isolated from an embryo formed by in vitro fertilization or cloning.

In 2008, Harvard and Columbia scientists (the latter led by the two senior scientific advisors of the Project A.L.S./Jennifer Estess Laboratory for Stem Cell Research, Christopher Henderson, Ph.D., professor of pathology, neurology, and neuroscience and co-director of the Center for Motor Neuron Biology and Disease, and Hynek Wichterle, Ph.D., assistant professor of pathology) were the first to take skin cells from a patient with ALS and transform them into iPS cells, which were directed to differentiate into motor neurons. Many Columbia scientists now employ iPS methods, which should lead to new drug screening assays and the bioengineering of tissue replacement therapies.

**Rejuvenated Columbia Stem Cell Initiative**

Although Columbia actively promoted stem cell research over the past 10 years, the institution launched a new Columbia Stem Cell Initiative – CSCI – in November 2007, increasing resources and attention on fundamental and translational stem cell research and promoting collaborations among scientists and departments. Recruitment of stem cell scientists is also under way, including endowed professorships in the Department of Rehabilitation and Regenerative Medicine, which houses CSCI. Joel Stein, M.D., the Simon Baruch Professor of Physical Medicine & Rehabilitation, who moved from Harvard in 2008 to chair rehabilitation and regenerative medicine, oversees the Initiative. Following on the lead given by James Goldman, M.D., Ph.D., professor of pathology & cell biology, Christopher Henderson recently took over as director of CSCI.

The impetus for the enhanced Columbia Stem Cell Initiative was in response to iPS and other stem cell advances and political events. Even though researchers were restricted by the previous presidential administration in the type of human stem cell research they could perform with federal funding, and were limited to a handful of approved stem cell lines, private organizations such as the New York Stem Cell Foundation and Project A.L.S. together with state funding allowed researchers to extend stem cell research. In May 2007, for example, New York state announced it would provide $600 million during an 11-year period for stem cell research, and Columbia has received more than $24 million since 2008. Potential sources of funding for stem cell research further spurred CSCI researchers to hold meetings and seminars, to collaborate scientifically, and to coordinate efforts to obtain grants for training, core facilities, and other needs. President Barack Obama’s executive order in March 2009 that expanded federal funding for human stem cell research, including use of human embryonic tissue, put Columbia stem cell scientists in a good position to build on their research efforts.
Basic Stem Cell Biology

While iPSC technology is promising, much research remains to be done to understand how natural stem cells maintain copies of themselves and how they become specific cell types. Boris Reizis, Ph.D., assistant professor of microbiology & immunology, uses mice to study stem cell self-renewal and differentiation in hematopoiesis, the process of forming different types of blood cells, and validates his results in human embryonic stem cell lines. Recently he showed that the Zfx gene is involved in the self-renewal of hematopoietic stem cells and in the self-renewal of embryonic stem cells in culture. “Similar mechanisms in stem cell self-renewal may work in different stem cells in the body,” Dr. Reizis explains. He is now studying the role Zfx might have in other tissues and in cancer.

Certain cancers, Dr. Reizis says, are believed to proliferate because a cancer stem cell in the tumor becomes a source for more cancer cells. Other cancers, lacking cancer stem cells, arise because all the tumor cells have the capacity to proliferate abnormally. Current chemotherapy may kill stem cell-derived cancer cells but not hurt the cancer stem cell. If a cancer stem cell remains viable, the cancer would still grow. The Zfx gene may act in self-renewal of the cancer stem cells and the propagation of cancers without cancer stem cells, Dr. Reizis hypothesizes. Thus, future drugs targeting Zfx would kill a cancer stem cell and become a new form of treatment.

Understanding basic stem cell biology also helps scientists understand how to exploit iPSC and other stem cell methodologies to make different tissues. Lori Sussel, Ph.D., associate professor of genetics & development, studies the molecules that guide the formation of the different cells in the pancreas during mouse development and also uses human embryonic stem cell lines to determine if similar processes are occurring in both mice and humans. Her research goal: to identify factors that promote the formation of insulin-producing beta cells so collaborators can use them to turn stem cells into beta cells to treat diabetes. Recently, scientists at Novocell, a San Diego-based stem cell engineering company, made immature beta cells in culture by treating human embryonic stem cells with a variety of developmentally regulated factors. “These...
cells, however, don’t respond well to glucose and make too little insulin,” Dr. Sussel says. She and other researchers are trying to find molecules that can possibly switch these immature beta cells to a functional beta cell. She has a candidate protein, called NeuroD. She recently found that if the gene for NeuroD is deleted in the mouse, the animal makes immature beta cells similar to the Novocell cells. “Perhaps adding NeuroD to the immature cells might move them further along in differentiation,” Dr. Sussel says.

iPS Cell-Derived Tissues as Models of Disease

Jonathan Lu, M.D., Ph.D., assistant professor of medicine, uses iPS to make cardiac cells in culture from patients to study an inherited disease of the heart called LQT syndrome. Individuals who have this condition are at a high risk of sudden death because of malignant arrhythmia. Scientists have identified genes that code for ion channels, which conduct electrical impulses in heart and other cells, responsible for LQT syndrome and have been able to treat some patients based on the mutation a person harbors. However, not all family members who have a mutation are symptomatic and it is unclear if an asymptomatic person will become ill. Dr. Lu uses iPS to make cardiac cells from people with the same mutation to find possible factors in the heart cells that modify the activity of the mutant ion channels. Such a factor might explain the symptomatic differences among relatives and provide a way to assess health risk. To ensure his iPS-derived heart cells reflect in vivo heart cells, Dr. Lu uses biochemical and electrophysiological tests to compare his findings with heart cells from healthy mice and from mouse models of LQT syndrome. He also compares iPS-derived heart cells with heart cells made from human embryonic stem cell lines, which he also evaluates relative to mouse heart cells.

Should iPS technology be used therapeutically, iPS cells have to be comparable to and compatible with normal human physiology. “Although induced pluripotent stem cells are similar to natural embryonic stem cells in vivo and in vitro, they are made by different biological pathways and validation is necessary before they can be used clinically,” says James Goldman.

Working with stem cells, whether embryonic, adult, or iPS, is challenging. Some human embryonic stem cell lines are more efficient at forming differentiated cells. There is also wide variety in the efficiency of making iPS cells and in turning them into differentiated cells. Asa Abeliovich, M.D., Ph.D., associate professor of pathology and of neurology, uses stem cells in mice models to study neuronal development, focusing on dopamine neurons affected in Parkinson’s disease and cortical neurons in Alzheimer’s disease. He analyzes neurons in culture derived from stem cells taken from animal models with disease to see if he can discern what goes wrong over time in a simple culture system. Dr. Abeliovich started using iPS technology when it became available because of his experience with stem cells. “I became fascinated with iPS and the process of turning skin cells to embryonic cells to nerve cells,” says Dr. Abeliovich, who in 2009 received two New York state grants to study iPS technology. He hopes to make reprogramming of iPS into neurons more efficient, to model Parkinson’s and Alzheimer’s disease with iPS, and to better understand the biological mechanisms involved in these procedures. He is also studying potential differences between stem cell-derived neurons and natural neurons, should any therapeutic application arise.

Moving Stem Cell Research into the Clinic

Angela M. Christiano, Ph.D., the Richard and Mildred Rhodebeck Professor of Dermatology and vice chair for research, in collaboration with Mitchell S. Cairo, M.D., professor of pediatrics, medicine, and pathology & cell biology and chief of pediatric blood and bone marrow transplantation at New York-Presbyterian Hospital, have begun a clinical trial with umbilical cord blood and bone marrow transplantation at New York-Presbyterian Hospital, have begun a clinical trial with umbilical cord blood and bone marrow transplantation at New York-Presbyterian Hospital, have begun a clinical trial with umbilical cord blood and bone marrow transplantation at New York-Presbyterian Hospital, have begun a clinical trial with umbilical cord blood and bone marrow transplantation at New York-Presbyterian Hospital, have begun a clinical trial with umbilical cord blood and bone marrow transplantation at New York-Presbyterian Hospital, have begun a clinical trial with umbilical cord blood and bone marrow transplantation. They are studying the disease, painful blisters akin to third degree burns form on the skin in response to the slightest trauma. Epithelial tissue that lines the mouth, esophagus, lungs, and other structures can be affected, making eating and breathing difficult. To study the disease, Dr. Christiano used a genetically engineered mouse missing the type VII collagen gene, which when mu-
tated or missing causes dystrophic EB in humans. The animals usually die within two weeks because blisters prevent them from swallowing and eating. In an effort to treat EB by delivering the missing collagen VII to the mice, Dr. Christiano gave the animals bone marrow from a healthy mouse – providing both an intact copy of the gene as well as a population enriched in stem cells. The treated animals lived for several months and were able to eat. “We hypothesize the stem cells find their way to the skin and begin making type VII collagen in response to inflammatory messages from the dis-eased tissue seeking repair,” says Dr. Christiano. In the clinical trial, EB patients are treated with umbilical cord blood or bone marrow, which contains stem cells, from a matching donor. The recipient’s bone marrow is only partially ablated, a technique Dr. Cairo has developed for non-malignant diseases, such as sickle cell anemia. With funding from New York state, Dr. Christiano continues to study skin stem cells and is developing a mouse model for junctional EB, which affects the laminin 5 genes, and is also pursuing the directed differentiation of iPS cells into skin tissues.

Engineering Stem Cells to Form Tissue

For more than a decade, Jeremy Mao, D.D.S, Ph.D., the Edward V. Zegarelli Professor of Dental Medicine, has researched the use of stem cells with biomaterials to engineer tissue. “It may not be enough to inject stem cells to regenerate most of the tissues in the body,” Dr. Mao says. In 2003, he had some success using stem cells to form non-functional bone and cartilage in an animal model. But recently, Dr. Mao, in collaboration with scientists and clinicians including input from Louis Biglani, M.D., the Frank E. Stinchfield Professor and Chair of Orthopedic Surgery, and Francis Y. Lee, M.D., assistant professor of orthopedic surgery, was able to regenerate a rabbit’s forelimb joint by the homing of bone marrow, mesenchymal stem cells, and biomaterials. The team imaged the rabbit’s mirror joint and used computer-aided design to develop the joint. The information was fed into what Dr. Mao calls a “bioprinter,” similar to a computer printer, with nozzles that spew Food and Drug Administration-approved biomaterials and growth factors to make a 3-D scaffold. The prefabricated joint, which “was not quite alive,” was surgically implanted into a rabbit. After two to three weeks, the entire joint regenerated with vasculature, bone, and cartilage, and the animal was able to move again. Dr. Mao is planning a clinical trial using this method for patients with arthritis. He also continues his research on stem cells, including using tooth stem cells to make neurons and muscle stem cells.

Bioengineering human stem cells to become replacement tissues is the focus of work by Gordana Vunjak-Novakovic, Ph.D., professor of biomedical engineering and director of the Laboratory for Stem Cells and Tissue Engineering, which hosts the Bioreactor Core of the National Institute of Health Center for Tissue Engineering at Columbia. “We engineer environments where stem cells can do their jobs and organize themselves into tissues,” says Dr. Vunjak-Novakovic, who is a pioneer in designing bioreactor environments that “instruct” stem cells (the architects of all our tissues) cultured on biomaterial scaffolds (templates for tissue formation) to form functional 3-dimensional tissues. Her lab has reported tissue engineering of anatomically shaped fully biological bone and synchronously contractile heart tissues and developed platforms for biophysical regulation of human stem cells and study of disease. She collaborates with researchers throughout Columbia to make bioreactors for stem cells to be cultured in environments resembling those encountered in vivo. With Jeremy Mao, she directs the Craniofacial Regeneration Center. She works with Robert Kass, Ph.D., vice dean for research and the Alumni & Hosa Professor and Chair of Pharmacology, to generate heart cells to understand their electrophysiology and with Warren Sherman, M.D., director of cardiac cell-based endovascular therapies at NYP/CUMC, to use stem cells to repair hearts damaged by cardiac arrest. “With iPS technology it might be possible to make individualized patches for the heart,” she says.
Adding to ALS Research Progress Using Stem Cells at Columbia

Although Dr. Maniatis, who is also the Isidore S. Edelman Professor of Biochemistry, has made significant contributions to molecular biology in his career, he is particularly gratified now to do research that may directly improve patients’ lives. When he first got involved in ALS research, he tried to determine how he could make a unique contribution. He and his collaborator at the time, Dr. Kevin Eggan at Harvard, decided to study early events in disease progression using a mouse model of ALS that had a mutation in the gene called SOD1, which causes some inherited cases of ALS. Following the success of Columbia scientists to make motor neurons from mice embryonic stem cells, he bred mutant mice, isolated their embryonic stem cells, and turned the cells into motor neurons to follow disease progression in culture compared with wild type mice. In 2007, Dr. Maniatis, Dr. Eggan, and Serge Przedborski, M.D., Ph.D., co-director of the Center for Motor Neuron Biology and Disease at Columbia, independently in back-to-back papers in Nature Neuroscience reported that other brain and spinal cord cells, called astrocytes, can adversely affect the health of motor neurons when the astrocytes harbor a mutant SOD1 gene. Thus, the mutation not only directly affects motor neurons, but also the cells that surround them. Since then, Dr. Maniatis has used a powerful new RNA sequencing technology to study the complex signaling alterations that arise in motor neurons damaged by mutant astrocytes. “We hope to identify a disease mechanism not previously detectable and develop a cell culture assay to screen for molecules that can block the toxic factor(s) released from astrocytes,” he says.

Recently, Dr. Maniatis began studying two newly identified genes implicated in ALS called FUS/TLS and TDP-43, which both affect RNA metabolism, an area of Dr. Maniatis’ expertise. He plans to use iPS technology to study these genes in motor neurons. The genes seem to play a role in sporadic ALS, the holy grail of ALS research: 90 percent of ALS cases are sporadic and are not due to the inherited SOD1 mutation.

Dr. Maniatis says Columbia’s appeal to him was and continues to be the research environment.
Eating Disorders: Aversion and Addiction
Understanding the Extremes of an Intractable Disease by Studying its Neurobiology
By Robin Eisner
What starts in adolescence as an innocent attempt to lose weight can become a downward spiral of voluntary and involuntary behavior that comes to characterize the most fatal of psychiatric diagnoses: anorexia nervosa.

While many affected individuals make full recoveries, calling the illness intractable is not hyperbole, says B. Timothy Walsh, M.D., the William and Joy Ruane Professor of Pediatric Psychopharmacology in Psychiatry and founder of Columbia’s Eating Disorders Research Unit. “Most of the people who develop anorexia nervosa start off in adolescence with a weight loss diet that begins with the best intentions,” says Dr. Walsh, who has led the eating disorders clinical research program since 1979 and is a national leader in the field. “They set off to lose 5 or 10 pounds. But most people who diet do not develop anorexia nervosa. So why is it that a small number of women who go on a diet around adolescence and in early adulthood are vulnerable to develop anorexia nervosa while most do not? Apart from that initial mechanism, once it gets established, it has a very stereotyped presentation.”

In the typical progression of the illness, a person develops an aversion to eating and becomes unable to maintain 85 percent of the weight deemed healthy for the person’s age and height. Individuals with anorexia nervosa become severely underweight but fail to see themselves that way. They obsessively fear weight gain, eat very few calories, and many exercise excessively to keep losing additional weight. Patients often describe a “high” they experience when starving.

Patients do not have sufficient insight to see the effects of their self-destructive behavior so the behavior continues. The disease is relatively rare, affecting only 0.5 percent of the general population, but it is 10 to 20 times more common in females than males. The severe weight loss causes menstruation to stop. Approximately 10 percent become severely ill and may succumb to the physiological effects of starvation or to suicide because the disease so adversely affects their ability to live a normal life.

“Anorexia nervosa has one of the highest mortality rates for any psychiatric disorder,” says Nicole Barbarich-Marsteller, Ph.D., assistant professor of clinical neurobiology (in psychiatry), who conducts pre-clinical studies of the disease. Dr. Barbarich-Marsteller has been interested in understanding anorexia nervosa since her youth. “When I was a young girl, I was involved in classical ballet and gymnastics. In both disciplines many girls suffer with eating disorders and I quickly learned the persistent nature of these deadly conditions.”

As an undergraduate majoring in psychology and biology at Rutgers University, she started doing research on the topic at the Rutgers University Eating Disorders Clinic with G. Terence Wilson, Ph.D. She surveyed members of the Academy of Eating Disorders, a leading professional association, and found that a third had personal experience with eating disorders. Her study was published in Eating Disorders: The Journal of Treatment and Prevention. She also has studied the relationship between obsessive compulsive disorder and eating disorders.

As she became more interested in the neurobiology of the condition, she started doing PET imaging in humans with anorexia nervosa as a research associate with Walter Kaye, M.D., then at the University of Pittsburgh Medical Center. Her doctoral research at Brookhaven National Laboratory with Stephen Dewey, Ph.D., focused on the dopamine system and the reward mechanisms acting in food restriction and in psychostimulant use. After completing her Ph.D., she obtained a postdoctoral position in Columbia’s Department of Psychiatry, where her mentors were Dr. Walsh; Richard Foltin, Ph.D., professor of neurobiology (in psychiatry); Mark Underwood, Ph.D., professor of clinical neuroscience (in psychiatry); and Michael Myers, Ph.D., professor of clinical psychiatry in developmental psychobiology.
Revisiting the Origins of the Disease

During the 1960s through 1970s, many psychologists and psychiatrists believed anorexia was due solely to psychological or cultural factors, so they did not pursue biological explanations, Dr. Barbarich-Marsteller says. Psychoanalysts suggested anorexia nervosa was a fear of oral impregnation, while psychologists said it was due to problems in family dynamics, with mothers of patients characterized as overprotective and fathers as moody or withdrawn. The societal obsession with thinness in women also has been blamed, but the disease has persisted for more than 100 years, even during periods in our culture when full-figured women were favored.

Doctors have not been successful in using medications to treat anorexia nervosa. Inpatient and outpatient stays that provide nutritional support and psychiatric counseling help a substantial number of individuals, but a third to 40 percent of patients develop a chronic condition. Dr. Walsh describes individuals with anorexia nervosa as being more similar to each other than in other psychiatric diseases, such as depression. “A depressed patient may either sleep too little or too much,” Dr. Walsh says. “But if someone refers me a patient with anorexia, I already know a lot about her. I know her diet and her thinking patterns.”

Women with anorexia, he says, have a phobia against high-fat foods, make moral judgments about food as being “good” or “bad,” and eat the same foods repeatedly, often in strange combinations. She will consume high bulk, low-fat foods, such as diet sweeteners, between two pieces of lettuce as a sandwich and feels a great accomplishment at her willpower to lose weight. An individual with anorexia nervosa is able to convince herself she is too fat and always will lower the limit as to how much she should weigh.

The stereotyped behavior, twin studies that suggest a genetic predisposition to the condition, and the continued rarity of the disease in the population since it was first described in the late 1800s all suggest a biological predisposition at work in addition to environmental stresses. “I don’t think there is a single way you can become anorexic, but once a person develops anorexia nervosa, my hunch is that it recruits some common underlying biology that helps explain the stereotypic presentation that patients have,” Dr. Walsh says. “One of the things that has held back progress in understanding the causes of mental illnesses, such as anorexia nervosa, is the absence of animal models of the disease. These models have been a significant method that investigators in other areas of medicine have used to probe the pathology of serious disorders, such as heart disease and cancer. Psychiatry is, arguably, much tougher because we are dealing with the brain, which is still a very much incompletely understood organ, and the human brain is particularly big and complicated.”

Because psychological risk factors for anorexia nervosa are similar to those in other psychiatric conditions, anorexia nervosa may involve some neurobiological pathway that gets activated during adolescence and reinforced in an individual at risk for the condition.

Parallels to Addiction

Dr. Barbarich-Marsteller took a sabbatical from her postdoc studies at Columbia to work with Bartley Hoebel, Ph.D., at Princeton University to refine development of an anorexia model to use in her current studies, which are funded by a five-year National Institute on Drug Abuse grant of $810,000. Since returning to Columbia, she has begun to study the link between food restriction and the reinforcing effects of psychostimulant drugs, such as cocaine and methamphetamine, by exploring how food restriction in rats alters the behavioral and neurochemical response to psychostimulants during adolescence, the most common time of onset for both eating disorders and drug use, and whether the effects are linked to gender. Her studies intend to shed greater light on the relationship between eating disorders and substance abuse by filling critical gaps in scientific understanding of adolescent reward mechanisms and vulnerability to addiction and addictive behaviors.

Because psychological risk factors for anorexia nervosa, such as familial problems, adverse adolescent peer pressure, or sexual abuse, are similar to those in other psychiatric conditions, Dr. Walsh says, anorexia nervosa may involve some neurobiological pathway that gets activated during adolescence and reinforced in an individual at risk for the condition.

Dr. Barbarich-Marsteller’s research focuses on the behavior of rats exposed to a running wheel and varied level of access to food. A laboratory rat with free access to food and a running wheel entertains itself by running, at first losing some weight because of the increased calorie expenditure but in time balancing its calorie intake and activity to maintain its weight. Rodents provided food for a limited time – an hour or two a day – without a running wheel also will shed weight at the beginning, but eventually adapt. They learn to eat more when food is available.

Something peculiar happens, though, when the rodent is allowed to eat for only a short period and has unlimited access to a running wheel. It will begin to run continuously, day and night, and eventually stop eating. At first, the animal will nibble at the food, but in a short time its desire to run overrides its instinct to eat, eating normally again only if given continuous access to food and exercise.

Dr. Barbarich-Marsteller believes the animal model may provide important clues to the neurobiology of human anorexia nervosa. By using brain imaging and other molecular techniques to study what might be going awry, she hopes to correlate her findings with what researchers detect in the brains of human patients with anorexia nervosa. She is particularly interested in characterizing the neural pathways underlying the apparently psychologically rewarding, or even addictive, nature of food restriction in both animals and patients. Dr. Barbarich-Marsteller is unique among researchers employing the food-restricted/running animal model, also called the activity-based anorexia model, to study anorexia nervosa because she fo-
cases on adolescent female and male rodents to mirror the disease: The disease affects more women than men and usually starts in the teenage years.

Dr. Barbarich-Marsteller is trying to understand what happens in a key neurotransmitter system, the dopamine pathway, in the brain to identify what might lead to the vulnerability to run excessively when food availability is limited. She focuses on the dopamine system because the neurotransmitter acts in the reward mechanism the brain uses to respond to positive stimuli, such as food, and to negative stimuli, such as addictive drugs. Prior evidence suggests dopamine system alterations in self-starving rodents, and considerable research has shown that the dopamine system becomes dysfunctional in substance abusers.

Rather than working on adult males, Dr. Barbarich-Marsteller uses adolescent male and female rodents. She also has extended the length of the time that the animal is kept under food restriction and running conditions to about two to three weeks. "Increasing the amount of time is important because ultimately we would like to try to study possible pharmacological interventions to try to stop behavior, but one week is not enough time to be able to measure an effect on an animal or a human," she says.

The study includes an effort to find a correlation between adolescent rats that excessively run and starve and the tendency to overuse addictive drugs, such as cocaine and methamphetamine, which also act on the dopamine system.

To understand the dopamine system, she scans the model's brain with micro-PET, a PET scanner designed for laboratory animals, and performs molecular analysis of the dopamine receptor in brain tissue. She is comparing the dopamine system in different groups of adolescent male and female rats, including those that are not food-restricted but are trained to self-administer either methamphetamine or cocaine and those that are food-restricted and develop excessive running for an extended period of time and are trained to self-administer either methamphetamine or cocaine.

Because of variability in any particular animal's amount of running or addiction to a drug of abuse, she will compare the tendency of an animal's proclivity to run with its level of addiction. She hypothesizes that an animal that runs less under the food-restricted conditions will be less likely to become addicted to the psychostimulant drug. Conversely, an animal that runs more under food-restricted conditions will more likely become addicted to the drug. These differences, she believes, will be reflected in the state of their dopamine receptors.

Dr. Barbarich-Marsteller believes her work will contribute to understanding anorexia nervosa because it focuses on the variables of adolescence, sex differences in the animals, and the dopamine system. She hopes her work will help move findings from the laboratory to the clinic, where Dr. Walsh has received a five-year grant from the National Institute of Mental Health to use PET imaging to study the dopamine system in women with eating disorders. "Together, perhaps, we can identify some of the mechanisms underlying anorexia nervosa. Ultimately, the knowledge may lead to more effective treatments, which are sorely needed."

Columbia Eating Disorders Treatment

Under the founding leadership of B. Timothy Walsh, M.D., the Ruane Professor of Pediatric Psychopharmacology in Psychiatry, the Columbia Center for Eating Disorders is an internationally recognized program with 30 years of commitment to the research and treatment of eating disorders, including anorexia nervosa, bulimia nervosa, binge eating disorder, and associated conditions. Inpatient and outpatient treatment incorporates up-to-date findings in the most effective treatments for eating disorders, including psychotherapy and medication. The center features several services.

- **Eating Disorders Assessment and Treatment Service** offers comprehensive evaluations and treatment for patients with anorexia nervosa, bulimia nervosa, binge eating disorder, and obesity. EDATS consultations are conducted by P&S faculty who have expertise in eating disorders. Evaluations include detailed feedback and treatment recommendations, which could include individual and group psychotherapy and medication management. Information: [www.columbiapsychiatry.org/cs/edcp.html](http://www.columbiapsychiatry.org/cs/edcp.html)

- **The Columbia University Day Treatment Program at Columbia Eastside on East 60th Street** offers structured treatment for individuals with eating disorders, including evidence-based psychotherapy groups and supervised meals. The program is designed as an adjunct to ongoing private, individual treatment and is well-suited to individuals who have interrupted their educational or professional pursuits because of mental illness and/or addiction. The goal of the day program is to help individuals return to work or school at their best possible level of functioning. (Evening components are geared to individuals who have recovered sufficiently to return to their former level of functioning.) Information: [www.columbiapsychiatry.org/cs/cudtp.html](http://www.columbiapsychiatry.org/cs/cudtp.html)

- **Mental health and addictions-focused groups** are available for patients who have resumed schedules that preclude ongoing involvement in day treatment.

- **Patients who participate in clinical trials and assessment studies** receive free medication and psychotherapy.

- In 2006, Columbia, New York Presbyterian Hospital/Westchester Division of Weill Cornell Medical Center, and Steven and Alexandra Cohen Children’s Medical Center (affiliated with North Shore/Long Island Jewish Health Care System) formed the Metropolitan Comprehensive Care Center for Eating Disorders, which treats the largest number of patients with eating disorders in New York state. Dr. Walsh serves on the board of the Metro CCCED. Information: [www.eatingdisordercenterofexcellence.org/](http://www.eatingdisordercenterofexcellence.org/)
On the 50th anniversary of the retirement of Robert Loeb, longtime professor and chairman of the Department of Medicine at P&S, alumnus Lawrence Norton writes about a single – and singular – experience with the legendary Dr. Loeb.

High bluffs form the eastern shore of the Hudson River at the top of Manhattan Island. Upon these bluffs stands a complex of tall, tan buildings. If one drives eastward across the George Washington Bridge in late afternoon sunshine, the site appears to shimmer as if it were the castle home of giants.

In fact, in the late 1950s, the Columbia-Presbyterian Medical Center was the home of giants. The College of Physicians and Surgeons, my medical school, and Presbyterian Hospital, its teaching hospital, were staffed by an unusual concentration of academic and clinical stars. Department chairs, without exception, were prestigious doctors whose names were internationally recognizable. Several faculty members were Nobel laureates. Even professors in the second rank at Columbia were eminent by ordinary standards. This happy merger of luminaries during one decade is still celebrated by alumni.

Despite the equity of brilliance and achievement among my teachers, one man stood out as the undisputed leader. He dominated the heady scene of genius, discovery, and authority that characterized the medical center. From virtually every faculty member, resident, and student, he received deference, respect, and, to a large degree, obedience. His power was such that merely mentioning his name brought subordinates to sober attention.

The professor and chairman of medicine deserved to be elevated. He had overpowering intelligence, penetrating judgment, and unshakable focus. His research as a young investigator was elegant and widely cited. As editor of the leading textbook of medicine, he towered over his peers in terms of influence and reputation. No one challenged his opinions without risking professional ridicule.

The professor was not a large man but he was physically intimidating. Something about his cold stare froze inferiors in their tracks. His square jaw and rigid posture warned off intruders who might want to become casual. The most distinctive feature of the man was blazing white hair. This qualified him for the whispered title of “The Silver Fox.”

In the company of medical students, Dr. Robert Loeb was tolerant but not indulgent. He did not encourage humor. He once asked our class clown to compare the caloric value of “the three basic foods.” He meant, of course, carbohydrate, fat, and protein. The student answered coyly, “Do you mean breakfast, lunch, and dinner?” The professor dismissed him immediately and, it was rumored, asked the dean to expel him for the remainder of the academic year.

During the entire medical school experience at P&S, one event was paramount for each student. During the third-year clinical clerkship on the medical service, a day would come when he or she presented a patient to The Silver Fox. Billed as the Professor’s Rounds, Dr. Loeb held court on the medical ward once a week. He never came alone. As many as 50 other faculty members from various services attended these performances. They were there, primarily, to profit from the wisdom of the chief but they also may have relished watching the emotional disintegration of medical students.

By tradition, the student who was to present to the professor would be the clinical clerk for the patient in the first bed on the right side of the ward. The medical residents shifted beds around so that every student had a date with self-sacrifice. At nine o’clock on Thursday morning, The Silver Fox appeared at the entrance of the ward.
Robert Loeb, left, with Vannevar Bush of MIT in an undated photo from a Plaza Hotel reception

Photo courtesy of CUMC’s Archives & Special Collections
The chief resident in medicine ran to welcome him. In slow procession, to allow time for the gathering retinue to find their places, the professor strode to the notorious first bed on the right, paying his respects to the chief nurse and acknowledging important out-of-town guests en route. Meanwhile, the medical student of the day would take up position on the patient’s right and say nothing until invited to speak. Occasionally, he or she couldn’t speak. Some students became so frightened that speech was impossible. Word had it that a student once vomited in front of patient, professor, and entourage!

The chief resident presented the student by name to the professor. After an awkward moment in which silence descended upon the room, The Silver Fox smiled a beneficent smile, the only one the student was likely to see, and said the fearful words, “Now tell me about this patient.” For the next 30 minutes, everything said by the student was subject to the professor’s correction, criticism, or, in sublime circumstances, approval. Attention was focused on the presenter but, rarely, the professor would turn unexpectedly to other students who were whispering nearby and ask an unprepared target to answer his question. This happened to me once. The patient in question was a burly man who spoke accented English. The ends of several fingers were missing but his real problem was heart disease. Suddenly, The Silver Fox turned from his accustomed prey, the patient’s clinical clerk, and challenged me to name the man’s occupation.

“My patient was a spry lady of 70. She lived alone a few blocks from the hospital. This was her first significant illness. Events on the ward seemed to fascinate her. She talked incessantly about doctors, nurses, and other patients. Free to walk about, she camped upon the bedside of her neighbors although she felt fine. Our initial impression was that she was suffering from an unusual form of lung disease.

“Sir,” I answered, “this patient had no chief complaint.”

The professor looked at me admiringly as the questioning reverted to the original presenter. I never revealed to them that my ready answer was not based upon keen observation. The patient was, actually, our own butcher who worked in a shop on Broadway at 172nd Street. I had recognized the face, not the hands.

The professor used different teaching styles for different needs. A classmate presented a patient with duodenal ulcer on one occasion. In the course of questioning, he was asked what advice he might give the patient to reduce the degree of mental stress that was then considered a principal cause of peptic ulcer disease.

“I would say ‘Don’t worry,’” the student responded. Clearly, the answer did not satisfy The Silver Fox. He was searching for something more insightful and less trite. He approached my friend benignly and covered his shoulder with his arm. Speaking softly, so that only those close by could hear, he advised the student that his medical school performance was below average (certainly not the case but the student wasn’t sure) and that dismissal was likely (again, a rhetorical exaggeration). Then, turning to the crowd and bellowing the words, he added “But, don’t worry!” The student got the point.

One Wednesday morning, my patient’s bed was moved to the first space on the right. Like a prisoner listening to the sounds of his scaffold being erected, I sensed the beginning of my doom. The patient knew nothing of the coming ordeal. She was admitted only recently under unusual circumstances. Intending to visit a hospitalized friend, she entered the medical center through the emergency room instead of the front door. A physician working in the ER noticed as she passed him that her lips were blue (cyanotic). One thing led to another and before long she was hospitalized herself although she felt fine. Our initial impression was that she suffered from an unusual form of lung disease.

My patient was a spry lady of 70. She lived alone a few blocks from the hospital. This was her first significant illness. Events on the ward seemed to fascinate her. She talked incessantly about doctors, nurses, and other patients. Free to walk about, she camped upon the bedside of her neighbors giving unsolicited analyses of why they were not improving at a faster rate. No one in a white coat, with the possible exception of me, was exempt from criticism. I confess, modestly, that she liked me.

I was ready for Thursday morning. I thought. What there was to know about my patient’s disease, I knew. As they had for so many students before me, the events of Professor’s Rounds began to play out. When I heard “Now tell me about this patient,” I launched into the details of my patient’s medical history, scanty as they were.

Not more than 30 seconds into my presentation, the professor stopped me. This was always a sign that students dreaded.

“Norton!” he scolded in a haughty voice, “you forgot to tell me the chief complaint.”

In the hallowed tradition of a proper presentation, the patient’s chief complaint is always mentioned first.

“Sir,” I answered, “this patient had no chief complaint. She was observed to...” And here I was about to describe the ER encounter.

“Nonsense!” the professor bellowed. “Every patient has a chief complaint. Now tell me what it was.”

“Really, sir, she had no chief complaint because...”

“This is disgraceful, Norton. You omit the single most important piece of historical information and want us to ignore that fact? It is obvious to me that you are not prepared. I think that we should move on.”

Robert Loeb retired from P&S in 1960 after nearly 40 years on the faculty of P&S and Medicine service of Presbyterian Hospital. He left a unique legacy that is the subject of passionate discussion more than 30 years after his death.

To add your remembrance to an online archive being built of remembrances of Dr. Loeb and other P&S remembrances (people, events, experiences), submit your memories to:

psjournal@columbia.edu

A few may be printed but all will be available online for future generations to enjoy.
My world collapsed. Heat rushed to my face; sweat saturated my arm pits. Faces of people around me blurred. The room tilted dangerously. I found no words to speak. This was the end of life as I knew it.

A high-pitched voice screamed out in the midst of my darkness.

"Leave my doctor alone, you old man!"

My patient had left her bed to stand between the professor and me. She shook her fist in his face.

"Now you listen to what he’s trying to say and don’t interrupt!" she demanded in a strident tone. "I thought you were supposed to be smart."

A profound hush fell upon the shocked crowd, so I was later told. I was beyond noting something like that myself. Nothing like this had ever happened before. Obviously, the professor had to be the first to react.

His face of stone remained firm for several seconds. Then, in a gradual relaxation of muscles beginning with the neck and extending upward to the brow, it broadened into a smile. The smile became a laughing grin.

"All right, my friend," the professor conceded in good humor, "I’ll let your doctor talk. Just get back in bed."

Deep sighs of relief from stunned onlookers filled the still quiet atmosphere. The Silver Fox turned again to me.

"I’ll say this for you, Norton, your patient has found her true doctor. Now tell me why she had no chief complaint."

Life flowed back into my embalmed mind. I rasped out the story of the ER detection of cyanosis. As a heaven-sent advocate, the chief resident confirmed the sequence of events and defended my position. The rest of the professor’s interrogation was unusually benign. My career was not over.

Before he moved on to the next patient, The Silver Fox put his head near mine and in a whisper said, "I’m never going to forget today."

I could have said the same.
Combating the Epidemics of Obesity and Type 2 Diabetes

The research arsenal of Ph.D. students in nutritional and metabolic biology

Obesity raises an individual’s risk for type 2 diabetes, heart disease, hypertension, stroke, certain cancers, osteoarthritis, and other conditions, and the talented Ph.D. students in the Nutritional and Metabolic Biology – NMB – program recognize the importance of developing new research approaches to understanding the genetic, cellular, and molecular mechanisms underlying this emerging epidemic.

The students inhabit the halls of the Russ Berrie Medical Science Pavilion, the epicenter of research in this field in the country, if not the world. The Diabetes and Endocrinology Research Center under the direction of Drs. Domenico (Mimmo) Accili and Rudolph Leibel attracts world-class investigators, including other NMB Ph.D. training faculty Drs. Wendy Chung, Anthony Ferrante, and Lori Sussel.

What draws students to research in nutritional and metabolic biology (and diabetes and obesity in particular)?

Senior Ph.D. student John Overton, who works in the Leibel lab, says his interest stems from a clearer understanding of the molecular etiology of disease and his undergraduate training in nutritional sciences at Cornell University plus a recognition of the need to study the development of co-morbidities, including type 2 diabetes and cardiovascular disease.

Jill Carmody is a senior student in the lab of Dr. Leibel and his colleague, Dr. Lori Zeltser. “It is actually quite frightening how steep the rise in obesity and diabetes rates has been over the last several decades in adults and children,” Jill says. Her research is particularly relevant to childhood obesity. While certain environmental and behavioral factors, such as diets high in fat and sugar and more sedentary lifestyles, contribute to the increased prevalence of childhood obesity, emerging research demonstrates, even more soberingly, in Jill’s opinion, that nutritional status during pregnancy can have long-term consequences on offspring, in particular models of both over- and under-nutrition during gestation that are associated with an increased risk for obesity. Her work focuses on the developing hypothalamus and how the maternal nutrient environment in utero may influence susceptibility to obesity, studies that she presented at a recent high-profile international meeting.

The most junior member of the Leibel/Zeltser contingent is Chi-Nok “Angie” Chong. After graduating from St. John’s University in Queens, Angie initially thought she would use her Ph.D. to combine her interest in nutrition and “how things work in the body” with a cancer research focus. Then she was bitten by the “Berrie bug” during rotations in the Accili and Leibel/Zeltser lab.

Students also are part of the research group led by Lori Sussel, who was recruited from the University of Colorado to join the Diabetes and Endocrinology Research Center and the Department of...
Genetics & Development. Shortly after arriving in August 2007, she was recruited to the Ph.D. training faculty of the NMB program. One of the students in this lab is third-year NMB Ph.D. student Jamie Papizan. Jamie had an interesting route to diabetes research. He grew up in the South and attended the University of Southern Mississippi on a full music scholarship, studying percussion performance. As Jamie explains, he became a bit “jaded with teaching music to high school students and did not want to become a struggling musician after college,” so he switched his major to nutrition during his senior year, influenced in great part by the fact that he has always been conscience of his health. He completed an M.S. degree in nutrition science at Auburn University, where he studied the role of fetuin-A in insulin resistance, leading to an interest in diabetes. His thesis adviser at Auburn knew about the Russ Berrie Diabetes Center and encouraged him to apply to Columbia’s Ph.D. program. Jamie’s research on various aspects of transcriptional regulation during pancreas development means that he’s traded in his drums to bang away at the cryostat to produce the histological sections of embryonic mouse pancreata that he needs to monitor specific gene expression.

In the labs of Drs. Accili and Ferrante are Ph.D. students Aliki Kostelli and Chutima “Noi” Talchai. Aliki recently defended her thesis titled “Studies Examining the Function of Adipose Tissue Macrophages.” Noi studies the morbidly obese (and appropriately named) “hippo” mouse model and uses mouse models to generate functional insulin-producing cells in the intestine. Noi is fascinated by the intellectual complexity of these diseases but also has a personal motive: Relatives from both sides of her family have died from complications from type 2 diabetes.

Life after Russ Berrie

Ph.D. training is intended to produce the next generation of leaders in diabetes research. How do these students feel about their future? John is excited about the prospect of being part of the next generation of scientists to develop patient-specific medicine, including “being able to take a single cell from a patient, induce that cell back to its pluripotent state, and differentiate it into almost any cell in the body to study its differences from a normal cell,” including defective B-cells in the pancreas. Noi is committed to serving the biomedical needs of the Thai community and is interested in pursuing several ongoing relationships between Columbia’s Institute of Human Nutrition and institutions in Thailand. Jill will defend her thesis shortly and plans to pursue postdoc training that will be consistent with her long-term interest in how the feeding circuits regulate energy balance.

Stephanie, Angie, and Jamie still have a way to go before defending their theses, but the prospects for all of our Ph.D. students seem broad, interesting, and limitless.
Remembering the faculty and alumni of Columbia University’s College of Physicians & Surgeons

Faculty

Elizabeth B. Davis Trussell, M.D.

Elizabeth Davis Trussell, professor emeritus of clinical psychiatry and a 1949 graduate of P&S, died Feb. 1, 2010. She became director of the newly established Department of Psychiatry at Harlem Hospital Center in 1962 when Columbia and Harlem Hospital formed an affiliation.

After graduating from P&S, she interned at Harlem Hospital and completed residencies at the New York State Psychiatric Institute and Columbia’s Center for Psychoanalytic Training and Research. She received a psychoanalytic certificate from Columbia in 1955.

She was the widow of Ray E. Trussell, who served as director of Columbia’s School of Public Health and Administrative Medicine from 1955 to 1968 and also was New York City commissioner of hospitals. As commissioner, Dr. Trussell set out to move the city’s elite medical school faculty, concentrated until then at Bellevue Hospital, into city hospitals in medically underserved areas. Psychiatry was the first of the major departments at Harlem Hospital to enter into an affiliation contract with P&S for professional staffing. The contract called for a 40-bed inpatient psychiatric unit and supporting services. Dr. Davis, as she was known professionally, led the department at Harlem until 1978 and became an authority on providing psychiatric care in an inner-city setting.

See more in the Alumni In Memoriam section.

Other Faculty Deaths

Herbert Spiegel, M.D., a retired faculty member in psychiatry, died Dec. 15, 2009.

Alumni

Class of 1938

Alvin J. Gordon, clinical professor of medicine emeritus and attending cardiologist at Mount Sinai School of Medicine, died July 10, 2002, at age 87. He received the Jacobi Medallion from Mount Sinai and the H. Mason Hicks Award from Doctor’s Hospital. Survivors include his wife, Elaine, a daughter, and a son.

Class of 1939

Robert M. Fisher, a retired family practitioner, died Sept. 13, 2009, at age 95. Dr. Fisher served during World War II with an American unit attached to the British 8th Army in North Africa and as a flight surgeon with the U.S. Army Air Corps in the Pacific. After the war he worked as a family practitioner first in Osceola, Iowa, then in Bryn Mawr, Pa., where he had been a member of the staff of Bryn Mawr Hospital. Survivors include his wife, Katharine, a daughter, two sons, and five grandchildren.

Charles S. Houston, a renowned mountain climber and one of the world’s leading experts on high altitude physiology, died Sept. 27, 2009. He was 96. Throughout his multifaceted career as mountaineer, scientist, teacher, and physician, he gathered and disseminated the knowledge of high places as a humbling prerequisite for respect. Not a man to be easily pigeonholed, he was also, among a long list of accomplishments, the inventor of a mechanical heart (the forerunner of the Jarvick artificial heart), a former Peace Corps director for India, and a pioneer in group practice and community medicine. Dr. Houston volunteered in 1941 for a commission in the U.S. Navy. Based in Pensacola, Fla., he coordinated the Navy’s high altitude training programs for aviators and directed a landmark high altitude study called “Operation Everest.” The common denominator for his diverse experiences was a sense of life as a great adventure. Climbing some of the world’s great peaks in his youth – Mount Foraker in 1934, Nanda Devi in 1936 – he led the first reconnaissance group to the Nepal approach of Mount Everest. A subsequent ascent up the forbidding K2 in 1953, during which he almost died and which cost the life of one of his teammates, made him put an end to his climbing career. But he never lost his love for high places. He lived and practiced for some years as a country doctor in Colorado before being recruited by Sargent Shriver as director of the Peace Corps in India. In 1966 he joined the faculty in the Department of Medicine at the University of Vermont in Burlington. For the next decade he pursued research on Mount Logan in Canada which led to significant advances in our understanding of high altitude physiology. Co-author (with Robert
Edward T. Reilly, a retired pediatrician, died Nov. 8, 2009. Dr. Reilly served as a medical officer in the U.S. Army Air Corps during World War II. He pursued a solo private practice for more than six decades in Brooklyn and taught on the clinical faculty at Downstate Medical School. He was preceded in death by his wife, Margaret, and a daughter and a beloved dog Pooh Bear. In “Going Higher,” he summed up his life’s work and passion: “Enjoy the mountains; they have beauty and wisdom for us if we approach them with humility, respect, and knowledge.” Among many other honors, he was the recipient of the King Albert Medal of Merit, named after the king of Belgium, an avid mountain climber, for his decades of work on man’s acclimatization to high altitudes.

Edward T. Reilly, a retired pediatrician, died Nov. 8, 2009. Dr. Reilly served as a medical officer in the U.S. Army Air Corps during World War II. He pursued a solo private practice for more than six decades in Brooklyn and taught on the clinical faculty at Downstate Medical School. He was preceded in death by his wife, Margaret, and a daughter and is survived by four daughters, two sons, 24 grandchildren, and six great-grandchildren.

Class of 1940

C. Lockard Conley, a pioneering hematologist and acclaimed teacher who conducted landmark studies of blood coagulation, blood platelets, hemorrhagic diseases, hemoglobins, and sickle cell anemia while inspiring generations of students and young researchers, died of Parkinson’s disease Jan. 30, 2010, at age 94. He had been head of the hematology division at Johns Hopkins University School of Medicine for 34 years. He also made crucial contributions to developing a therapy for vitamin B 12 deficiency. He started medical school at the University of Maryland then transferred to P&S. In 1980, he was appointed distinguished senior clinician to the U.S. Public Health Service Hospital in Baltimore. When he retired from Johns Hopkins in 1980 as University Distinguished Professor Emeritus of Medicine, an entire issue of the Johns Hopkins Medical Journal was dedicated to him with articles written by his former students. He received the Distinguished Teacher Award of the American College of Physicians in 1983 and the ACP Mastership Distinguished Service Professorship of Medicine Award from Johns Hopkins. In 1998, Alpha Omega Alpha selected him as a “leader of American medicine.” The American College of Physicians recognized his teaching skill by naming an award, the C. Lockard Conley, M.D. Award for Excellence in Medical Resident Education, in his honor. Other honors included Phi Beta Kappa, membership in the American Society of Hematology, honorary fellowship in the Royal College of Physicians, and the Bicentennial Medal from P&S. He was preceded in death by his wife, Edith Martha, and is survived by two daughters, two grandchildren, and four great-grandchildren.

Class of 1941

Philip D. Wiedel, a retired general surgeon and former member of the faculty in the Department of Surgery at P&S, died July 26, 2009. He was 93. Dr. Wiedel served as an officer in the Navy during World War II. Assigned to military government, he attended to civilian casualties during four Pacific Island landings, for which he earned two awards of the Bronze Star Medal with Combat “V.” He also served for many years in the Medical Corps of the U.S. Naval Reserve. After training at Columbia-Presbyterian, Dr. Wiedel joined the clinical faculty in the Department of Surgery and pursued a private surgical practice with a focus on breast surgery. A licensed glider pilot and avid bird watcher and conservationist, Dr. Wiedel served as president of Swampfield Land Trust in Danbury, Conn. He was a loyal alumnus, a longtime member of the Alumni Council, and a staunch supporter of the medical school. Survivors include his wife, Mimi, three sons, six grandchildren, and one great-grandchild.

Class of 1942

Francis G. Geer, internist and primary care physician, died Dec. 10, 2008, at age 92. Following a surgical internship at St. Luke’s and a surgical residency as a U.S. Navy medical officer in the central Pacific, he changed to internal medicine. He maintained a private practice in New York City until retirement. He served on numerous charity boards in New York and on alumni committees at P&S. Preceded in death by a son, he is survived by his wife, Mimi, three sons, six grandchildren, and one great-grandchild.

William G. Knox, a retired vascular surgeon and former professor of clinical surgery at P&S, died June 29, 2009. Dr. Knox served in the U.S. Navy Medical Corps and took part in the third wave of the invasion of Okinawa during World War II. A surgeon in private practice, he served on the staffs of St. Luke’s, Roosevelt, and St. Vincent’s hospitals. At St. Luke’s he was chief of staff; at St. Vincent’s, he helped found and for more than a decade chaired the Department of Vascular Surgery. Active in several professional societies, he served terms as president of the New York County Medical Society, the New York Surgical Society, and the New York Cardiovascular Society. He is survived by his wife, Amie, a daughter, three sons, and eight grandchildren.
Class of 1943

Charles Clark, a retired surgeon, died June 27, 2009. He served as a captain in the U.S. Army Medical Corps during World War II, first as medical officer on a hospital train between Paris and the port of Le Havre, then as the commanding officer of a hospital for German prisoners of war in Nancy. After a surgical residency at St. Luke’s Hospital in New York, he went on to enjoy “40 glorious years” of practice in Bergen County, N.J. He served on staff and as a former director of the Department of Surgery at Valley Hospital in Ridgewood and as director of the Division of Surgery at Pascack Valley Hospital in Westwood. His first wife, the late Dr. Margaret Clark, joined him in practice. They built out an old barn behind the family house as an office. A heart attack at age 74 convinced him to retire, devoting free time to vegetable gardening. He is survived by his second wife, Marilyn, two daughters, one of whom, Mary Clark Romney ’76, is a pediatrician, a son, Dr. Charles E. Clark Jr., a family practitioner, three grandchildren, one great-grandchild, and two step-sons. Dr. Clark was a loyal alumnus and generous supporter of the medical school, for which he established a charitable remainder trust in his and his late wife’s names.

Howard G. Turner, a retired pulmonologist and former member of the clinical faculty in the Department of Medicine at Tufts Medical School, died Aug. 27, 2009. He served in the U.S. Medical Corps during World War II, in both the European and Pacific theaters. Dr. Turner also pursued a private practice for many years in Springfield, Mass. He helped develop, then directed the pulmonary service at Bay State Medical Center. He was a past president of the Eastern Thoracic Society and an active member of the American Lung Association of Massachusetts. He is survived by his wife, Marion, a daughter, two sons, and a granddaughter.

Class of 1944

Roswell W. Phillips, a retired internist, died April 8, 2009. Dr. Phillips was a flight surgeon with the rank of lieutenant colonel, retired, of the Washington Air National Guard. Dr. Phillips had been chief of medicine at the VA Hospital in Spokane, Wash. Preceded in death by his first wife, Marilyn, and one son, he is survived by his wife, Ruth, two sons, and four grandchildren.

Class of 1945

Stuart W. Cooper, a retired internist, died Dec. 1, 2009, at age 89. A graduate of Princeton University, he interned at Presbyterian Hospital after graduating from P&S and then served in the U.S. Navy. He held faculty appointments at Albany Medical College and Hudson Valley Community College. He was particularly proud of developing the Albany Medical College and Hudson Valley Community College PA Program. He was preceded in death by his wife, Marjorie Elizabeth, a Columbia nursing graduate, and a daughter. He is survived by two sons and a daughter.

Ralph W. Grover, a retired dermatologist and member of the clinical faculty in the Department of Dermatology at SUNY Stony Brook, died May 25, 2008. Dr. Grover served as a captain in the Medical Corps of the A.U.S. immediately following World War II. He maintained affiliations with Nassau County Medical Center, as co-director of the Department of Dermatology at St. Francis Hospital in Roslyn and Eastern Long Island Hospital. He was an honorary member of the Pan American Medical Association. Preceded in death by his wife, Jean, he is survived by a daughter, two sons, and two grandchildren.

Sherwood Vine died Dec. 11, 2009, in Princeton at age 88. Born in Trenton, Dr. Vine lived there most of his life. He graduated in 1942 from Princeton University. He was an internist and gastroenterologist and medical director at Greenwood House for 49 years. A fellow of the American College of Surgeons, he served as medical director at St. Francis Medical Center and was on the medical staff at Lower Bucks County Hospital. Dr. Vine was former president of the New Jersey Medical Society. He proudly served as a captain in the Army Medical Corps during World War II. An accomplished cellist and pianist, he participated with local chamber music quartets and orchestras. He enjoyed theater, tennis, reading, and traveling the world. He is survived by his wife of 56 years, Myra Grossweiner Vine, two daughters, a son, and six grandchildren.

Class of 1946

Clement G. Curd, a retired general and thoracic surgeon and former member of the Department of Surgery at the University of Massachusetts, died Aug. 28, 2009. Dr. Curd served as a lieutenant in the Navy. In his 36 years of practice he was affiliated with Pittsfield General and St. Luke’s hospitals, which merged to become Berkshire Medical Center, where he was chief of staff. He had been a member of Berkshire Surgical Associates. He also served as president of the Massachusetts chapter of the American College of Surgeons and national governor of the American College of Surgeons. He is survived by his wife, Patricia, six daughters, and 18 grandchildren.

Daniel L. Larson, former P&S faculty member, died March 3, 2007, at age 86. He was clinical director and director of medicine at St. Barnabas Hospital in the Bronx and had privileges at Westchester Square Medical Center. While a student athlete at Washington State University, he played in the Rose Bowl. Following his medical training, he served in the U.S. Army and then was assigned to Walter Reed Hospital. In 1962, he received a commission as a reserve lieutenant colonel. He was admitted as a founding fellow in the American Rheumatism Association in 1986. He maintained a private practice in Throgs Neck, N.Y., and also worked at the United Nations. Dr. Larson was preceded in death by his wife, Mary Ann Lo Monaco. He is survived by four children.
Class of 1947

Robert E. Hindman, chief of surgery and chief of staff at Grossmont Hospital in the San Diego area, died May 9, 2005, at age 84. He was a graduate of Iowa State College and served in the U.S. Army. His medical education began at Yale University but his degree was from P&S. Following an internship at Bellevue Hospital, his residency training in surgery was done at Saranac Lake Hospital and he trained at the Bronx VA Hospital. Survivors include his wife, Lora Spencer Hindman, a daughter, a son, a sister, a brother, grandchildren, and a great-grandchild.

Class of 1949

Elizabeth Bishop Davis Trussell, a pioneer in the delivery of quality mental health care to African-Americans, died Feb. 1, 2010. Dr. Davis, who was among the first African-American women accepted to P&S, was known professionally as Elizabeth Davis. A caregiver for many years at the LaFargue Clinic, the first psychiatric clinic in the world devoted to the care of African-Americans, she was later appointed the first director of Harlem Hospital’s Department of Psychiatry, a position she held for more than 16 years. Professor emeritus of clinical psychiatry at P&S, she provided care and taught psychiatry at Harlem Hospital, New York State Psychiatric Institute, Presbyterian Hospital, and Sydenham Hospital and at community clinics at Northside Center for Child Development and the James Weldon Johnson Community Center, both in Harlem. A visionary whose grasp of her patients’ problems transcended the strictly clinical, understanding that health is as much a function of social circumstances as of pathological illness, she was instrumental in the fight for state-licensed community housing for African-Americans suffering from mental health issues. Widely published in her field, she also served for many years as Distinguished Visiting Professor of Psychiatry at the Puerto Rico Institute of Psychiatry in San Juan. Revered by her peers, Dr. Davis was honored with the Barnard College Medal of Distinction, the New York State Office of Mental Health’s Lifetime Achievement Award, and the Distinguished Service Award at P&S, among other honors. She was preceded in death by her husband, Ray Trussell, M.D., former commissioner of hospitals for New York City and director of Beth Israel Hospital, and is survived by a daughter.

Class of 1950

Hans W. Neuberg, a distinguished endocrinologist and retired clinical professor of medicine at P&S, died Aug. 10, 2009. Following his retirement from practice he served for 30 years as a member of the Institutional Review Board. In a 2004 alumni reunion questionnaire he hailed the “great technical advances and massive progress in pathophysiology” of modern medicine but bemoaned “lack of time by MDs to see patients.” And he asked: “How can good medicine be practiced with financial pressure forcing patient time and science?” Dr. Neuberg was a loyal alumnus and faithful supporter of the medical school. He is survived by his wife, Birgit, and two sons, including Gerald’83.

Class of 1950 PSY

Harold I. Lief of Pittsburgh, Pa., died in March of 2007.

Class of 1951

Frank W. Johnson, a retired psychiatrist, died Sept. 13, 2009, from chronic heart disease. He served in the U.S. Naval Ordinance Laboratory during World War II. Dr. Johnson had been affiliated withNorristown Psychiatric Hospital and Carrier Clinic in Belle Mead, N.J., before moving to Michigan, where he was affiliated with mental health clinics in Baldwin and Traverse City. Outside of medicine he was a passionate athlete. He helped found Snow Bowl Ski Area in Milton, N.J., the first ski area in the state to use snowmaking equipment, which Dr. Johnson designed. Preceded in death by a daughter, he is survived by his longtime companion, Britt Lipson, two daughters, and five grandchildren.

Word has been received of the May 18, 1995, death of Penelope K. Tosteson, a retired psychiatrist, who had been affiliated with the Bangor Mental Health Institute in Bangor, Maine.

Class of 1952

Charles L. Doolittle, a retired general practitio- ner, died Oct. 26, 2009. He served for three years as a lieutenant in the U.S. Navy, stationed on the U.S.S. Ajax during World War II. Dr. Doolittle lived and practiced in Salinas, Calif., where he delivered more than 3,000 babies, performed hundreds of surgeries, and treated the ills and enhanced the well-being of the community. Fondly dubbed “Dr. Doo” by his patients, he called himself the “Railroad Doctor,” often setting up “ambulatory” care in the Salinas train station, caring for sick passengers. Shortly before his retirement he wrote in an alumni ques-
tionnaire: “I having a hard time quitting and I would start the whole thing over again in a min-
ute.” A man of many talents, he could swing a tennis racket like no one else, and (when he was not delivering babies) delivered lines at the local theater company in many shows, including “It’s a Wonderful Life,” which, judging from the affection of his many friends and patients, might just as well have been subtitled “The Life and Times of Dr. Doolittle.” He retired to Big Sky County, Mont. Dr. Doolittle is survived by his third wife, Mary, four sons, nine grandchildren, and a great-grandchild.

Class of 1953

Robert H. Eddy, a retired internist and cardiologist in private practice, died March 6, 2009. A resident of Camden, Maine, he had an honorary affiliation with Penobscot Medical Center, where he helped to establish the special (coro-
mary) unit. Among other extramedical activities, Dr. Eddy volunteered with Habita-
tat for Humanity, helping to build seven houses. He is survived by his wife, Mary, a daughter, and four sons.

Warner Nash, gynecologist and attending emeritus at Lenox Hill Hospital in New York City, died Jan. 3, 2010, at age 88. He was a graduate of George Washington University. Following his medical training at P&S, he served in the U.S. Army during World War II. He is survived by his wife, Ar-
temis Nash’53, two daughters, including Laurie’90, and four grandchildren.

Class of 1954

Roger M. DesPrez, a retired internist who taught on the faculties of Cornell and Vanderbilt, died Aug. 28, 2009. He was 82. Following his training, Dr. DesPrez worked for the Indian Health Service, run-
ing the Fort Defiance Tuberculosis Sanitarium in New Mexico. After working on the Cornell faculty, he moved to Tennessee to join the faculty at Van-
derbilt School of Medicine. He served as chief of medicine at the VA Hospital in Nashville, where he worked for more than three decades. Upon his retirement in 1995, Vanderbilt established the Roger M. DesPrez Award for Teaching. A restless retiree, the following year he joined the faculty of the Vanderbilt School of Nursing, teaching on the clinical faculty at the Vine Hill Community Clinic. He is survived by his wife, Patricia, three daughters, two sons, and eight grandchildren.

Class of 1956 PSY

Wayne Alan Myers, a training and supervising an-
alyst at the Columbia University Center for Psycho-
analytic Training and Research, where for many years he headed the admissions service, died of lung cancer Jan. 16, 2009. Dr. Myers, an emeritus member of the clinical faculty of psychiatry at Weill Cornell Medical College, was the author of five books, including “Shrink Dreams,” a New York Times notable book in 1992. His area of expertise was the intensive treatment of the aged. Dr. Myers served as 28th Battalion Commander of the Fif-
teenth Medical Battalion during the Korean Con-
flict. He is survived by his wife, Joanne, a daughter, a son, and three grandchildren.

Class of 1957

Vert Mooney, orthopedic surgeon and profes-
sor of orthopedics at the University of California, San Diego, died Oct. 13, 2009. He was 78 years old. He served as professor and chair of orthopedics at University of Texas South-
western and also spent time on the faculty of the Univer-
sity of Southern California. He was past president of several spine societies and president of the American Orthopedic Society. He authored hundreds of original manuscripts and was a prolific speaker. Survivors include his wife, Ruth Grace Mooney, two daughters, a son, and two grandchildren.

Class of 1958

Mary Ellen Wohl, a professor of pediatrics at Harvard Medical School and leading researcher in pediatric pulmonary disease, died Oct. 9, 2009, of cardiac arrhythmia. She also had been suffer-
ing from progressive dementia. Dr. Wohl served for 22 years as chief of respiratory diseases and 19 years as director of the Cystic Fibrosis Center at Children’s Hospital Boston, where a professor-
ship was established in her honor. According to an article in the Boston Globe, Dr. David Nathan, for-
erm physician-in-chief of Children’s, said Dr. Wohl was “the first woman to be recruited as a division chief.” Dr. Wohl applied lung function tests origi-
ally developed for adults to the special needs of young children. Among her many honors, she received the American Thoracic Society’s Life-
time Achievement Award and the Edwin L. Kenig Award, distributed jointly by the American Academy of Pediatrics and the American Academy of Chest Physicians, for outstanding achievements in pediatric pulmonology. She is survived by her husband, Martin Wohl’57, a daughter, a son, and four grandchildren.

Class of 1960

Grace Eddison, whose primary interest was public health, died Nov. 26, 2009, at her home in Pawleys Island, S.C. A graduate of Wellesley College, she inter-
terned at Bellevue Hospital after graduating from P&S. She was on the faculty of Albert Einstein College of Medicine and the University of Kentucky, health com-
missioner for Bath County, Ky., and a scholar at the Public Health Leadership In-
stitute. Following her retire-
ment to South Carolina, she consulted with the Depart-
ment of Health and Environmental Control and other organizations to help strengthen the state’s public health. Preceded in death by her husband, L. Corbin Eddison, she is survived by her son and two granddaughters.
Class of 1968

Word has been received of the presumed death of Eugene Ambard, a physician at Kaiser Hospital in Honolulu, Hawaii. Dr. Ambard disappeared in August 2001.

Class of 1969

Mitchell A. Goldman, who was on staff of North Shore University Hospital for 34 years, the last 12 as chair of radiology for both North Shore and Long Island Jewish Medical Center, died Feb. 16, 2010, at age 65. He also was assistant professor of radiology at Cornell University, associate professor of radiology at NYU, and past president of the New York State Radiology Society. A graduate of Queens College, he was chief resident at McGill University’s Royal Victoria Hospital after a two-year public health assignment. He is survived by his wife, Barbara, a daughter, his parents, and a sister.

Class of 1974

Philip A. Higginbottom, who spent his entire career in the infectious diseases division at Scripps Green Clinic, died Dec. 31, 2009, at age 62. He also was vice president of the Scripps Medical Group. After graduation from Princeton University, he considered studying business at Stanford University but decided on a medical career. After graduating from P&S, he completed a residency and fellowship at the University of California at San Diego. Much of his career was spent in the residency teaching program at Scripps Green Clinic/Hospital from which he received the Faculty Teaching Award in 2008. He and his wife made semi-annual humanitarian trips to Fiji, where he treated impoverished people in remote villages. They founded the Dina Humanitarian Foundation to better the lives of children and their families in remote areas of Fiji. He is survived by his wife, Terry, a daughter, and three step-children.

Class of 1975

Michael B. Macko of Providence, R.I., died Jan. 24, 2010, at home after a lengthy illness. He was 60. Dr. Macko grew up in Ardsley, N.Y., and entered P&S after graduating from Princeton University. He joined the Roger Williams Medical Center faculty in Rhode Island after his medical residency there. He maintained a private practice until 1992, when he joined the staff of the Providence VA Hospital, returning in 2001 to Roger Williams to teach full time and direct the Introduction to Clinical Medicine Program at Brown University Medical School. He also was director of continuing medical education at Roger Williams, associate program director of the internal medicine residency training programs, and chairman of the Graduate Medical Education Committee, overseeing all residencies and fellowship programs at Roger Williams.

Dr. Macko was a past president of the Providence Medical Association and the Rhode Island Medical Society and clinical associate professor of medicine at both Boston University and Brown University. Dr. Macko enjoyed squash, skiing, and sailing and raced competitively on many boats on Narragansett Bay. Dr. Macko is survived by a sister.

Class of 1979

Jeffrey P. Gilbard, a noted innovator in ophthalmology, died from complications following a bicycle accident on Aug. 12, 2009. He was 55. A noted innovator in ophthalmology, Dr. Gilbard created the company Advanced Vision Research. Dr. Gilbard created the company to market TheraTears, an eye drop he invented to treat dry eye, a condition caused by chronic lack of moisture in the eye. The now popular medication grew out of a summer research project he pursued while still a medical student, a project subsequently funded by a grant from the National Eye Institute. In pursing the research, he wrote, “I was ‘bitten by the bug’ and became obsessed with the disease, working in my ‘spare time’ as a medical student.” He demonstrated that the electrolyte balance of the tear film is biologically active. Previous medications on the market had washed away the electrolytes. Dr. Gilbard was the youngest researcher to be awarded such a grant. He was also a pioneer in understanding the link between nutrition and eye health. He is survived by his wife, Elisabeth, and three children.

Karen Knox, an obstetrician/gynecologist affiliated with Pinelands OB/GYN in Mount Holly, N.J., died Aug. 17, 2008. In her free time she was an avid kayaker and bicyclist, once pedaling with her husband, Bradley Bowen, who survives her, from Helsinki, Finland, to the Arctic Circle. She also was politically active in many causes, including women’s rights, the environment, and the treatment of animals.

Class of 1987

Marian Markowitz Haber, professor of pathology at Drexel University College of Medicine, died Oct. 6, 2009. She was known for her work in the field of gastrointestinal pathology. She is survived by her husband, Dr. Alan Haber, a daughter, three sons, and siblings Arlene Markowitz ’84 and David Markowitz ’85. Her late father, Dr. Alfred Markowitz, was a celebrated professor of surgery at P&S.
ANDREW G. FRANTZ:

From Endocrinology to Admissions, a Life in Medicine

Reflecting on his role as associate dean and chair of the Admissions Committee at P&S, a position he has held for close to three decades, longer than anyone else in the history of the medical school, Andrew G. Frantz ’55 quotes Banquo’s charge to the witches in Shakespeare’s “Macbeth”: “if you can look into the seeds of time/And say which grain will grow and which will not./Speak then to me…”

His own forecasting skills have proved to be on the mark. “You can often make very accurate predictions as to the trajectory of human life. You’re certainly not always right. But often you are.”

OF HORMONES AND HOMER

A man of science and consummate culture, equally at home in the pituitary gland and Plato, hormones and Homer, Dr. Frantz, professor of medicine at P&S and former chief of the endocrinology division, considers each admissions interview a kind of Socratic dialogue, a potential learning experience for both the interviewee and the interviewer. He carefully weighs a candidate’s dossier, grades, test scores, letters of recommendation, and personal statement, and, when in doubt, bases his decision on whether to admit on one key question: “If I were sick, would I want this person to come into my room as my physician?”

A number of the students accepted to P&S based on the answer to that question became his advisees and have since gone on to leadership positions in their chosen fields. A few became lifelong friends, among whom feelings for Dr. Frantz run strong.

One of those “accurate predictions,” oncologist-writer Jerome Groopman ’76, professor of medicine at Harvard Medical School, chief of experimental medicine at Beth Israel Deaconess Medical Center, a regular contributor on medical matters to the New Yorker magazine, and author of several soul-searching books, put it this way: “Andy Frantz was, and still is, a guiding light for me, as he is for so many of us fortunate to know him at P&S. He is not only a mentor in advising on classes and career but showed me the joy and fulfillment that come from the kind of doctoring that melds science with the soul in the care of every patient.”

THE SCIENTIFIC SIDE OF A BI-MODAL CAREER

After training in medicine at Presbyterian Hospital, where he later pursued a fellowship in endocrinology with Dr. Joseph Jailer, Dr. Frantz served for two years as a lieutenant commander in the Navy at the U.S. Naval Hospital in Memphis. He joined the faculty in the Department of Medicine at Harvard Medical School, seeing patients and pursuing research in human growth hormone at the endocrinology unit at Massachusetts General Hospital. At Harvard his lab devised a landmark radioimmunoassay on human growth hormone, helping to unravel the mystery of its physiology. Though invited to stay on in Boston, he had always envisioned his future at P&S. “I’m a New Yorker, I was born here, have family here, went to school here. I practically grew up at P&S. I always wanted to come back.”

Dr. Frantz returned to New York and joined the Department of Medicine at P&S in 1966 and was named professor of medicine in 1973. In 1971 he had taken on the reins as the first chief of the newly established endocrinology division at Presbyterian Hospital, a position he held for the next 17 years.

He is best known for the pioneering work he did on human prolactin, a neglected hormone secreted by the pituitary gland. Prolactin is involved in the generation of lactogenic activity in all mammals, including humans. Previously thought to be tied to human growth hormone, human prolactin had been ignored by researchers, some even doubting its existence as an independent entity, until Dr. Frantz’s lab made the breakthrough discovery in 1970 of its presence in human pituitaries and circulation in the blood as a molecule immunologically distinct from human growth hormone. Hypothesizing that the two hormones were so closely related in molecular structure that prolactin might just have been missed, Dr. Frantz, working with dissected mouse breasts, devised a bioassay at least a hundred times more sensitive than the best existing assay, allowing for the accurate measurement in human blood. “Adding a tiny amount of anti-human growth hormone antibody to the incubation mixture of sections of mouse breast in vitro, we found, would completely neutralize the activity of human growth hormone.”

Some 30 years after the finding, his voice still quivers down to an intense whisper as he relives the thrill of discovery. “But it didn’t tie up the lactogenic activity in the serum from nursing mothers. So, clearly, there must be something in the blood of nursing mothers which has all the properties of prolactin and is immunologically distinct from growth hormone. It took us about six months of testing to believe our own results,” namely that he had successfully isolated and proven the existence of the missing hormone.

His paper, “Prolactin: Evidence that it is separate from growth hormone in human blood,” co-authored with Dr. David Kleinberg and published in the journal Science, took the scientific world by storm.

The discovery, it turned out, had major clinical implications. In subsequent studies, Dr. Frantz and his colleagues established the physiology of human prolactin. He also studied prolactin-producing pituitary tumors, for which prolactin assay proved to be a reliable marker. Prolactinomas are the most common type of pituitary tumor in humans. Once detected, the tumor can be safely removed. This finding helped launch a new neurosurgical field and improved the quality of countless lives.

Dr. Frantz’s lab also established that “by giving a long acting dopamine agonist, such as bromocriptine, we could lower prolactin to normal...”
hour before dinner, over dry martinis, anticipating dinner and with nothing that we have to do, is one of the pleasantest times there is in life.’ The conversation often turned to teaching and to his mother’s unofficial role as a trusted counselor to students, a role he subsequently inherited upon joining the faculty. ‘My mother loved what she did, the research, the teaching and advising, and she communicated that passion to me.’ She also served on the Admissions Committee.

“I LIKE STUDENTS, AND I FEEL I’M STILL ONE AT HEART.”

He still remembers his own medical student experience as if it were yesterday, including a first-year anatomy exam that initially shook his confidence and made him really dig in, henceforth rising daily at 4 a.m. to study. All the strains and thrills of student life are engraved in his memory. “For a long time I was a student in my dreams, worrying about an exam…waking in a cold sweat,” he says. “I like students and I feel I’m still one at heart. This is why the admissions job has been so right for me. I can identify completely with the person sitting in that chair. I know what they’re going through. And I’m also learning from them all the time.”

A CALL TO ADMISSIONS

While he had served as a member of the Admissions Committee since first joining the faculty,
Dr. Frantz remained focused on research and teaching until a fateful telephone call in 1981 from the dean at the time, Donald F. Tapley, changed the course of his life. The head of admissions had suffered a nervous breakdown, and Dr. Tapley asked if Dr. Frantz would consider stepping in immediately as interim chair of the Admissions Committee. “You should bear in mind,” Dr. Tapley pointed out, “this may well turn into something permanent.”

“After thinking about it for about, I suppose, 20 milliseconds,” Dr. Frantz recalls, “I said yes. It was the best thing that ever happened.

“You can always dream up experiments to confirm the best thing that ever happened. And I thought I could probably continue doing admissions work until I had about one neuron left.”

“I KNOW I’M BEING INTERVIEWED TOO.”

As dean of admissions, Dr. Frantz is in a certain sense the face of the medical school, or at least the first face many prospective candidates see. “I’ve learned that my job is not only picking out people, but also I’m a recruiter, I’m a salesman. But I’m not selling snake oil, I’m selling P&S. I want the admissions interview to be a positive experience, whatever the outcome. I know that I’m being interviewed too. I want the candidates to have a favorable impression of me and of this institution, because they’re going to go back to whatever college and they’re going to report on their experiences.”

And though he has no set formula for each interview, he and his colleagues on the Admissions Committee know what they are looking for. “We want people who are certifiably smart, but we want them to have other interests and passions too. Brains alone don’t make a great doctor.”

He is a great proponent and supporter of the P&S Club, the oldest medical student activities organization in the country and among the most diverse, with some 59 activities offered, including the Bard Hall Players, the medical school’s celebrated student theatrical group. “It’s a very good selling point for our school when applicants discover this wonderful resource. My gosh! There’s no other school that puts on three full-scale productions every year.”

Musical ability is also high on his list. “Last year there were four members of the class who had been concertmaster of the symphony orchestra at their respective universities.”

One of the joys of his job has been learning to appreciate the strengths of people unlike himself, candidates from different backgrounds and with different abilities, particularly athletes. Though disinclined to toss a ball and not a fan of spectator sports, Dr. Frantz started attending P&S rugby matches and has seldom missed the annual John Wood’76 Memorial Tournament, of which P&S is a longtime champion. “The high spirits on the field are palpable,” he says, the smile lines radiating from his eyes and across his forehead. “These guys are having the time of their lives.”

A number of his athletically inclined picks have gone on to become national leaders in orthopedics and other fields.

So what makes an ideal P&S candidate, according to Dr. Frantz?

“There are three qualities doctors have to have. They have to be bright, of course, brighter than average. Then they have to be motivated, really motivated. But they also have to want to do good in this world.”

The admissions process is arduous for both the candidate and the dean of admissions. For years Dr. Frantz put in entire weekends, reading dossiers way into the wee hours of the night. As of October 2009, he shares some of the workload with Stephen W. Nicholas, M.D., MPH, professor of clinical pediatrics at P&S and of clinical population and family health at the Mailman School of Public Health, the newly appointed assistant dean for admissions at P&S.

“The WORD DOCTOR MEANS TEACHER IN LATIN.”

The author of more than 150 papers and book chapters, Dr. Frantz is the recipient of many honors, including the Distinguished Teacher Award at P&S and the Medal for Service to the medical school and its Alumni Association, of which he is a past president.

Throughout his career, from the lab to the bedside to the admissions office, he has embraced the educational role of the doctor. “The word doctor means teacher in Latin,” he points out. “That’s what we are trained and what we train medical students to do: to teach the patient. In the first place, we try to find out what they’ve got. Then we have to tell them about it. We’ve got to make them understand their disease or condition but also help them to accept it, because there are still many diseases we can’t cure and others we can’t even alleviate.”

Like his mother, he has been devoted to the medical school and its student body. She established the Virginia Kneeland Frantz’22 Scholarship. He likewise set up a scholarship fund in his name. To Dr. Frantz, it’s not so much a matter of perpetuating his name – “What is it that Milton called fame...that last infirmity of noble minds.” – but rather of supporting the institution to which he has given his all. Or, as he put it in the title of his remarks at the first P&S Class Day in 2002: “Sprit is the medical center’s legacy, students its future.”

He still remembers his own medical student experience as if it were yesterday, including a first-year anatomy exam that initially shook his confidence and made him really dig in, henceforth rising daily at 4 a.m. to study. All the strains and thrills of student life are engraved in his memory. “For a long time I was a student in my dreams, worrying about an exam...waking in a cold sweat. I like students and I feel I’m still one at heart. This is why the admissions job has been so right for me. I can identify completely with the person sitting in that chair. I know what they’re going through. And I’m also learning from them all the time.”
About the Portrait

This is the second portrait Chris French’95 has painted of Andy Frantz. “My last one was about 10 years ago, and my portrait-painting skills have improved,” says Dr. French. “Because Dr. Frantz’s 80th birthday is approaching, I thought it was an appropriate time to paint him again.”

The portrait was unveiled Jan. 20 at a ceremony in Bard Hall. Dr. French, assistant professor of pathology at Harvard Medical School, attended the ceremony along with other alumni and many of Dr. Frantz’s colleagues and friends.

Dr. French runs an RO1-funded cancer research lab and also practices cytopathology at Brigham and Women’s Hospital in Boston, where he completed a pathology residency after graduating from P&S.

“Dr. Frantz is a very close mentor and friend to me,” says Dr. French. “We share a deep connection, possibly due to similarities in our character, and I emulate him. He has helped shape my life.”

The portrait shows Dr. Frantz in a familiar scene – cocktail hour. “The scene is Dr. Frantz sitting across from me. It is during cocktail hour that we converse and catch up. Dr. Frantz is an amazing story teller, with the ability to embellish his personal tales with historical context, making use of his profound knowledge of history and literature. A large percentage of my own literary and historical knowledge comes from my quarterly meetings with Dr. Frantz.”

While at P&S, Dr. French produced the cover art for the Winter 1995 issue of P&S (a view of the Hudson River and George Washington Bridge from his window in the Bard-Haven Towers) and illustrated posters for six Bard Hall Players productions. A biology graduate of UCLA, Dr. French started college as an art major. He continues to pursue art by painting portraits and landscapes in oil on weekends. He produces art for galleries and does commissioned works through an agent.
Bucharest: A Balkan Brigadoon Waiting to be Reborn

There are two Bucharests, a rubble-strewn shambles by day, a spritely Brigadoon by night, when Romania’s capital reawakens, as if from a bad dream, darkness hides the wrinkles, and the city reclaims its proud past. Wars, earthquakes, and dictators have taken their toll, but the historic heart of the city still pulses with an odd mix of Eastern stoicism and a Latin zest for life. The visitor who takes the trouble to scratch below the surface, as I did last summer, develops a tender feeling for this battered Balkan beauty, for what it was and what it might be if ever the government gathered the funds and mustered the resolve to fill in the pot holes and plaster the cracks.

Bucharest is a city of stark contrasts.

The lovely Biserica Stavropoleos, an early 18th century Orthodox church painted with frescoes inside and out, huddles just down the block from the colorful Neo-Gothic façade of the Caru cu Bere, the city’s oldest beer hall.

No vampires linger around the ruins of the Curtea Veche, the royal residence of Vlad Țepeș (the Impaler), the 15th century Walachian ruler who inspired the myth of Dracula. But the modern-day megalomaniac dictator Nicolae Ceaușescu drained the lifeblood of the nation and leveled the past, razing century-old villas to erect his Palace of the Parliament, the world’s largest civilian administrative building. Another bloated brainchild of his, Unirii Boulevard, longer and wider than the Champs Elysées and forever clogged with traffic, overshadows the stately Calea Victoriei, one of the city’s oldest and most charming thoroughfares.

But the university survived his excesses. The site of student protests in 1989 that helped topple his corrupt regime, its walls are still pockmarked in places with bullet holes. The historic Faculty of Medicine, housed in a grand neoclassical building, is named for its founder, Dr. Carol Davila, who devised the Davila tincture, an opioid-based treatment for cholera. Another faculty member of note, Dr. Victor Babeș, an early bacteriologist, made major contributions to the study of rabies, leprosy, diphtheria, and tuberculosis. And yet another professor, physiologist Dr. Nicolae Paulescu, is credited by some with the original discovery of insulin, which he called pancreatine.

Having joined the European Union in 2007, Romania is in the throes of frenzied modernization while holding on to traditional ways. I had no trouble finding some meds I’d lost in transit at a local pharmacy, though the local curative of choice is still a shot of țuică, the potent white lightning distilled from plums, of which I likewise partook.

The contrasts are surprising and sometimes disconcerting. While the pavement is torn up and stately buildings crumble in the old commercial hub, the Lipscani district, making it look a bit like a throw-back to the South Bronx of the late 70s, there is a wacky Post-Modern appeal to the Piața Română (Roman Square), with a statue of the she-wolf suckling Romulus and Remus dead center harking back to a classical past and Coca-Cola spilling from a colossal bottle perched on a rooftop, as cars circle below.

Stray dogs unleashed by Ceaușescu’s mad destruction projects are everywhere you turn. But you can also find perfect serenity bobbing in a rowboat among the swans in Cismigiu Garden, the city’s oldest park.

More information: www.romaniatourism.com/bucharest.html
Among the guests in attendance at the Sept. 17, 2009, council dinner, the first of the fall semester, were Amelia Alverson, the new vice president for development at CUMC, and Emma Wu, an interviewer and announcer for the Chinese National TV Network, a friend of Columbia University Trustee Clyde Wu’56. Ms. Wu interviewed Columbia University President Lee Bollinger and P&S Dean Lee Goldman, among other members of the Columbia community. The Donald F. Tapley Faculty Club was packed with alumni and friends on hand to hear remarks by the evening’s guest speaker, Nobel Prize laureate Harold E. Varmus’66.

Former director of the National Institutes of Health, Dr. Varmus is now president and chief executive officer of Memorial Sloan-Kettering Cancer Center in New York. Dr. Varmus shared the 1989 Nobel Prize for Physiology or Medicine with J. Michael Bishop, Ph.D., for their research that demonstrated the cellular origin of the oncogene of an avian retrovirus. This groundbreaking discovery led to the isolation of numerous genes that normally control growth and development and are often mutated in human cancer.

Dr. Varmus spoke on the genesis of his recently published memoir, “The Art and Politics of Science,” based on a series of lectures he gave at the New York Public Library. Having been trained in English literature before shifting his focus to medicine and science, he said, “I always thought of myself as a writer.” Asked by a member of the audience about the role of a liberal arts education in his scientific career, Dr. Varmus replied: “There is no doubt that for me, having an interest in how you express your ideas is based on an interest in writings of all kinds.” He outlined his role as a scientific adviser to President Obama’s transition team and as a member of the President’s Council on Science and Technology. Following his remarks, Dr. Varmus signed books.

The guest speaker at the Nov. 18, 2009, council dinner was George Yancopoulos’86 Ph.D., ’87 M.D., executive vice president, chief scientific officer, and president of Regeneron Research Laboratories. A widely respected researcher in molecular immunology and the author of more than 300 scientific articles, Dr. Yancopoulos’ research has focused on growth factor receptors and pathways as well as the development of new platforms for target and drug discovery. In 1989 he left an academic career to become founding scientist of Regeneron Pharmaceuticals. Under his direction the company has brought numerous drug candidates to clinical trials. In his remarks, Dr. Yancopoulos reported on the company’s development of a unique platform for producing humanized mouse monoclonal antibodies. In light of this scientific advance, he was excited to announce what he called “the largest deal in biotech history,” the agreement of the pharmaceutical giant Sanofi-Aventis to support Regeneron with $10 billion over the next 10 years.

Dr. Yancopoulos described the challenge of being involved in a biotech startup. “Just to give you an idea of how difficult this business is, there are over 3,000 biotech/biopharma companies in the U.S. today, all trying to bring new drugs to the market, but only 10 new products a year are approved by the FDA.” Regeneron had its first drug approved in 2008 and now has three drugs in phase 3 trials, for diseases ranging from blinding eye disease to cancer to gout. The company has four or five more drugs moving along in the pipeline. Dr. Yancopoulos gave a special salute for P. Roy Vagelos’54, former CEO of Merck and current chair of Defining the Future, the medical school’s capital campaign, whom he called “a lifelong role model and inspiration.”
SURPRISE 80TH BIRTHDAY BRUNCH FOR DR. VAGELOS

The invitation read 10:45 a.m. Sharp. Mum was the word among friends, faculty, and staff who gathered in the Donald F. Tapley Faculty Club in hushed silence Oct. 8, 2009, waiting for the guest of honor to appear. Birthday honoree P. Roy Vagelos ‘54 paused in stunned amazement as he entered the club. Dean Lee Goldman began his salute wishing Dr. Vagelos good health and happy birthday in Greek and thanked him for his selfless service to the medical school. Dr. Vagelos, a dynamic octogenarian, picked up a knife and cut hunks of the birthday cake for all to enjoy.

ALUMNI WALKING TOUR OF THE VILLAGE

Alumni and friends met under the landmark Washington Square Arch Oct. 25, 2009, for a walking tour of Greenwich Village. The Sunday stroll, the first in a series of off-campus and “off-beat” alumni events, was organized by Alumni Association director Elizabeth Williams. Liz also organized a well-attended alumni volunteer action event, “Pantry in Harlem,” an opportunity to serve food to the homeless.

1. Michelle Tucker, left, and David T. Tucker ‘66 in Greenwich Village

2. Shearwood J. McClelland ‘74, left, and daughter Kimberly McClelland at “Pantry in Harlem”

3. From left at “Pantry in Harlem”: Suchita Shah ‘12, Camilla Mateo ‘13, Kimberly McClelland, and Emily Niu ‘10

4. Participants in the walking tour of Greenwich Village gather under the Washington Square Arch
**CLASS OF 1951**

*John McGiff*, professor and chair of the Department of Pharmacology at New York Medical College, received a Lifetime Achievement Award from the Western Returned Scholars Association in December 2009; the award was presented at the Nobel Forum in Beijing, China, in the Great Hall of the People. The Western Returned Scholars Association is a Chinese government-affiliated entity consisting of more than 40,000 Chinese scholars and researchers who have studied abroad. At the same meeting he presented a seminar on the anti-inflammatory effects of the signaling molecules, ATP and adenosine, on renal function. In 2004 John was given a Lifetime Achievement Award for his research in hypertension by the American Heart Association.

**CLASS OF 1958**

See an article elsewhere in this issue by Lawrence W. Norton. Larry’s remembrance of Robert Loeb – who retired from P&S 50 years ago this year – will join an online archive of Loeb and other P&S remembrances. To contribute to the archive, send remembrances to psjournal@columbia.edu.

**CLASS OF 1962**

*Henry A. Solomon*, chief medical officer of the American College of Cardiology, also serves as chair of the group’s Professional and Corporate Consortium. Although he remains on the clinical faculty (clinical associate professor of medicine) at Weill Cornell Medical Center, he recently retired as medical director at Pfizer.

**CLASS OF 1965**

In 2008, *Robert P. Lisak* was named a Fellow of the Royal College of Medicine, “by distinction,” one of only five American physicians elected for that session. In 2009 he was elected as an honorary member of the American Neurological Association after being an active member since 1979. Honorary membership is reserved for those who have made “unique contributions that have enriched the field of neurology or the neurological sciences over a substantial period of time.”

*Stuart Rose*, an emergency room physician, is board-certified in internal medicine and emergency medicine. He is assistant professor of emergency medicine at Tufts University and a member of the American Society of Tropical Medicine and Hygiene and the International Society of Travel Medicine. He recently opened a full-service travel clinic and travel supply store in Northampton, Mass.

**CLASS OF 1966**

The George H. Humphreys II Professor of Surgery at P&S, *Henry M. Spotnitz*, received the 2009 Alfred M. Markowitz Service Award from the medical center’s Society of Practitioners.

**CLASS OF 1967**

*Richard Banyard*, a former trustee at Greenwich Hospital in Greenwich, Conn., and an ophthalmologist on the emeritus staff there, received the 2009 President’s Award at the hospital’s 14th annual gala in November 2009. This award recognizes outstanding service to the hospital. He began his career at Greenwich Hospital as an intern and later served as chief of staff and head of the hospital’s ophthalmology section. He had a private ophthalmology practice in Greenwich for 35 years until retiring in 2008. He continues to serve the hospital as a member of its Institutional Review Board.

**CLASS OF 1967 PSY**

See Alumni in Print to read about a second suspense novel by *David Peretz*. David’s first book, “The Mosel Legacy” was inspired by stirrings of neo-Nazism in Europe in the 1990s. He is assistant clinical professor of psychiatry in the Center for Psychoanalytic Training and Research at Columbia. Before writing fiction, David co-edited a number of books in the field of loss and grief, death, and dying. He and his wife, Eileen, an award-winning interior designer, live in New York and spend part of the year in Paris. He is working on his third novel, “Revenge.”

**CLASS OF 1971**

*Judith S. Palfrey* is 2009-2010 president of the American Academy of Pediatrics, the nation’s largest pediatric organization with a membership of 60,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists. After training as a general pediatrician at Jacobi Hospital in New York, Judy joined Children’s Hospital, Boston, where she was chief of general pediatrics.

**CLASS OF 1975**

*David P. Roye Jr.*, chief of pediatric orthopedic surgery at P&S, received the When U Dream A Dream Foundation’s “Inspiration Award.” The award was from 1986 to 2008. Under her leadership, the division grew to one of the largest and most productive general pediatrics programs in the country. Judy is the T. Berry Brazelton ’43 Professor of Pediatrics at Harvard Medical School and directs the Children’s International Pediatric Center at Children’s Hospital. She has written five books, including “Community Child Health” and “Child Health in America: Making A Difference Through Advocacy,” and more than 100 articles dealing with improving child health systems. During her year as AAP president, Judy is working to draw attention to the needs of children around the world.

**CLASS OF 1975**

*David Roye’75*, center, with former patient Kip Guja, left, and Lawrence Pleskow, president of the When U Dream A Dream Foundation
presented in November 2009 by the foundation’s president and by Dr. Roye’s former patient, Kip Guja. When Kip was born with cerebral palsy, doctors predicted he would never learn to walk or attend a mainstream school and would have multiple disabilities throughout his life. After Kip’s parents rejected those predictions, Kip met Dr. Roye. “He was very different from the other doctors,” Kip recalls. “He had this amazing positive attitude and was determined to help me walk and live a normal life.” Kip, a second-year medical student at Stony Brook University School of Medicine, credits Dr. Roye for inspiring him to attend medical school, where he is enrolled in a combined MD/PhD program and hopes to specialize in pediatric orthopedics so he can “one day have a positive impact on my patients, as Dr. Roye had on me.” Dr. Roye is the St. Giles Professor of Pediatric Orthopedic Surgery at P&S.

CLASS OF 1976

Marguerite McDonald received the prestigious Svyatoslav N. Fyodorov Award in February at the 24th International Congress of the Hellenic Society of Intraocular Implant and Refractive Surgery in Athens, Greece. Marguerite, a physician with Ophthalmic Consultants of Long Island, is the first female to receive the award, which is presented biannually to distinguished Greek or foreign ophthalmologists for their contributions to the field of refractive surgery. Before joining the Long Island practice, Marguerite was director of the Southern Vision Institute in New Orleans, La., from 1993 until Hurricane Katrina hit the city. There she headed the research team investigating the use of the excimer laser for the correction of optical error and in 1987 performed the world’s first excimer laser treatment to eliminate or reduce the need for glasses and contact lenses. In 1993, she performed the world’s first excimer laser surgeries for farsightedness. Ophthalmic Consultants of Long Island is one of the largest ophthalmology practices in the nation, with 21 eye specialists representing each subspecialty of ophthalmology in six locations throughout Long Island. Marguerite also is clinical professor of ophthalmology at NYU and adjunct clinical professor of ophthalmology at Tulane University in New Orleans.

CLASS OF 1978

Andrew M. Kaunitz, professor and associate chair of ob/gyn at the University of Florida College of Medicine in Jacksonville, has received the John A. Beals Award for Medical Research, given by the Duval Medical Society, in the review article category; the article, “Hormonal Contraceptives in Women of Older Reproductive Age,” was published in the New England Journal of Medicine in 2008. Andy also serves as director of Menopause and Gynecologic Services at University of Florida Southside Women’s Health.

CLASS OF 1981

A drug developed by Acorda Therapeutics of Hawthorne, N.Y., received approval by the FDA in January as the first therapy to improve walking in MS patients. President and CEO of Acorda is Ron Cohen. The drug, Ampyra (dalfampridine), is now available by prescription. Ampyra demonstrated efficacy in people with all four major types of MS: relapsing-remitting, secondary progressive, progressive relapsing, and primary progressive. “The approval of Ampyra marks an important milestone for the many people with MS who suffer walking impairment. Difficulty walking is often cited by those with MS as one of the most pervasive and challenging aspects of their disease,” Ron said in announcing the FDA approval. Acorda Therapeutics is a biotechnology company that develops therapies for multiple sclerosis, spinal cord injury, and related nervous system disorders. The company’s pipeline includes products for the treatment, regeneration, and repair of the spinal cord and brain.

CLASS OF 1984

In April 2008, Maria Oquendo, professor of clinical psychiatry at P&S, was named director of residency training in psychiatry. She is also vice chair for education in the Department of Psychiatry and directs the postgraduate training program in adult psychiatry.

CLASS OF 1987

See Alumni in Print to read about a new book by Alan Gettis. Alan, who also has a Ph.D. degree, has a private practice as a psychologist in New Jersey. His life’s work is featured in the first digital edition of P&S—P&S online—and can be seen at www.cumc.columbia.edu/news/journal.

CLASS OF 1991

See Alumni in Print to read about a new book edited by Vilma E. Ortiz. Vilma is an associate anesthetist at Massachusetts General Hospital and assistant professor at Harvard Medical School.

CLASS OF 1992

Michael Argenziano, professor of surgery at P&S, has been inducted into the American Association for Thoracic Surgery.
Emil W. Chynn appeared on a town hall discussion among MDs on health care reform on the “Glenn Beck Show.” Emil was the only physician in the audience to express support for President Obama’s proposals.

Michael Marvin, director of liver transplantation at the University of Louisville and at Jewish Hospital there, has been named chief of the division of transplant surgery at Louisville. Under Michael’s guidance, the liver transplant program set a state record in 2009 with 54 liver transplants. Before joining the Louisville faculty, Michael was on the faculty of New York Medical College and a liver transplant and hepatobiliary surgeon at Westchester Medical Center. He completed all of his surgical training at Columbia. He has research interests in organ donation, liver transplantation outcomes, and the relationship between control of blood sugar and outcomes in critically ill patients.

Kathie-Ann P. Joseph, assistant professor of surgery at P&S, received the 2009 Trailblazer Award from the Northern Manhattan Alumnae chapter of Delta Sigma Theta Sorority. Kathie-Ann holds an MPH as well as her M.D. from P&S.

John Poneros has been appointed assistant professor of clinical medicine in the Division of Digestive and Liver Diseases at P&S.

CLASS OF 1997
The Department of Orthopedic Surgery at P&S has appointed Benjamin Roye assistant professor of clinical orthopedic surgery. Ben also has an MPH degree.

CLASS OF 1998
The Department of Medicine at P&S has named Debra Quinn assistant professor of clinical medicine in the cardiology division.

John Vest has been appointed assistant professor of clinical medicine-cardiology at P&S.

CLASS OF 2000
See Alumni in Print to read about a new book by Jennifer Ashton.

The Department of Medicine at P&S has appointed John Morrow assistant professor of clinical medicine in the cardiology division. As reported in P&S News (Fall 2009 P&S) John received the 2009 Lewis Katz Cardiovascular Research Prize for a Young Investigator during ceremonies at Columbia in October. Also in 2009, John was named a Louis V. Gerstner Jr. Scholar at P&S in support of his translational research into why heart function often improves in advanced-stage heart failure patients after the implantation of a left ventricular assist device.

CLASS OF 2001
See Alumni in Print to read about a new book by Michael J. Smith. Michael is assistant professor of pediatrics in pediatric infectious diseases at the University of Louisville School of Medicine.

CLASS OF 2002
Clarissa A. Bonanno has been promoted to assistant clinical professor in the division of maternal/fetal medicine in the Department of Ob/Gyn at P&S.

Sansan Lo has been named assistant professor of anesthesiology at P&S.

CLASS OF 2003
Natalie H.-Y Yip has been named assistant professor of clinical medicine in pulmonary, allergy and critical care medicine in the Department of Medicine at P&S.

CLASS OF 2005
The Department of Ob/Gyn at P&S has appointed Jessica L. Fiorelli assistant clinical professor.

Manjri Shah has been appointed assistant clinical professor of ob/gyn at P&S in the Allen Hospital.

CLASS OF 2005 PH.D.
Solvieg Halldorsdottir started working at Bayer Healthcare in Tarrytown, N.Y., in 2008 as manager of medical information in the diabetes care division. Her responsibilities include monitoring the scientific and clinical literature for new medical and scientific developments and developing and overseeing communication systems and policies to disseminate information about new developments.

CLASS OF 1993
Elizabeth Tillinghast, a psychiatrist and psychoanalyst on the Columbia and Cornell faculties, will contribute regularly to the new online edition of P&S. Elizabeth, who also has a law degree, has published widely about how lawyers and other professionals can overcome psychological impediments to success, and she will apply that help to physicians in her contribution, titled “Stress Points.” She welcomes ideas for topics through et41@columbia.edu.

CLASS OF 1995
See page 39 for information about Christopher French.

Kathie-Ann P. Joseph, assistant professor of surgery
IN HAITI

Joshua Hyman’90, Jennifer Ashton’00, and David Walker’02 Help in Earthquake-Torn Country

David Walker’02 traveled to Haiti in January to join medical volunteers in setting up and staffing a makeshift clinic after the Jan. 12 earthquake. Dr. Walker, an attending physician in pediatric emergency medicine at Yale-New Haven Children’s Hospital and a faculty member at Yale School of Medicine, is an expert in global pediatric emergency care infrastructure. He also is faculty adviser to the Yale pediatric residency program’s global health track.

Dr. Walker’s visit to Haiti was sponsored by the United Haitian-American Society in Norwalk, Conn., the Haitian Consulate in New York City, and Old St. Andrew’s Episcopal Church in Bloomfield, Conn.

The volunteers set up the clinic in Carrefour, a large suburb of Port au Prince, and saw around 200 patients per day. Some patients had routine complaints; others sought attention for post-traumatic concerns, including mental health issues. The clinic also provided food and tents to as many patients as possible.

“Although it’s important to be part of the international response, I came away with an individual sense of futility, given the scope of what happened there,” Dr. Walker said. He hopes to return to Haiti with pediatric residents, who have been discussing sustainable, locally relevant ways to improve pediatric care.

Jennifer Ashton’00 spent eight days in Haiti providing medical care to earthquake victims during the day and reporting her experiences and those of the victims for the “CBS Early Show,” “CBS Evening News with Katie Couric,” and “Face The Nation with Bob Schieffer.”

“I traveled to Haiti with a medical group from University of Miami Global Institute. We were caring for 200 patients in a tent hospital,” says Dr. Ashton, a CBS News medical correspondent. “One day, I was given the first media tour on board the USNS Comfort, the U.S. Navy Hospital Ship that arrived in Haiti. Another day, I was the transporting physician responsible for the transfer of five critically injured patients from our facility to the Israeli Field Hospital. The bulk of what I did have were compassionate medical professionals and stoic and appreciative patients who confirmed the importance of our response to this disaster.”

Dr. Ashton was joined in Haiti by Joshua Hyman’90, a pediatric orthopedist and associate professor of clinical orthopedic surgery at P&S. He arrived in Haiti the Monday following the earthquake after contacting the University of Miami Global Institute/Project Medishare to offer his expertise. Dr. Hyman, who has been involved in international relief efforts for several years, spent 10 days in Haiti working in a tent hospital. “The first few days were spent fixing fractures with plaster casts.” Within a week, the facility had doubled in size and he was performing as many as 50 surgeries a day, though still under makeshift conditions.

Surgeons limited amputations to life-threatening cases, and the experience strengthened Dr. Hyman’s advocacy for judicious use of amputations in disaster situations. “Disaster planning can limit the need for amputations.”

Dr. Hyman told his hometown newspaper in New Jersey that he hopes people will not lose interest in Haiti. “It deserves a great deal of attention, not just in the next two months, but in the next two years, because it’s going to take a long time for them to rebuild.”
The Broderick Curse

David Peretz ’67 PSY
CreateSpace, 2009
www.davidperetznovels.com

Dr. Peretz’s first novel, “The Mosel Legacy,” was called a page-turner, and he has brought back the same protagonist, NYPD’s Ross Cortese, for his second suspense novel, which has been described as an intricate tale of intrigue that includes a murder mystery, a tale of corporate skull-duggery, and a study into human nature. After discovering skeletal remains behind the wheel of a Mercedes at the bottom of a remote, ice-covered Berkshire pond, Detective Cortese joins forces with Sally McDevitt, chief of detectives for the Massachusetts state police, to work this literal cold case set in New York and Massachusetts. As the detectives seek to unravel the Broderick Curse, the story moves from boardrooms to bedrooms and from psychiatric offices to Athens and Zurich.

It’s All Part of the Dance: Finding Happiness In An Upside Down World

Alan Gettis ’87
Goodman Beck Publishing, 2010
www.drgettis.com

Dr. Gettis, who also has a Ph.D., applies 40 years of clinical experience as a psychologist with his gift of storytelling in his latest self-help guide intended to help people feel happier and more relaxed. In this book, another follow-up to his successful “The Happiness Solution,” Dr. Gettis provides more of the solution to help people improve relationships, feel more resilient, and find purpose and meaning as they move through life. The book is a tapestry of positive psychology, cognitive behavioral therapy, and Zen wisdom in which he combines parables, myths, anecdotes, and teaching stories with the humor and personal revelations that have characterized his books. This book is about “showing up for your own life and feeling as good as you possibly can about it.”

Perioperative Anesthetic Care of the Obese Patient

Vilma E. Ortiz ’91
Informa Healthcare, 2009

Edited by Dr. Ortiz and Dr. Jeanine Wiener-Kronish (chair of anesthesia, critical care and pain medicine at Massachusetts General Hospital), this book addresses anesthesia delivery to the obese patient, which has its own set of complexities that require physicians to keep abreast of the latest techniques and strategies to minimize risk. The book includes contributions from more than 25 experienced practitioners in anesthesia, critical care, and surgery, guiding the reader through each of the three stages of anesthetic care (preoperative, intraoperative, and postoperative) to ensure that clinicians take the proper steps to maximize patient results. Chapters address unique challenges and complications, obesity-related comorbidities, and special patient populations, such as pregnant and pediatric patients.

The Complete Idiot’s Guide to Vaccinations

Michael Joseph Smith ’01
Alpha Books/Penguin Group, 2009

Dr. Smith and medical writer Laurie Bouck have developed an informative reference book divided into four sections: understanding vaccines and how they work, standard required and recommended vaccinations for every age (including senior citizens), episodic and circumstantial vaccinations (vaccines for travel or injury treatment), and controversies surrounding vaccination challenges. “If you want information on a specific vaccine, this book will give you concrete facts about what it prevents, how many doses you need to create immunity, and who should or should not receive the vaccine,” the authors write in introducing the book. Dr. Smith’s research focuses on vaccine risk communication and the association between media coverage of vaccine safety issues and immunization rates in the United States.

The Body Scoop for Girls: A Straight-Talk Guide to a Healthy, Beautiful You

Jennifer Ashton ’00
Avery Trade, 2009

Dr. Ashton, a CBS News medical correspondent, has produced an authoritative yet girlfriend-friendly health book for teen and tween girls. Because her ob/gyn practice specializes in adolescent care, Dr. Ashton is in a good position to understand the angst of being a teenage girl. After talking openly and non-judgmentally to young patients in her practice, she has shared her advice in a guidebook that cuts through the embarrassment girls often feel about their changing bodies and arms them with the knowledge they need to make smart choices. The book covers the basics of puberty and beyond, including body development and image, sex, birth control, sexually transmitted infections, eating disorders, depression and hormone imbalances, grooming, and body piercings.

More Online

The online edition of P&S, called P&S online, has debuted at:

Find original content there about your classmates, research being published by P&S physicians and scientists, and news from campus. Four columnists and the beginnings of an archive of remembrances also can be found there.
Formally Speaking

Columbia students turned heads as they flocked to Chelsea Piers in January for “Leonides,” the annual semiformal for P&S students. The cold season and the longer commute than previous years (past locations included Columbia’s Italian Club, the Princeton Club, and the Harvard Club) did nothing to deter women from seizing the opportunity to don beautiful dresses and heels, suitably matched by men in sharp semi-formal attire. Quite the contrary, the event sold out a week before (unprecedented for the event). First and second years composed the majority of attendees, but fourth years were not about to miss out on the fun and were well represented.

The event took place in a large room with floor-to-ceiling windows, elegantly decorated to match the theme “Under the Stars.” This year, a buffet dinner was provided, in addition to an open bar, allowing students to sit and socialize before heading to the dance floor. Dancing continued in full swing until the end of the evening. Music suited all tastes, ranging from Miley Cyrus to Caribbean-inspired tunes. A door conveniently placed near the dance floor allowed easy access to an outdoor walkway over the Hudson River.

When the music ended and the event drew to a close, Columbia students were still going strong. While some returned to Washington Heights, many stayed downtown to continue the festivities for a few more hours. We enjoyed an extremely successful event and discussions are already in the works for next year’s Leonides.

Into the Woods

In November 2009, the Bard Hall Players took on the delightful James Lapine-Stephen Sondheim musical “Into the Woods.” The show, directed by Ian Tattersall’12, takes place at the crossroads of fairytales, as beanstalks are climbed, wolves defeated, princesses pursued, and curses undone. In the end, when the storybook universe collides with stark truths of the real world, the characters discover that the most important quest is to teach their children well and watch them grow. More than 40 students (and one professor!) from CUIMC schools participated in this outstanding production. Played to an audience of more than 600 during its run, the show was the Bard Hall Players’ most successful on record!

The production was reviewed by Darcy Zacharias, a Columbia College senior, on the CU Arts Blog: “The enthusiasm of the performers was the most valuable, and pervasive, asset to the production. I have seen several productions of Sondheim’s classic, but this version of ‘Into the Woods’ was one of the most fun I have experienced. The team clearly enjoyed themselves and that translated to the audience. Bard Hall Players added many whimsical touches, including the use of coconuts for the Princes’ horses a la Monty Python and the stepsisters played by two burly gentlemen in trashy wigs and bright gowns. The real stand-out was the cow Milky White, portrayed by Manuel Montano and Peter Rubenstein, billed as “Head” and “Rump” respectively. The bovine star stole every scene it was in, providing mute commentary on the action of its human costars and dancing to Sondheim’s catchier tunes. Bard Hall Players directly challenge the dominant perception of medical students. These physicians sing, dance, and act, proving that doctors aren’t just entertaining on TV.”
THE P&S LEGACY CHALLENGE

ARE YOU UP TO THE CHALLENGE?

It’s as easy as ONE, TWO, THREE:

**ONE:** You name P&S in your Will or estate plan, or create a life income gift, valued between $30,000 and $1,000,000 and designate it for scholarships.

**TWO:** You notify Michelle Cass at 212.305.0428, Laura R. Tenenbaum at 212.342.2108 or by email at givingwell@columbia.edu in the Planned Giving Office of the nature of your gift.

**THREE:** A group of your fellow alums will immediately match your planned gift by adding 1/3 of its value to a scholarship fund at P&S today. If the planned gift is more than $150,000, a new endowed scholarship fund will be named now in your honor.

These 3 simple steps result in a partial scholarship being awarded to a deserving student in your name during the next academic year. In addition, you will be invited to attend the annual P&S Legacy Dinner to meet current scholarship students. You will also be eligible for membership in Columbia’s 1754 Society, honoring all who have made a planned gift to Columbia.