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In This Issue

2 Faculty Remembered: Hans T. Clarke, 1887-1972

4 Clinical Advances
- New hearing aid: clearer sound, less discomfort
- Dialysis facility opens doors
- Finding what works to treat ADHD

8 Research Reports
- Vitamin A key to kidney development
- Teen-age smoking increases risk for anxiety disorders
- New protein regulates important tumor suppressor
- Chickenpox vaccine not the source of breakthrough infection
- Master switch associated with tissue damage
- Aid from mechanical heart doesn’t affect transplant outcome
- Key protein identified in immune cell development
- Juvenile cholesterol problems abroad linked partially to Americanized diet
- Dueling enzymes regulate strength of nerve cell connections
- Huntington’s related to male fertility, neuron survival
- Enzyme that helps RNA unwind also peels off proteins
- Alzheimer’s risk in some minorities is twice that of whites
- Timing key to success of light therapy for winter depression
- Anaphylaxis incidence higher than previously believed
- Radiation risks weighed for new imaging method
- New way for anti-cancer drugs to trigger cell suicide
- Gene for Alexander disease discovered

13 Pursuing the Meaning of Life and Healing Through Literature
In white coats and street clothes, they surrounded a table and talked about things medical and fictional and how the two relate to each other.

18 “City of One: A Memoir”
Francine Cournos spent much of her adolescence in foster care after her parents died, but she exchanged her childhood adversity for a successful adult life, including a career as a psychiatrist. This excerpt from the long-time faculty member’s memoir provides a glimpse at her psychiatry residency.

23 Revolutionizing Medical Education for the New Century
The use of the computer in medical education is old news after several years of evolution of the electronic curriculum at P&S. What excites students and faculty these days is the interactivity of the multimedia resources available to students in the increasingly more complex medical information age.

27 P&S Students
Second-year students have found an energetic way to build and polish their teamwork skills.

28 P&S News

30 In Memoriam: Faculty and Alumni who have died

34 Alumni Section
Profile: Calvin H. Plimpton ’51 MSD

48 Postscript
“The Real Fourth of July Story” by Marianne Legato, M.D.

ON THE COVER: Photographs, illustrations, animation, and 3-D computer models make medical education interactive for today’s P&S student. Illustration by Ahmet Sinav.
HANS THACHER CLARKE 1887-1972

Hans Clarke chaired the Department of Biochemistry from 1928 to 1956. Recent graduates—any young person—may ask how a British organic chemist, born when Victoria’s long reign still had 14 years to run, can have any possible relevance to the medical science of today. Clarke’s enduring importance rests upon his scientific progeny. He made numerous valuable contributions in the synthesis of organic compounds and played an important scientific and managerial role in the development of penicillin, but scientists he rescued from Nazi-dominated Europe and the young graduate students whose careers he selflessly fostered, in a sense, outweigh the chemical work he did himself. One may also argue that their influence will prevail longer: What a great teacher imparts to students and associates lasts a long time; in fact, one cannot calculate how long.

Clarke was born in Harrow, England, of an American father and a German mother, the latter a descendant of a family that settled in America in the early 17th century. He was a great tinkerer in boyhood, becoming so good a glassblower that he was indispensable to chemical colleagues later. He obtained bachelor’s and doctoral degrees from University College, London, studied with the great Emeril Fischer in Berlin (1852-1919, another voice from the past), worked briefly in physiology with Starling, spent a chemical summer in Belfast, and, in 1914, took up a position at Eastman Kodak in Rochester, N.Y., remaining until 1928. At Eastman he did useful work in synthesizing rare organic chemicals no longer available from Germany during World War I. Years later an attempt was made...
to raise money from Eastman to honor his tenure at Columbia, but the request was turned down.

When Clarke came to Columbia in 1928, P&S and Presbyterian Hospital had just moved into new quarters on West 168th Street; although new, the laboratories needed modernizing, which he quickly accomplished. He made good use of existing staff for the teaching program—Miller, Foster, Sperry—in the physiological chemistry which was just turning into biochemistry. During the Clarke era at Columbia the department trained 94 graduate students; one, Konrad Bloch, became a Nobelist years later. These young people were chosen by a rigorous interview, often conducted by Rittenberg (see P&S Journal, Fall 2000) and other young staff members.

The legacy for which Clarke is chiefly remembered, at Columbia and in the scientific world at large, is the biochemistry department he built at P&S, arguably the best in the world during his tenure. This happy outcome grew out of the pre-World War II political upheavals in Europe, specifically the anti-Semitic policy of Nazi Germany. This compelled the ouster of many distinguished Jewish scientists from academic posts in Germany and Austria. Starting in the mid-1930s, continuing into about 1943, Clarke actively recruited a dozen or more such people, adding great luster to science in New York, in fact in the United States. One has to admit that in those times the Ivy League universities were not very hospitable to Jewish-American scientists or humanists who applied for academic posts, even in the face of stellar academic records and recommendations. Clarke, almost alone, became a model for what you could accomplish by the European windfall of scientists; other universities soon followed his example.

Among the most notable of the Europeans were E. Chargaff, Z. Dische, Karl Meyer, R. Schoenheimer, H. Waelsch, and Erwin Brand. One may also list David Nachmansohn, officially lodged in neurology. These people’s work spanned many fields, the dynamic state of components of the mammalian cell, neurotransmission, cystinuria, neurochemistry, the structure of nucleic acids, many others. They made the department famous; unlike most scientifically high-powered groups, they became, as a group, not a bad teaching organization. Clarke, himself not a charismatic lecturer, knew how to apportion the teaching assignments, which his staff took seriously.

When Clarke retired from Columbia at age 68, he was, by virtue of University policy, denied a laboratory but soon settled at Yale and later in Boston to continue working. Indomitable, when his first wife died he married again. He continued to play clarinet with chamber groups at, by report, almost a professional level. In the 1960s his musical career was cut short by “an encounter with a scythe.” A tall, aristocratic-looking man of dignified bearing (except he always wore sneakers) he was aloof but friendly, his office door always open. His only important shortcoming seemed to be insensitivity to the low salaries of his staff members. Nevertheless, this heroically energetic and imaginative man left an indelible imprint on Columbia and on American biochemical science.

Author’s Note: The writer received valuable help from many people, including Ronald Bentley, David Sprinson, Barbara Low, Erwin Chargaff, Alvin Krasna, Helen Ranney, and Irving London. Details of Dr. Clarke’s career can be found in “Biographical Memoirs” of the National Academy of Sciences (1975, 46, 3); in the Annual Review of Biochemistry (1958, 27, 1); and in an article by Ronald Bentley in the February 2001 issue of the Journal of Chemical Education.
NEW HEARING AID: CLEARER SOUND, LESS DISCOMFORT

Columbia-Presbyterian Medical Center is one of only two New York area facilities to offer a new implantable hearing aid for treating moderate to severe sensorineural hearing loss.

The device, called the Vibrant Soundbridge, is implanted in the middle ear. It consists of an audio processor hidden underneath the hair behind the ear. It is held in place by a magnet and an internal receiver beneath the skin of the scalp. A “floating mass transducer” that stimulates the tiny bones in the middle ear to enhance the natural hearing process is connected to the receiver.

Vibrant Soundbridge is different from other hearing aids because no part of the device rests in the ear canal. That eliminates problems common with other devices such as occlusion, discomfort, feedback, and ear infections. The maker of the device, Symphonix Devices of San Jose, Calif., holds a patent on the floating mass transducer.

The device is installed in an outpatient surgical procedure, using a facial recess approach under general anesthesia. The surgery takes about 90 minutes. Three patients received the Vibrant Soundbridge at Columbia in August 2000 during clinical trials. “All of them are very happy and they got very good results,” says Dr. Jose Fayad, assistant professor of otolaryngology/head and neck surgery. Dr. Fayad is also director of cochlear implants and implantable hearing devices at New York-Presbyterian Hospital.

The Vibrant Soundbridge implant works best for patients with sensorineural hearing loss, usually older adults, Dr. Fayad says. “The main contraindications for the device are for those patients who do not fit the audiometric criteria.” The Food and Drug Administration approved the device in Fall 2000.

“This is an improvement over conventional hearing aids because it does not simply make sounds louder in the ear so that they have to be picked up by the ear drum,” Dr. Fayad says. “Rather, it sends a signal directly to the middle ear.”

In clinical trials, including those conducted here at Columbia-Presbyterian, patients with moderate to severe hearing problems have found that the device provides better hearing with less discomfort than existing hearing aids, says Dr. Fayad.
DIALYSIS FACILITY OPENS DOORS

Chronic dialysis patients now have an Upper Manhattan option for care, complete with a view of the Hudson River and the George Washington Bridge.

P&S nephrologists, working with a private company, have built a new facility for chronic and peritoneal dialysis patients. The Columbia University Dialysis Center occupies two floors between Bard Hall and 60 Haven just below the lobby level in space that had been considered unusable. Open to the outside, the space had contained an unused auditorium made of concrete and cinder block and a large population of roosting pigeons. Graffiti that still remained in an unfinished section of the building in January this year attests to the former condition of the space.

P&S faculty staff the facility, but it is independent of both Columbia and New York-Presbyterian Hospital.

Dr. Donald Landry, associate professor of medicine and director of the division of clinical pharmacology and experimental therapeutics, organized the project and will supervise research that comes out of the center. Dr. Len Stern, founder of the peritoneal dialysis service at P&S, will be the medical director.

Although the renal division at Columbia has been ranked in the top 10 in the country by U.S. News and World Report, it has lacked a true outpatient chronic dialysis center for more than 25 years. According to Dr. Gerald Appel, director of clinical nephrology: “We’ve waited 25 years for a chronic dialysis unit. At last, it’s finished! End-stage renal disease leads to 300,000 people requiring maintenance dialysis in the United States. We have been a major kidney center, and now we will be able to provide better care to more patients.”

Columbia’s first nephrologist, Jay Meltzer, spearheaded an effort three decades ago to build a dialysis unit. The hospital obtained two certificates of need over the years but both were allowed to expire. The latest effort to develop a unit for chronic dialysis again originated with the P&S nephrology faculty. After interviewing private companies interested in building the facility, the nephrologists chose Gambro Health Care, whose New York state entity, Empire Dialysis, built the facility and will operate it, says Dr. Qais Al-Awqati, the Robert F. Loeb Professor of Medicine and chief of nephrology at Columbia-Presbyterian. “A lot of things happened when everyone went into very high gear.” Dr. Meltzer added, “I’m happy that it’s finally come to fruition.”

Before the facility opened its doors this spring, the medical center was able to serve 50 peritoneal dialysis patients on site, but the closest facilities for chronic dialysis patients were in Harlem or on the Upper West Side. “Our patients are scattered all over and they would much rather come here,” says Dr. Landry.

“Patients were losing continuity of care and the medical center was losing patients and the opportunity to provide the wide array of services end-stage renal failure patients need,” says Dr. Landry. “Patients with end-stage renal disease
CLINICAL ADVANCES

have many other problems. Often they have heart disease. They may opt for a kidney transplant.

Dr. Landry and his colleagues worked with Empire State Dialysis to make the new facility pleasant for patients. “The idea was to humanize the place,” he explained. “Typically dialysis units are placed in windowless basements.”

The walls feature large color landscapes by Maryland photographer Timothy Edberg. A frosted glass panel with an etching of the George Washington Bridge greets patients entering the chronic dialysis center on the lower level. Giant picture windows look out onto the Hudson River. The 24 stations in the chronic dialysis center can serve 144 patients. Upstairs are facilities for peritoneal dialysis training and care for 100 patients.

The center contains the latest advances in dialysis equipment. Standard dialysis uses non-sterile water, but this facility is the second in the nation to use a system for generating massive volumes of sterile water and heat-sterilizing the dialysate conduits on a daily basis. “The center is a state-of-the-art facility that will allow us to develop innovative approaches to improve the health of our patients,” says Dr. Landry.

FINDING WHAT WORKS TO TREAT ADHD

Treatment for attention deficit hyperactivity disorder (ADHD) is frequently accompanied by controversy via the mass media, but the goal of research at the New York State Psychiatric Institute is a laudable one: identify the most effective treatment and get the word out to parents and health care providers nationwide.

Dr. Laurence Greenhill, professor of clinical psychiatry and director of the research unit in pediatric pharmacology at the Psychiatric Institute, was principal investigator of the Multimodal Treatment Study Group of Children with Attention Deficit Hyperactivity Disorder Cooperative Group. Columbia was one of six universities in the group.

The study concluded that carefully monitored drug treatment is the most effective overall therapy for children with ADHD. For children with ADHD complicated by anxiety, depression, or other disorders, combination therapy (psychotherapy plus medication) is particularly helpful.

“It clearly helped their social skills and how they were liked by others,” says Dr. Peter S. Jensen, the Ruane Professor for Science in Child Psychiatry. “It’s quite clear it had an impact in other areas.”


Before joining the Columbia faculty last year, Dr. Jensen was associate director for child and adolescent research at the National Institute for Mental Health and lead investigator for the institute’s participation in the ADHD study. At Columbia, he directs the Center for the Advancement of Children’s Mental Health, which opened at the psychiatric institute in May 2000.

The center does not provide treatment but identifies and disseminates scientific findings to parents and provider...
groups and helps other health professionals implement scientifically based interventions.

In the ADHD study, combination therapy normalized about two-thirds of the children. Medication alone normalized 55 percent of children, while behavioral treatment alone normalized 34 percent. Children who received treatment from doctors in the community fared worst of all, with 25 percent normalized. This is the treatment children in the United States are most likely to receive.

"Treatment across the country is a real problem," Dr. Jensen says. "Although medication is a core part of what we do, we don’t assume that medication is all you need." With standard community treatment, he observes, many parents either never begin giving their children the medication or stop medication soon after they begin. "Parents, and even doctors, are unduly afraid of medicine," he adds. "When used appropriately, it can have a powerful and beneficial effect."

In the study medication management included monthly, half-hour visits with a pharmacotherapist, with time built in for the doctor to address questions from family members. "Lots of times families have unspecified concerns," Dr. Jensen notes. "If they are rushed in and out of the office, they can’t talk about them." This is a major reason families stop a child's medication, he adds.

The monitored drug treatment began with a 28-day, double-blind trial of placebo or titrated doses of Ritalin. Children received a dose at breakfast and at lunch, with another halfdose in the afternoon. Once the optimal dose was determined, it became the child’s maintenance dose. Children who didn’t respond to Ritalin were titrated to dextroamphetamine or other drugs.

The titration period, Dr. Jensen says, allowed providers to adjust the drug to normalize the child. "If you don’t really normalize their function as best as can be done, they’re still going to be feeling badly about themselves, with resulting problems in many areas of their lives."

In the combined treatment arm, children received the same series of interventions as those in the medication management arm. In addition, parents underwent 35 sessions of training, in which they learned skills for coping with their children’s behavior. The effort was coordinated with teachers.

The pharmacotherapist called the child’s teacher each month to check on his or her performance in school. "This is where self-esteem is built," Dr. Jensen says. "If they’re OK there, they’re likely to be OK everywhere."

As part of combination therapy children completed an eight-week summer program featuring behavioral interventions delivered in group-based recreational settings five days a week. They also spent 12 weeks of their school time with a part-time paraprofessional aide.

Throughout the course of the study, parents received a daily report card from the teacher and provided positive reinforcement to the child.

Children who received combined therapy wound up taking slightly lower doses of the drug. All were started on an average of 28-30 mg., but the children receiving medication management alone ended up taking 38 mg., on average, while the children receiving combination therapy stayed at about 32 mg.

The study identified combination therapy as the gold standard for ADHD treatment, but it’s far from being standard practice across the country. Dr. Jensen says. Managed care organizations are working on developing treatment guidelines based on the research results, and Drs. Jensen and Greenhill are collaborating with the American Academy of Pediatrics to use the research findings to establish a series of guidelines and checklists for physicians.
**Vitamin A Key to Kidney Development**

Vitamin A deficiency during fetal development and mutations in ret, the gene that encodes an enzyme called a receptor tyrosine kinase, are associated with kidney malformations in mice and humans, according to a study by Dr. Cathy Mendelsohn, assistant professor of urology, her colleagues at P&S, and colleagues at the University of Wisconsin-Madison. Their research demonstrates that vitamin A directs kidney development by turning on the ret gene.

“Ret is a major target of vitamin A. Our work links these together and emphasizes how dietary vitamin A is absolutely critical for making the kidney in the mouse,” says Dr. Mendelsohn.

Because some human kidney malformations are linked to disease susceptibility, the authors of the paper, published in the January 2001 issue of Nature Genetics, underscore the need for pregnant women to pay careful attention to their vitamin A intake.

**Teen-AGE SMOKING INCREASES RISK FOR ANXIETY DISORDERS**

Evidence found in a longitudinal study shows that teen smoking may lead to anxiety disorders in late adolescence and early adulthood. The study was published in the Nov. 8, 2000, issue of the Journal of the American Medical Association. The research was led by Dr. Jeffrey Johnson, assistant professor of clinical psychology, and colleagues at Columbia, the New York State Psychiatric Institute, and Mount Sinai Medical Center.

An association of teen smoking with anxiety disorders has long been known, but it has not been known whether anxious teens are simply more likely to become hooked on cigarettes or whether smoking itself increases the likelihood of developing an anxiety disorder.

“Some previous studies have suggested that anxious individuals may be more likely than others to begin smoking,” says Dr. Johnson. “Our findings clearly indicated that anxiety disorders during adolescence were not associated with increased risk for initiation of cigarette smoking during early adulthood.”

**New Protein Regulates Important Tumor Suppressor**

Columbia researchers have identified a new protein called PID, a novel cellular target protein for p53, a pivotal protein that slows growth of tissues. Because boosting p53 activity is the goal of many anti-tumor therapies, the finding may further development of new tools to fight cancer.

“PID clearly represses p53 function. If you abrogate the effect of PID, you can enhance p53’s function. Hopefully, we’ll be able to reactivate p53 in tumor cells,” says Dr. Wei Gu, assistant professor of pathology. The research was published in the Nov. 16, 2000, issue of Nature.

The tumor suppressor p53 normally keeps down cell numbers both by stalling cell division and by triggering cell death. At the node of a complex network of controls, the p53 “brake” on cell growth is, in turn, controlled by several different “switches.” One way to regulate p53 activity is by chemical attachment of acetyl groups, termed acetylation, which makes the protein more efficient at turning on genes to slow cell division and hasten cell death. Dr. Gu was the first person to discover that p53 can...
be acetylated and functionally regulated by protein acetylation (1997).

**Chickenpox Vaccine Not the Source of Breakthrough Infection**

Some children vaccinated against chickenpox—about 15 percent—come down with the disease within a year of receiving the vaccine. The fact that the vaccine consists of a live, attenuated version of the same varicella virus that causes the chickenpox has prompted concerns that this incidence might stem from the vaccine itself.

Using polymerase chain reaction (PCR) techniques to amplify viral DNA, Dr. Philip LaRussa, professor of clinical pediatrics, and colleagues at P&S and at Yale have shown that the breakthrough of chickenpox did not originate from the vaccine but from infection with varicella virus acquired in the usual manner.

The authors conclude that generalized chickenpox rashes are unlikely to result from the vaccine, although it is possible that later reactivation of the vaccine strain may be the cause of rare instances of shingles. The research was published in the November 2000 issue of the Pediatric Infectious Disease Journal.

**Master Switch Associated with Tissue Damage**

Tissue damage resulting from oxygen deprivation following vessel blockage can be lethal, especially when the blockage occurs in the brain or heart. Low oxygen triggers inflammation, blood coagulation, and immune responses, which contribute to tissue damage.

Dr. Shi-Fang Yan, assistant professor of surgery, and colleagues at P&S and Scripps Research Institute reported in the December 2000 issue of Nature Medicine that they have identified a protein called Egr-1 that acts as a master switch to unleash blood coagulation and immune and inflammatory responses by turning on a host of genes involved in these destructive processes.

The authors suggest that temporarily blocking Egr-1 might be an effective therapeutic approach for reducing damage after a stroke or heart attack.

**Aid from Mechanical Heart Doesn’t Affect Transplant Outcome**

For patients awaiting a heart transplant, the left ventricular assist device (LVAD) can extend survival. However, infections triggered by LVAD installation have been a concern. A new study shows that although infection rates remain elevated among LVAD users, three-year survival rates are the same for those using LVAD as those who did not use the device before transplantation.

Dr. Brian Scully, associate professor of clinical medicine, and colleagues reported their findings in the Nov. 7, 2000, issue of the journal Circulation. The authors credit improvements in infection control during device implantation and improved antibiotic therapies for the improved survival rates among LVAD recipients.

**Key Protein Identified in Immune Cell Development**

Whether, when, how, and where young immune cells known as B cells encounter the right type of antigens, or “foreign” molecules, can influence their choice of “career paths.” One choice is to become a plasma cell, which does not divide and secretes antibodies that help bind up antigens to ward off attacks by invading pathogens.
In lab-grown B-cell lymphoma cells, which behave similarly to developing B cells, B-lymphocyte-induced maturation protein-1 (Blimp-1) can block the transcription of certain genes to trigger this final stage of development.

P&S researchers have found that Blimp-1 appears in B cells of mice at a critical stage of their maturation into plasma cells. Dr. Kathryn Calame, professor of microbiology and of biochemistry & molecular biophysics, and others reported their results in the Nov. 15, 2000, issue of the Journal of Immunology.

**Juvenile Cholesterol Problems Abroad Linked Partially to Americanized Diet**

Blood cholesterol levels of American children have remained relatively stable over the past two decades, but a team of researchers from Columbia, Japan, Barcelona, and Madrid has found that cholesterol levels among Spanish and Japanese children have risen rapidly over the past few decades and now exceed levels found in American children. In a study published in the November 2000 issue of the American Journal of Clinical Nutrition, Dr. Richard Deckelbaum, professor of pediatrics and director of the Institute of Human Nutrition at P&S, and others looked for evidence linking these elevated levels of serum cholesterol with Americanized high-fat eating habits. In Spanish children, whose fat intake has increased in recent decades, fat intake and cholesterol levels were predictably linked. However, this doesn’t tell the whole story, as fat intakes among Japanese and Spanish children are still much lower than for American children.

The authors theorize that genetic factors are likely to be at play in raising cholesterol levels. They advocate taking special measures to promote healthful diets and lifestyles in these populations. The authors further suggest that future studies evaluating links between diet and atherosclerosis risk focus on particular populations so that intervention measures can be adapted appropriately.

**Dueling Enzymes Regulate Strength of Nerve Cell Connections**

Certain patterns of stimulation can trigger long-term strengthening of the connections between nerve cells in the hippocampus for learning. One form of long-term connection involves a particular biochemical pathway, the p42/p44 mitogen-activated protein (MAP) kinase pathway. At the same nerve cell connections, or synapses, stimulation can also weaken these connections.

Dr. Steven Siegelbaum, professor of pharmacology, and others have found that activity can also weaken a synapse via a similar enzyme pathway involving the p38 MAP kinase. Thus two separate MAP kinase pathways oppose one another at the same synapses to either strengthen or weaken the communication between the two nerve cells. Dr. Siegelbaum and researchers at Harvard, Glaxo Wellcome Research Center in Verona, Italy, and the University of Texas reported their findings in the November 2000 issue of Nature Neuroscience.

**Huntington’s Related to Male Fertility, Neuron Survival**

Huntington’s disease is caused by a mutation in the Hdh gene—a gene identified in 1993 by a Columbia-led international research effort. However, the normal function of this gene has been unclear. Drs. Ioannis Dragatsis, research scientist in genetics and development, and Scott...
Zeitlin, assistant professor of clinical pathology, worked with Dr. Michael Levine of UCLA to show that inactivating the Hdh gene in the forebrain and testis of a mouse leads to nerve cell degeneration and sterility.

This suggests that proposed therapeutic approaches of neutralizing the gene in patients with Huntington’s disease could be harmful. The research was reported in the November 2000 issue of Nature Genetics.

**Enzyme That Helps RNA Unwind Also Peels Off Proteins**

A viral enzyme that helps untwist double-stranded RNA also helps pull off a protein that associates with the RNA, according to research led by Dr. Anna Marie Pyle, associate professor of biochemistry & molecular biophysics.

Because the affected protein has an “editing” effect on RNA directions for protein construction, this viral enzyme may have a disruptive effect on the normal production of proteins. The research was done in collaboration with colleagues at Memorial Sloan-Kettering Institute and the Howard Hughes Medical Institute. Their findings were published in the Jan. 5, 2001, issue of Science.

**Alzheimer’s Risk in Some Minorities Is Twice That of Whites**

Alzheimer’s risk is elevated in African-Americans and Caribbean Hispanics, report researchers at P&S, the Mailman School of Public Health, and the New York State Psychiatric Institute. This increased risk remained even when researchers took into account the subjects’ history of stroke, hypertension, heart disease, or diabetes, as well as level of education or literacy, which the researchers previously found to be associated with the disease.

Dr. Richard Mayeux, the Gertrude H. Sergievsky Professor of Neurology and Psychiatry and co-director of the Taub Institute for Research on Alzheimer’s Disease and the Aging Brain, and colleagues published their report in the January 2001 issue of Neurology. Dr. Mayeux’s team tracked the incidence rate of Alzheimer’s disease among a sample of patients in northern Manhattan over a seven-year period.

**Timing Key to Success of Light Therapy for Winter Depression**

Synchronizing light therapy with a person’s biological clock doubles its effectiveness as a treatment for winter depression, reports research published in the Jan. 15, 2001, issue of the Archives of General Psychiatry by Dr. Michael Terman and Dr. Jiuan Su Terman.

Their study measured the plasma melatonin pattern in 42 patients with seasonal affective disorder (SAD) before and after they received bright light therapy. Dr. Michael Terman notes that the implications of these findings go beyond SAD treatment. The effectiveness of many drugs—antihypertensives, antiasthmatics, and chemotherapy agents, for example—vary with the time of day.

**Anaphylaxis Incidence Higher Than Previously Believed**

Reviews of epidemiological studies to obtain accurate prevalence estimates of anaphylaxis, a severe life threatening allergic reaction that affects both children and adults, have led researchers to conclude that the occurrence of the four major subtypes of anaphylaxis (food, drugs, latex, and insect stings) is not as rare as generally believed.
Figures published in the Jan. 8, 2001, issue of Archives of Internal Medicine show that more than 3 million—and possibly as many as 40 million—individuals in the United States may be at risk for anaphylaxis. The research was led by Dr. Alfred Neugut, professor of medicine and of public health.

**RADIATION RISKS Weighed for New Imaging Method**

Computed tomography fluoroscopy (CTF) improves a surgeon’s visual feedback while performing biopsies and other surgical procedures by providing better spatial resolution and operating quickly enough to accommodate patient movement. The imaging gives the surgeon a much clearer picture of the biopsy needle’s location.

In the December 2000 issue of Health Physics, P&S radiology researchers reported their measurements of radiation doses that a patient receives in a typical CTF procedure. Because CTF requires much higher radiation doses, the authors caution radiologists to minimize procedure time and to take proper radiation protection measures for both patients and staff.

The research was led by Dr. Edward Nickoloff, professor of clinical radiology; Dr. Alexander Khandji, associate professor of clinical radiology; and Ajoy Dutta, associate in clinical radiology.

**NEW WAY FOR ANTI-CANCER DRUGS TO TRIGGER CELL SUICIDE**

Blocking the activity of enzymes known as cyclic GMP phosphodiesterases (cGMP PDEs) can trigger apoptosis of cancerous cells via more than one biochemical pathway, report P&S researchers and their industry colleagues.

Dr. Jae-Won Soh, postdoc research scientist in the Irving Comprehensive Cancer Center, and Dr. I. Bernard Weinstein, the Frode Jensen Professor of Medicine and professor of genetics and development, joined with colleagues at Cell Pathways to report the results of the research in the October 2000 issue of Clinical Cancer Research.

The effects of anti-cancer drugs targeting cGMP PDEs may be more robust than previously thought to the variety of mutations in signaling pathways that occur in different cancers. The researchers report that the increase in cGMP that results from blocking cGMP PDEs activates another enzyme, cGMP-dependent protein kinase (PKG), which activates the JNK-1 apoptosis pathway. It was previously demonstrated that PKG activation also degrades a regulatory protein, beta catenin, to trigger apoptosis.

**GENE FOR ALEXANDER DISEASE DISCOVERED**

Defects in the gene for the growth factor glial fibrillary acidic protein (GFAP) are responsible for Alexander disease, a rare and deadly childhood brain disorder, reports Dr. James Goldman, professor of pathology at P&S, and his colleagues at the University of Wisconsin-Madison, Albert Einstein College of Medicine, Clermont-Ferrand Medical School in France, and St. Vincent de Paul Hospital in Paris.

The myelin that wraps the long extensions of nerve cells is necessary to transmit information properly. GFAP regulates the growth of glia, the cells that make up these myelin sheaths. The research was published in the Jan. 3, 2001, issue of Nature Genetics.
When Dr. Katherine Nickerson’s pager sounded one afternoon in the middle of a literature seminar, the gentleman leading the class did not cringe at the interruption. The class simply continued examining Joan Didion’s novel “Democracy” while...
Dr. Nickerson tiptoed to a wall phone in the back of the Irving Center conference room.

Clearly, this was no ordinary literature class: Beepers. Furtive phone calls. And sitting at the head of the table: novelist and poet Michael Ondaatje.

The P&S Program in Narrative Medicine hosted the celebrated author of “Anil’s Ghost” and “The English Patient” as writer-in-residence during the fall 2000 semester. Mr. Ondaatje taught six-week and four-week literature seminars—focusing on the work of such authors as Jamaica Kincaid, W.G. Sebald, J.M. Coetzee, Joan Didion, William Maxwell, and Anne Carson to members of the P&S community interested in studying fiction and poetry. The places at the table were highly coveted. (See accompanying article.)

“This is unique, to bring in a writer who writes about medicine to work with doctors,” says program coordinator Rebecca Garden. The second seminar began with Mr. Ondaatje’s two most recent books, “Handwriting,” a collection of poems, and “Anil’s Ghost,” a novel about a forensic anthropologist, Anil Tissera, sent to Sri Lanka by a human rights group to discover the source of organized murder campaigns. There Anil collaborates with a local archaeologist, Sarath Diyasena.

When the 20 participants gathered around the vast table in the Irving Center conference room, Mr. Ondaatje, born in Sri Lanka but now a resident of Toronto, dove into the literature, saying: “Writing a novel is trying to find what causes something. It’s like diagnosing an illness. You have to go back into the past.”

The class didn’t seem to want to follow him headfirst into the literature. There were so many things they wanted to ask Michael Ondaatje. Sensing their desire, he submitted to interrogation.

CLASS: Why did you leave some major characters—Anil’s parents, Sarath’s wife—out of “Anil’s Ghost”?

ONDAATJE [hesitantly]: I don’t know what happened to Sarath’s wife.

CLASS: Anil is bleak. Can you reconstruct what was going through your mind as you wrote?

ONDAATJE: To write “Anil” I had to begin at rock bottom and write toward the light. “Anil” moves backwards as it progresses, further into Anil’s past, into Sarath’s past. In “English Patient” I traced a deepening of mood as I progressed. I think that happened with “Anil’s Ghost” too. . . . I haven’t talked about this voice-deepening thing before, so I’m still kind of working it out.

CLASS: Sarath was a difficult character to hold onto. How did you view him?

ONDAATJE: I saw him as innocent—but possibly not. I wasn’t sure where he’d fall. Sarath coped as a cold, guarded man. He was isolated emotionally from his brother and his wife. No one knows what causes that state. [He pauses and shrugs.] It’s the two or three things that happen once too often.

CLASS: You must have steeped yourself in medical gore.

ONDAATJE [laughing]: Medical gore? The medical stuff happened when I introduced Sarath’s brother, Gaminin [a beleaguered doctor]. Before Gaminin, I didn’t know so much would occur in the emergency room. You have to leave lots of doors open. . . . I really wanted to write about doctors in Sri Lanka because they were the only sane ones in this crazy nation. [He pauses then
...gently tries to shift the focus.] But I’m much more interested in hearing what you have to say about doctors and how they react to things.

I’m much more interested in hearing what you have to say?

Michael Ondaatje’s interest was, perhaps, the single most meaningful thing he brought to P&S. “It is very validating that somebody outside of medicine is interested in what we do, what we care about, and who we are as people,” said Dr. Nickerson, associate professor of clinical medicine, when the seminar series ended.

Encouraged by the author’s curiosity, the nervous energy in the room gave way to cerebral fire. One of the first to offer his thoughts was Dr. Steven Miller, associate professor of clinical pediatrics, who usually arrived at the seminar from a long shift in the pediatric ER. “In war, doctors might be the most sane,” Dr. Miller said, referring to the doctors in “Anil’s Ghost,” “but they’re the most crazy, too. You’re connecting to the sick and disconnecting with the other people in your life.”

That comment shot the class straight to the crux of “Anil’s Ghost”: Is intimacy possible? It seemed to be a question Dr. Miller had pondered before now.

Michael Ondaatje dreamed up the writer-in-residence program when he came to read at P&S in April 1999, invited by the Program in Narrative Medicine, led by Dr. Rita Charon.

When Mr. Ondaatje returned to Columbia for another talk in January 2000, Dr. Charon extended an invitation for the writer-in-residence position. During his semester, he seemed willing to share what being a writer is about, at least for him. When one participant, Dr. John Truman, professor of clinical pediatrics, asked Mr. Ondaatje how he framed his cadences, the author replied, “I don’t think writers are as conscious of cadence as readers are. I don’t write to a meter or a rhythm in my head. I’m just trying to describe that shoe I see in my mind.”

When asked how he, as a writer, reads, Mr. Ondaatje replied, “I read very slowly. I amble in that thing. Don DeLillo’s book ‘The Names’ took me a month.”

While Mr. Ondaatje ambled, some of the physicians in his seminar approached the novels as they would a patient. “They were almost clinical in their analysis,” noted Tim Jancelewicz, a second-year medical student who holds a master’s degree in English. “They offered very black-and-white definitions of what was happening in a scene, as if they were diagnosing the literature.”

In that vein, while talking about the narrator in “Democracy” during the second week of class, Dr. Nickerson said, “I interpret the staccato meandering as anxiety.” And another participant, a research...
GETTING A SEAT AT THE TABLE

The competition for a seat at the table headed by novelist Michael Ondaatje was so fierce, a lottery was developed to ensure fairness. The lottery enabled the table to be surrounded by individuals who brought different levels of experience and education to the mix.

Senior faculty and administration—for example, Dr. Ronald Drusin, cardiologist and associate dean for curricular affairs; Dr. Linda Lewis, neurologist and associate dean for student affairs; Dr. Joan Leiman, executive deputy vice president; Dr. Steven Shea, chief of general medicine; Dr. John Truman, deputy chairman of pediatrics; and Dr. Richard Mayeux, recent Institute of Medicine inductee—sat alongside P&S students, postdocs in the labs, house officers, pediatric nurses, epidemiologists, and community physicians. “We created an egalitarianism otherwise hard to achieve in medical education and practice,” noted Dr. Rita Charon, associate professor of clinical medicine. “We were equal in our unfamiliarity with these texts, and so we could experience together our struggles to understand what they mean. It was priceless for the students, and for the faculty and staff too.”

The 20 participants for each seminar were a mix of a few invited faculty and medical students and winners of a Columbia-Presbyterian lottery. Demand was so intense that more than 200 entries were received for 30 slots, enabling the program to assure a rough balance among faculty, staff, and students.

The seminars captured the interest of the participants and illustrate the vast appetite of the P&S community for the non-scientific elements of their education or growth as physicians or health-care leaders. It’s an appetite the P&S Program in Narrative Medicine is uniquely qualified to satisfy. The program is led by Dr. Charon, who has an M.D. degree and a Ph.D. degree in English.

Besides its writer-in-residence program, the Program in Narrative Medicine directs the humanities and medicine seminar series for second-year students and offers intensive literature and medicine preceptorships for fourth-year students. The program hosts “Literature at Work,” a biweekly reading group for faculty and staff. It also sponsors a series of readings at the medical center by such writers as Joan Didion, Paul Auster, Richard Selzer, and Mary Gordon. The nationally acclaimed journal Literature and Medicine now finds its home at the program, co-edited by Dr. Charon and Professor Maura Spiegel of Columbia’s English department. An ambitious research effort is under way at the program to document the outcomes of providing disciplined training in reading and writing in medical education and practice.

Mr. Ondaatje’s residency was funded by the John Templeton Foundation and support from private donors. The residency was planned by a committee that included P&S students Katerina Christopoulos, Moupali Das, and Eric David.
scientist in psychology, digressed briefly but fascinatingly into the brain while discussing “Anil’s Ghost,” saying, “If you remove the amygdala you lose the memory of fear and the ability to fear.”

Clinical asides like that seemed of particular delight to Mr. Ondaatje. Medical musings flow when doctors discuss literature, says Dr. Charon, associate professor of clinical medicine. But the readers’ emotional bursts in Mr. Ondaatje’s class were equally appealing. On one occasion, Dr. Truman, who said he found the suggested readings quite offputting, raised his hand and asked: “Did I miss something? Was I supposed to like someone here?”

“Why not?” Mr. Ondaatje replied. “I think you’re supposed to like them.”

Another doctor opened “Democracy” to Page 143 and read aloud two sentences: “I don’t like crazy people. They don’t interest me.” The doctor shut the book. “That’s a very interesting comment,” he said, “in how it influences the reader and also in what it reveals about Didion’s perception of her entire cast of characters.” Irritated, he continued, “I have purposely read little fiction from the second half of the 20th century for this reason. Crazy people in practice interest me but they don’t in literature.”

Dr. Miller confessed that “Democracy”—a novel about the remote wife of a U.S. senator, adrift in the 1960s and buoyed only by a vague love affair with an intelligence agent—made him feel square: “Didion’s whole world view, the whole book, is irreverent about everything I hold sacred,” he said. Mr. Ondaatje responded sometimes defensively, other times sympathetically, to these remarks.

“Something happens when there’s a text on the table,” said Dr. Charon, who leads a twice-monthly faculty reading group at P&S.

“Sometimes it’s easier to approach delicate subjects—racism, incest, rape—through literature. Think about Coetzee,” she said, referring to J.M. Coetzee’s devastating novel about the violent metamorphosis of a professor attempting to relate to his daughter and to the racial complexities of South African society.

In addition to his blue-eyed gravity, his questioning mind, and his well-informed view of contemporary literature, Mr. Ondaatje always brought to class some form of contact with the book under discussion. On one occasion he brought Joan Didion herself to read from “Democracy.” Novelist Paul Auster was another visitor. He also played recorded interviews of the authors Jamaica Kincaid and J.M. Coetzee. “It helped us see that these people aren’t strangers,” said Dr. Charon. “These are people coping with the same problems that bedevil you and me.”

And that realization can make a difference in what a doctor will do tomorrow with a person in pain. “There’s a lot of resonance between understanding stories you read and understanding patients,” says Dr. Nickerson. And, therein, lies the value of literature in medicine.

“Being a doctor you often say, ‘Why did I choose to live my life around the sick and dying?’” says Dr. Charon. “Practicing medicine can be very depleting. And literature can be a way to make it replenishing. My overall experience in the seminar was replenishing. In every session what we were really probing at the end was our own means of making meaning.”
“CITY OF ONE: A Memoir”

City of One” is a poignant memoir of childhood loss and its enduring meaning. Francine Cournos was 3 years old when her father died, and by the time she was 11, her mother was dead of breast cancer. She was placed in foster care after a brief period with relatives and never again lived with her biological family. After graduating from medical school at NYU, she trained as
a psychiatrist and is now professor of clinical psychiatry at P&S and director of the Washington Heights Community Service at the New York State Psychiatric Institute. She has combined her perspective as a psychiatrist with her own personal experiences to examine the problem of childhood bereavement.

In 1973, after two years of training to become an internist, Dr. Cournos made a reluctant decision to leave medicine to begin a residency in psychiatry. This excerpt from “City of One” describes her first months of training.

By Francine Cournos

I am in a room filled with middle-aged women wearing nothing but short white hospital gowns. They look identical—heavyset, disheveled, blank-faced, robotic from the effects of the drugs they have been given. I try to talk to them, but they only stare impassively.

I woke up anxious and distraught. The dream reinforced my fear that I had made the wrong decision, and I lay there dreading the first day of my psychiatric training. I’d decided to follow in the footsteps of my own therapist, my symbolic father, and become a psychiatrist, even training at the same institution. But I didn’t know whether I’d chosen a new profession or run away from the old one.

I felt unsuited to the practice of medicine. It was confusing to try to save people who wanted to die, and distressing to fail to save people who wanted to live. And with patients in the chronic stages of illness, when living and dying were not at stake, I found myself more strongly drawn to their unique stories than to the repetitive patterns of their diseases. On the last day of my medical training, I was saying goodbye to a woman I’d been treating for hypertension for more than a year. At each visit, I would check her blood pressure, adjust her medication, and make small talk. But on her last visit, she blurted out her entire life story, how she had married a man she didn’t love, how she had tried to leave, how her family had threatened to disown her if she did. She was still with him to this day, but even at 58 she thinks if she ever had the courage she would pack up and walk out. She’s waited all this time, until the last day she would ever see me, to decide it was safe enough to tell me her story. But now I was embarking on a different career, one in which I would help patients talk at the first meeting instead of waiting for the last. If I couldn’t bring my mother back to life, maybe I could fix things by discovering the words for what Mom and I could never express.

It was 9 a.m. and I was sitting in a room with my new colleagues, the eight men and two women who were starting training with me, all strangers. The chief resident had arrived to orient us. “Look around at the people in this room,” he announced. “By the time your training ends, you will be closer to each other than you’ve ever been to anyone else in your lives.” His speech, even with the farcically melodramatic flourishes, made me panic. I wasn’t sure I wanted to be close to anyone, let alone to this randomly assembled group of people. I felt like running away, but under the circumstances, that seemed ill advised.

The speech concluded, and we set out on a tour of the psychiatric ward I’d be working on. I was relieved that the patients did not look like those in my nightmare. Some wore ordinary
street clothes and behaved in reasonably ordinary ways, but others were in pajamas, pacing or talking incoherently, gesticulating aimlessly. How was I ever going to carry on a conversation with people in such condition? My heart was starting to beat faster. Soon it was pounding. I couldn’t breathe. I felt I was about to faint, even die. I stood immobilized, unable to say a word, until the acute fear started to subside and I made it to the nearest telephone.

“Eric, you’ve got to come right away. I’m completely panicked, and you’ve got to get me out of here.” I had known Eric since he was an intern and I was a third-year medical student. He was 5 feet 10 but weighed only 119 pounds. He claimed that when he was weighed at his Army physical, the examiner told him, “Sonny, put your other foot on the scale.” Eric was the first friend I’d made—at least the first from whom I didn’t feel some sense of detachment—since my elementary school days with my best friends Sarah and Rita. After 400 sessions of psychotherapy, I could finally do again what had once been so effortless: enjoy the give-and-take of a shared inner life and the mutual certainty of being helped in times of trouble. Eric was in the same psychiatric training program, one year ahead of me. He liked rescuing people in trouble—and now I really needed some rescuing. He came immediately, took me for a long walk, and stayed with me until my panic receded. I was ready to go back to work, and so began my career as a psychiatrist.

I needn’t have worried about carrying on a conversation with my patients: A psychiatric interview doesn’t follow the conventions of ordinary conversation. We skip the social niceties and encourage the patient to come right to the point. “I’m the Second Coming of Christ. Notify the media. Go. Call them right away.” The 39-year-old Puerto Rican man was staring at me with a beatific smile. He was very happy, and I started to share his joy, so much that I was afraid I’d start giggling—not exactly the most professional approach.

But with practice, I became comfortable and matter-of-fact and learned to ask the questions that form a road map of the mind. I labeled what I saw and heard with scientific terms—delusions, hallucinations, thought disorders—and the phenomena seemed less strange, or frightening, or funny. I learned psychiatry’s diagnoses—mania, schizophrenia, borderline personality—and the theories that are put forth to explain the phenomena—the Oedipus complex, the schizophrenogenic mother, the malfunction of neurotransmitters in the brain. Just like in medicine, we started out taking care of the sickest patients, where what’s wrong is both urgent.
and obvious, and where our medical training was still paramount.

Psychiatry is a respite from death but not from suffering. The residents took turns on call in the emergency room. Here I saw a woman who’d had a stroke during the height of sexual excitement and was now afraid to have an orgasm ever again. A man who had been riding the subway for three days without eating or sleeping because imaginary persecutors would catch up with him if he stopped for even a minute. One woman arrived at the emergency room having walked miles to get there. She had no money for car fare, and this was the only hospital she trusted. She had a daughter, she told me, and she loved the little girl, but she had impulses to beat her, just as she was mercilessly beaten herself when she was a child. It was horrible to think of beating a child, but my heart went out to her in her struggle to stay in control. The police brought in a couple who had caused a disturbance by having a violent fight in public. The man wouldn’t let his girlfriend talk to me alone, and judging from the gist of their conversation and the flashy clothes they were wearing, I had the distinct impression that she knew secrets about his connections to organized crime. I was standing there envisioning Don Corleone coming after me with a machine gun because I knew too much. Please don’t tell me about it! Sometimes I wondered if I was becoming paranoid myself.

One day a patient I was examining actually pulled a knife on me. “Put that knife down, Mr. Jones!” I shouted in the most authoritative tone I could muster, and I was surprised and relieved when he followed my orders. A woman who lived nearby was brought to the emergency room because she had been throwing all her furniture out the window. I was interviewing her in a little room that had a bathroom in the back. I was called away for a phone call, and when I came back she was gone. I could hear water running in the bathroom, and I opened the door. There she was, stark naked, hair thoroughly soaped up, water dripping all over the floor. “I needed a shampoo,” she said amicably. Manic, I decided.

I was evaluating a thin, pale young woman, hunched over, timid, speaking barely above a whisper. She started to explain that an evil person was living inside her, and of course I took the description to be a metaphor. I was briefly interrupted, and when I returned I was startled to see a different person sitting in the chair. When I looked more closely, I realized that it was the same person. She sat upright, now wearing bright red lipstick, dark sunglasses, a different hairstyle. She started to shout and spit, cursing the body she claimed she lived inside. I’d read “The Three Faces of Eve,” but I couldn’t believe there was a real-life version of the story. The existence of multiple personality disorder is a matter of debate, but I was taken aback by whatever phenomenon I was witnessing. It was an amazing and fascinating place, this emergency room, and I was beginning to think that, yes, maybe I had made the right choice in deciding to become a psychiatrist.
Five centuries ago, physician Andreas Vesalius shocked the medical community by dissecting human cadavers to learn more about anatomy. Vesalius was condemned for his actions, but over time his revolutionary ideas gained acceptance and changed his profession forever.
Five years ago, the Office of Scholarly Resources at the Health Sciences set out to develop new options for teaching at P&S by collaborating with faculty to create interactive multimedia that would become indispensable components of the curriculum.

Today, the Vesalius Project—in which photographs from a cadaver are used to create 3-D digital images—is just one of many bold creations that help students learn human anatomy, the nervous system, and more by clicking a mouse instead of only cutting a cadaver. In addition to the office’s Vesalius team, the Curriculum Design Studio brings P&S to the forefront of modern teaching technology. Photographs, illustrations, animation, and 3-D computer models are used to bring the human body to virtual life in electronic programs that are revolutionizing medical education.

A 3-D demonstration of the bones in the skull uses a combination of photography and animation. Instructors regard the skull as one of the more challenging early concepts in medical education. In this program the bones of the skull can be isolated, removed, replaced in any order, and rotated 360 degrees in any direction—all with the click of a mouse. A digital resource merging photographs and illustrations of brain surfaces allows students to highlight structures and see how those structures relate to brain function. A digital neuroanatomy dissection of the eye orbit is used during lectures; a similar project is being developed for the foot.

These efforts are only a few of the collaborative projects developed by faculty and the Curriculum Design Studio. The programs are visually stunning, accurate in their detail, and fully interactive.

“For the last five years we have been working in a close collaboration with faculty and students with the goal of developing interactive multimedia applications and investigating the latest media and communications technologies for teaching and learning,” says Dr. Pat Molholt, associate vice president and associate dean for scholarly resources. “We have enjoyed a strong relationship with instructors and rely on their subject expertise to complement the design strengths of Ewa Soliz, director of the CDS.”

The eye orbit program demonstrates how multimedia merges dissection with written and illustrated information. Dr. Richard Ambron, professor of anatomy and cell biology, uses the program—projected on a large classroom screen—to add and remove eye structures during his lecture to first-year students. The program helps students identify the various structures, their proper names, spatial relationships, and function. In addition to enhancing the lecture, this program can be used by students on their own to virtually dissect the region as many times as they need to and in any order. Actual dissections provide less flexibility because students must remove outer structures first, and structures can never be returned to their original state.

“These projects were prompted by a need to address both teaching and learning needs,” explains Dr. Ambron. “Ten or 20 years ago, a medical student spent approximately 450 hours on anatomy studies. The proliferation of new scientific knowledge into the world of medicine has resulted in a greater demand...
on the student’s time in all areas of training. Today, that student will participate in a curriculum with about 180 hours devoted to anatomy."

Like the eye orbit, a program on the brain uses color overlays to associate areas with their proper names. Dr. John Martin, associate professor of clinical psychiatry, and his students can click on an area to see its name or vice versa. Students also can click on color-coded buttons to highlight areas of the brain associated with vision, hearing, etc. Students can use this program to test themselves and evaluate their progress in learning the complex material. Identifying a structure or brain region on a brain slice and, alongside that, on a corresponding MRI is nearly impossible to do except with a computer.

“As a teacher, you are always exploring new methods,” says Dr. Martin, one of the first faculty members to work with new forms of media. “I started working with the studio in 1996 and we completed our

THE PEOPLE BEHIND THE TECHNOLOGY

Don’t be fooled by the technology. People are the driving force behind these programs. They include three who bring different abilities to their work: Ewa Soliz, director of the Curriculum Design Studio; Dr. Celina Imielinska, associate research scientist; and Dr. Ahmet Sinav, associate research scientist.

Ms. Soliz specializes in how students learn—she is pursuing her Ph.D. at Teachers College—and is an expert in multimedia and interface design. Her skills merge in her leadership of the Curriculum Design Studio, where she takes on P&S students as interns to help her develop learning programs using the images created by Drs. Imielinska and Sinav. Dr. Imielinska is a mathematician. Her work with the Vesalius team provides accurate 3-D representations of anatomical structures in a digital format. Dr. Sinav is an anatomist and illustrator who also is on the anatomy faculty. He works with Dr. Imielinska to create the 3-D segmentations; his dual background allows him to work quickly and accurately.

Dr. Imielinska, lead researcher for Columbia’s Vesalius team, has contributed to the development of a method for creating accurate 3-D segmentations from Visible Human Data photographs. The method uses mathematical algorithms to merge hundreds of 2-D images into a computer-generated 3-D model. She holds several research grants in this area.

“The resulting 3-D anatomy looks photorealistic,” says Dr. Imielinska. “The color of each structure is of the color of the fresh human tissue.”

As Dr. Sinav works with Dr. Imielinska on generating these models, he also “cleans up” the segmentations without compromising accuracy. In addition to enhancing the segmentation’s sharpness and clarity, he creates overlay illustrations of anatomical structures, such as nerves and muscles, that can be added and removed within the target region.

“I call on all facets of my background to create these illustrations,” explains Dr. Sinav. “Imagine viewing a body being operated on. There would be parts of the anatomy that you couldn’t see clearly because things like blood and other tissue are in the way. My job is to create images of these parts without extraneous elements that might obscure the target structures.”

When these images are completed, Ms. Soliz takes over. Along with her medical student interns, she works on developing the best methods for communicating the combined data from the 3-D models and illustrations. She incorporates animation, video, and sound. Her work in developing interactive labeling programs has made the task of memorizing hundreds of terms significantly easier.

The process of creating these materials varies depending on the product. Some projects may not need the expertise of all three, while some call for contributions from others outside the Curriculum Design Studio. But the common trait shared by all programs is that the final product virtually brings to life a collection of media centered around specific teaching and learning needs.

From left: Pat Molhoit, Ewa Soliz, and Celina Imielinska. Not pictured: Ahmet Sinav
first presentation the next year. Even though it was only a few years ago, the older computer systems posed a challenge and the initial materials were a bit clunky. But it was clear how important these tools would be to teaching."

The products coming from Dr. Molholt’s team are not meant to condense invaluable anatomical study and dissection or neuroanatomy into a few hundred minutes of mouse clicks. Instead, faculty members like Drs. Ambron and Martin identified difficult concepts in medical education where multimedia presentations could enhance traditional teaching. The goal is for students to gain a stronger understanding of challenging areas faster and have the option of reviewing material easily and effectively. This makes the lab and lecture time more focused and productive.

"Before we had these materials, we learned from lectures and textbooks before we dissected," says Winston Jeshuran, a fourth-year student who worked as an intern for the design studio during his second year. Under the guidance of Ms. Soliz, input and feedback from volunteer students help shape the focus of many studio projects. "These programs are like textbooks with floating pages. Any time you have a question or need to check a reference, a mouse click brings you right to the information. They could never substitute for dissection, but if I could have used them before I dissected, I would have had a better understanding of what I was doing and would have learned much more. We are fortunate to have cadavers to study because men and women have generously donated their own bodies to science. That is a tremendous gift and we owe it to them to learn as much as we can from the experience."

The Vesalius Project at Columbia University has contributed to electronic curriculum programs by adding a high level of accuracy to the illustrations and animations. Columbia’s Vesalius team used mathematical algorithms to create 3-D models from images of representative male and female cadavers. The male was sectioned at one millimeter intervals and the female at one-third of a millimeter intervals to create complete, anatomically detailed, 3-D representations of the normal male and female human bodies.

These models are then overlaid with hand illustrations showing each muscle, nerve, bone, blood vessel, organ, and other structures. Each structure can be viewed individually or in any combination, all controlled by the user.

Samples of these projects and others can be viewed online at http://cuMedLearn.org. The site is used to provide easy access to individuals outside Columbia and to allow those interested in licensing the software to try it out. Traffic on the site is especially high after a presentation of the work at a conference or other gathering.

"We have presented our course materials at many national meetings and conventions," says Dr. Ambron. "People are amazed at what we have accomplished with so few resources."

"We started out five years ago with many lofty goals and a lot of promise," Dr. Molholt says, alluding to an article on electronic materials that appeared in the Fall 1995 issue of P&S Journal. "Thanks to our excellent staff and a dynamic collaboration with faculty, we have not only met many of those goals but in some instances far exceeded them."
Second-year P&S students have discovered an unorthodox way to prepare for working together in class and, later, on the wards: dangling in harnesses, climbing giant ladders made of logs, and untying human knots.

For the past two years, P&S students have started their second year by participating in a program funded by the Gold Foundation and designed to build teamwork and leadership skills. They gathered in Blairstown, N.J., for a day of rappelling down vertical cliffs alongside a waterfall and leaping out of trees to grab for a ball suspended far above the forest floor. The students also broke into groups to solve problems and puzzles, such as untying themselves from human knots and figuring out how to get 15 people to stand together on a single 2-foot square.

Suzanne Cullinane’00 initiated the team- and trust-building exercise, now called TEAMWORK, when she was a third-year student and president of the P&S Club. The event is intended to break down barriers that may have formed among students during the first year and prepare them for the second year and beyond, when teamwork skills become more crucial, says Kate Malin-Smith, P&S Club administrator, who helped organize the events.

Unifying experiences mark the beginning of the first and third years (white coat ceremony in the first year and the clinical transition ceremony in the third year), but little exists for second-year students.
Jonah Essers’02 says the exercise helped bridge the passage between self-reliance and learning to rely on others. “The first two years of medical school are really about yourself,” he says. “Third year—that’s when it’s essential that you have your group skills intact.”

Mr. Essers and Ms. Malin-Smith helped Ms. Cullinan organize the first leadership day in 1999. Turnout for the event—held over Yom Kippur—was disappointing; only about half the class attended. However, nearly 100 percent of the Class of 2003 participated in 2000, when the event was held on a week day. Students formed 10 groups of 15, the same small groups they would belong to throughout the second year when they spend a half-day working together every day.

“It was really rewarding,” says Class of 2003 President Juliette Lee. “Many students learned to trust people that maybe they’d talked to only once or twice.”

Ms. Lee and Mr. Essers agree that this trust is important for the small group work that begins during the second year and is even more crucial as preparation for third year, when students must work as a team with interns, residents, nurses, and each other.

TEAMWORK also helped participants get to know their classmates better. “I think everyone can come up with someone they really got to know during the exercise that they hadn’t known before and were impressed by,” Ms. Lee says.

The exercise also helped give the class a much-needed mood boost, Ms. Lee adds. “It really lifted our spirits. A lot of people were intimidated approaching second year. It gave people a positive outlook who had been ambivalent about coming back to school.”

Although some faculty were resistant to having TEAMWORK during school time, Mr. Essers says the students feel the exercise is well worth the time spent away from the classroom.

The next step, say Ms. Lee and Mr. Essers, will be to ensure that second-year classes continue this tradition. The P&S Club wants to develop a system to better evaluate the value of the experience and may consider a shorter version to help students prepare for their third year.

COLUMBIA BREAKS GROUND FOR THIRD AUDUBON PARK BUILDING

Construction will begin this year on the third building in the five-building Audubon Biomedical Science and Technology Park. The Irving Cancer Research Center, named for New York City philanthropist and food distribution executive Herbert Irving, will double Columbia’s available laboratory space for cancer research and expand Columbia’s growing genetics program. Mr. Irving gave $21 million toward the building’s construction.

The first building in Audubon Park, known as the Mary Woodard Lasker Biomedical Research Building, houses 15 biotechnology companies. The facility, which opened in 1995, is an incubator for new start-up biotechnology and biomedically related companies and is the linchpin in efforts to help the city attract its share of the multi-billion dollar biotechnology industry by fostering collaboration between industry and academic science. The second building, the Russ Berrie Medical Science Pavilion, opened in 1997 as an academic building. It has labs for Columbia researchers and clinical facilities, including the Naomi Berrie Diabetes Center and the Associates in Internal Medicine practice. Audubon Park is New York City’s only university-related research park and houses the only biotechnology business incubator in the city.

“Biomedical research is one of the strongest areas of opportunity for attracting funding, founding new biotechnology companies, creating jobs, and stimulating the city’s economy, while simultaneously producing major new scientific discoveries that will lead
to lifesaving treatments,” says Dr. Gerald Fischbach, Columbia’s new vice president for health and biomedical sciences, dean of the Faculty of Health Sciences, and dean of the Faculty of Medicine. “The Irving Cancer Research Center is another way Columbia continues to expand its outreach to New York and into its own community.”

The Irving Cancer Research Center will bring together at one site basic scientists and clinicians working on cancer, genetics, and cell biology to encourage collaborative efforts and build on Columbia’s contributions in medical research and treatment.

The building will have a comprehensive breast cancer screening facility and research laboratories. Avon Products Foundation has given a $10 million gift to Columbia and New York-Presbyterian Hospital to help the Herbert Irving Comprehensive Cancer Center expand its breast cancer research and clinical care. A portion of the gift will be used to support screening and comprehensive breast cancer care for indigent women in northern Manhattan.

The 13-story, approximately 300,000-gross-square-foot facility will cost $131 million. The new building is designed by Davis Brody Bond and will sit east of Columbia-Presbyterian Medical Center on St. Nicholas Avenue between 166th and 167th streets. The building will have nine floors of research space, underground parking, and clinical facilities. Occupancy of the building is projected for the spring of 2003.
IN Memoriam

FACULTY

SADEK K. HILAL, M.D., PH.D.

Dr. Sadek K. Hilal, professor emeritus of radiology (in neurological surgery), died Dec. 24, 2000, at age 70. He was one of a handful of people considered to be the most influential in advancing imaging science and radiology during the past 50 years.

Dr. Hilal had been director of the neuroradiology division since 1979. He received his M.D. degree from the University of Cairo in 1955 and immigrated to the United States in 1957. He earned his Ph.D. degree from the University of Minnesota in 1962; his thesis, “The Measurement of Blood Flow by Radiologic Technique,” was one of the most cited references in radiology, according to the journal Radiology. Recruited to P&S in 1963, he began a series of advances that earned him an international reputation. These included development of a microdensitometer to measure cerebral blood flow.

In 1968, Dr. Hilal and colleagues used a magnet to perform the first externally guided arterial catheterization inside the human brain. This led to endovascular therapy for aneurysms and arteriovenous malformations and was a forerunner of the field of neurointerventional radiology.

Columbia-Presbyterian nearly 50 years ago as an intern following graduation from Washington University’s medical school in 1952.

He served in the U.S. Army from 1955 to 1957 then returned to Columbia-Presbyterian as surgical resident, becoming chief surgical resident in 1959. He received his bachelor’s degree from NYU.

After retiring from active clinical practice, he continued to teach medical students and residents as a regular participant in weekly morbidity and mortality conferences in the Department of Surgery.

ALFRED M. MARKOWITZ, M.D.

Dr. Alfred M. Markowitz, professor of clinical surgery, died June 9, 2000. He began his tenure at Columbia-Presbyterian nearly 50 years ago as an intern following graduation from Washington University’s medical school in 1952.

He served in the U.S. Army from 1955 to 1957 then returned to Columbia-Presbyterian as surgical resident, becoming chief surgical resident in 1959. He received his bachelor’s degree from NYU.

After retiring from active clinical practice, he continued to teach medical students and residents as a regular participant in weekly morbidity and mortality conferences in the Department of Surgery.

OTHER FACULTY DEATHS

Mavis Kaufman, M.D., associate professor of neuropathology (in psychiatry), died March 21, 2000.


IN MEMORIAM

THE COLLEGE OF PHYSICIANS & SURGEONS OF COLUMBIA UNIVERSITY
SPRING 2001

ALUMNI

Class of 1932
Hilliard M. "Hilly" Shair, a retired dermatologist, died Oct. 10, 2000. Dr. Shair earned his B.A. degree and an M.A. degree in chemistry from Columbia University before applying to medical school. He saw active duty during World War II, serving with the U.S. Army Medical Corps in the Pacific Theater, retiring with the rank of major and earning two battle stars for valor. His lengthy career included private practice in New York, Chicago, and St. Louis and close to four decades on the staff of the dermatology clinic at Columbia-Presbyterian. Dr. Shair was a past president of the St. Mary Hospital medical staff and the Blessing Hospital board in St. Louis. He also served tenures as president of the Adams County, Ill., Medical Society, the Chicago Dermatologic Society, and the St. Louis Dermatologic Society. Likewise committed to public service, he was president of the Quincy, Ill., Rotary Club, campaign chairman for the American Red Cross, and a longtime supporter of the State of Israel. He served three volunteer tours of duty with CARE Medico in Indonesia on the island of Java, in Afghanistan, and in Israel. A Bible scholar by avocation and passion, he had a fluent knowledge of ancient Hebrew and Greek. In his spare time he played the violin as principal second violinist in the Quincy Symphony Orchestra, of which he also was past president. He is survived by his wife, Jane, four sons, six granddaughters, and four step-grand-children.

Class of 1936
Retired psychiatrist Robert B. Kotty died July 10, 2000. Dr. Kotty was affiliated for many years with Beth Israel and Bellevue hospitals in New York. He saw active duty with the U.S. Army in the Pacific Theater during World War II. Survivors include two sisters and a brother.

Class of 1937
The distinguished orthopedic surgeon, Ernest M. Burgess, recipient of a Presidential Citation for his pioneering work on the development of prosthetic devices, died Sept. 30, 2000. A founder of the Prosthetics Outreach Foundation, Dr. Burgess served as former vice president of the American Academy of Orthopedic Surgeons, professor of orthopedics at Washington University (where an endowed chair in orthopedic research was established in his name), and director of research at the Prosthetic Research Institute. Among other encomia, Dr. Burgess received an honorary Ph.D. degree from the University of Utah for his international humanitarian efforts in prosthetics and a medal of honor from the Vietnamese government for his work in Southeast Asia. The prosthetic clinic he helped establish in Hanoi in 1989 has fit more than 7,500 artificial legs for Vietnamese patients. Regarding P&S, with which he maintained strong ties, he once wrote: "The quality of my education and the relationship with that outstanding faculty has been the linchpin for my professional life. Hail, Columbia!" He is survived by his wife, Ruth, a daughter, and two sons. . . .

Class of 1939
Charles F. Goodnough, past president of the medical staff of the House of the Good Samaritan and the medical staff of Mercy Hospital in Watertown, N.Y., died Aug. 22, 2000, at age 87. For many years a general practitioner in private practice, Dr. Goodnough later switched to emergency medicine and headed the emergency medicine department at Good Samaritan, where he also helped organize the first coronary unit. He later became medical director of Mercy Hospital’s ambulatory care facility. Dr. Goodnough served with the U.S. Army 4th Armored Division and as chief of anesthesia at the 30th General Hospital during World War II. He was honored with the European-African-Middle Eastern Theater Campaign Ribbon and the American Defense Service Medal. A past president of the Jefferson County, N.Y., Medical Society, he also served on the board of directors of the local Blue Cross...
organization and as general chairman of the 1962 Heart Fund Campaign. In addition to his wife, Virginia, survivors include three daughters, three sons, 17 grandchildren, and a great-granddaughter.

**Class of 1940**
Retired radiologist Walter J. Brown died Sept. 22, 2000. He had been affiliated with Boswell Memorial Hospital in Sun City, Ariz. He is survived by his wife, Elizabeth.

**Class of 1942**
Richard R. Storrs died May 17, 2000. A retired radiologist, Dr. Storrs trained at the Mayo Foundation in Rochester, Minn., and had been a member of the staff of St. Vincent Medical Center in Los Angeles, Calif. He saw active duty with the U.S. Navy during World War II for which he was awarded a Bronze Star. Dr. Storrs served a tenure as president of the Los Angeles Radiological Society and was councilor in the American College of Radiology. He is survived by his wife, Nancy, six children, one stepchild, and two grandchildren.

**Class of 1943**
Thomas Armour, a retired internist and former faculty member at the University of Miami, died Nov. 26, 2000. Surviving him are his wife, Susan, and four sons.

**Class of 1945**
Warren G. Smirl, a retired general surgeon from Waukesha, Wis., died Nov. 11, 2000. Following service in the U.S. Air Force after World War II, Dr. Smirl pursued postgraduate study at the University of Vienna. He had been affiliated with Waukesha Memorial Hospital. Survivors include his wife, Jean, two daughters, three sons, and three grandchildren.

**Class of 1946**
Morton H. Maxwell died in February 2000, the exact date not reported. Former clinical professor of medicine at UCLA, Dr. Maxwell published more than 400 papers in the fields of nephrology and hypertension. In 1980 he was the recipient of a special Lasker Award for detection and follow-up programs in hypertension, his area of focus throughout his long career. Dr. Maxwell also was active in supporting the Los Angeles County Museum of Art and the Los Angeles Music Center. He is survived by his wife, Roberta.

**Class of 1948**
Anthony M. Iannone, founding chairman of the neurology department at the Medical College of Ohio and one of the nation's leading researchers on neurological disorders, died Oct. 17, 2000, at age 75. Throughout a long and distinguished career that combined clinical practice, teaching, and research, Dr. Iannone published more than 50 papers, many of them seminal in his field. Dr. Iannone's more than 30 years at the Medical College of Ohio included service as chief of staff. His studies in the functioning of the human brain paved the way for major advances in the treatment of chronic neurological conditions, including gait disorders, Parkinson's, clonus, and stroke. He served in the U.S. Air Force from 1951 to 1953. Preceded in death by his wife, Mary, and two sons, his survivors include five daughters, three sons, 17 grandchildren, and one great-grandson.

**Class of 1951**
Nelson D. Holmquist died May 20, 2000. A distinguished anatomic pathologist and cytopathologist, Dr. Holmquist had been professor of pathology at Louisiana State University in New Orleans and senior visiting pathologist and director of the Russell L. Holman Cytology Laboratory at Charity Hospital of Louisiana. He is survived by his wife, Marion, a son, a daughter, three stepchildren, and six grandchildren.

**Class of 1952**
John E. Ultmann, an internationally renowned cancer treatment researcher, died Oct. 23, 2000, at age 75 from complications of lymphoma, one of his many areas of expertise. An educator heart and soul, he continued teaching and practicing medicine until several weeks before his death. Director for 18 years of the Cancer Research Center at the University of Chicago Pritzker School of Medicine, where he was professor of medicine and where a professorship was endowed in his name, he also served for 11 years as dean for research and development. A former chairman of the board of scientific counselors for the National Cancer Institute's Division of Cancer Treatment, he specialized in the treatment of Hodgkin's disease and non-Hodgkin's lymphoma. He participated in the development of numerous new
drugs, helped to hone chemotherapy, encouraged an interdisciplinary approach to the treatment of cancer, and helped train a generation of scientific investigators in the field. A native of Vienna, Austria, which he fled as a child, Dr. Ultmann immigrated to the United States in 1938. During World War II he served in the U.S. Intelligence Service and, after the war, helped interrogate German prisoners. He lectured around the world and garnered a host of encomia, including honorary degrees from Heidelberg University, the Chinese Academy of Medicine, and the University of Vienna. Dr. Ultmann was a loyal P&S alumnus whose generosity included his support of the Class of 1952 Scholarship Fund and considerable time and effort spent organizing and hosting regional alumni gatherings in Chicago. Asked about his most memorable experience after medical school, Dr. Ultmann once put his life in a nutshell: “It has been a fabulous [time]: one wife, two of three children pediatricians, research to satisfy my curiosity and do some good.” He is survived by his wife, Ruth, two daughters, Monica’80, and Michelle, also a physician, a son, and five grandchildren.

Class of 1955

Pediatrician Stanley D. Olicker died July 25, 2000. Associate clinical professor of pediatrics at Cornell, Dr. Olicker was an attending at Long Island Jewish and North Shore University hospitals. He particularly relished the development of his pediatrics practice as it evolved into treating the children of his former patients. Dr. Olicker served with the U.S. Air Force from 1954 to 1956. He is survived by his wife, Sydell, four daughters, and a son.

Class of 1959

Word has been received of the death of general surgeon Norman S. Roome in August 2000, the precise date not reported. Dr. Roome was affiliated with the Munson Army Health Center at Fort Leavenworth, Kan. He is survived by his wife, Judith.

Class of 1961

Jane S. Ferber, assistant clinical professor of psychiatry at P&S and director of the family training and residency training programs and former associate residency director of Creedmoor Psychiatric Center, died Sept. 19, 2000. Dr. Ferber pursued a private practice in psychiatry in New Rochelle, N.Y. An expert in non-verbal communication in psychotherapy and family aspects of alcohol abuse, among other areas, her publications included two books, “Crisis: A Handbook for Systemic Intervention” and “Context Analysis of a Family Interview.” She leaves behind a daughter and a son. . . .

Charles G. Watson has been reported dead, no date specified. Professor and vice chairman of surgery at the University of Pittsburgh, Dr. Watson was an expert in endocrine-related surgery. He was honored in 1992 with the Chancellor’s Teaching Award and had three Golden Apple Teaching Awards. Dr. Watson also served as chairman of the board of directors of the University Health Network. Survivors include his wife, Nancy, and two sons.
In the course of a long and distinguished career, in which he piloted three great institutions of higher learning through turbulent times and played a pivotal role in others, veteran educator Calvin H. Plimpton’51 MSD weathered many tight spots. None tighter than the night in 1984 when he single-handedly scared off prospective kidnappers as the newly inducted president of the American University of Beirut—AUB—following the assassination of his predecessor. “A heavy screen door between us, I greeted them politely, a seminaked man with a large revolver in hand, which caught the light beautifully. ‘Scuse! Scuse, pliss!’ Never had to fire a shot.”

Less perilous perhaps but no less peppery were his tangles with restive students and irate trustees in his role as president of Amherst College in the explosive 60s and his wrangles with Albany bureaucrats over the budget of SUNY Downstate Medical Center in Brooklyn, which he ran through the economic downspin of the 70s.

“Learning,” he once said, “is the act of sticking one’s neck out.” Educator to the bone, for five decades he has been stretching his neck out to practice what he preaches.
Wit and Wisdom Off the Top of His Head

Whereas most academic and political leaders depend on professional speech writers to speak their minds, Dr. Plimpton has always minded his own. A 1981 volume titled “The Spoken Word” of the oratorical tours de force he wrote and delivered as the 13th president of Amherst College attests to his mastery of the art of public address. (Included is a talk titled “Ask Not What Amherst Can Do For You,” which inspired President Kennedy’s famous inaugural remarks, and the stirring meditation, “Four Weeks Ago He Was Here,” written in the wake of Kennedy’s assassination.)

Anyone who has ever heard him speak comes away enlightened and entranced.

Eighty-two years old, his 6-foot-4-inch frame folds with some difficulty into a chair, but he’s still got the raconteur’s knack for rubbing sparks off the flint of experience and the fire in his eye is still as wild as a dancing flame on the tip of a candle wick.

A Pre-Med Childhood Down on the Farm

Born into comfortable circumstances—his ancestral roots go back to an enterprising haberdasher on the Mayflower—Calvin Plimpton grew up on the family farm in Walpole, Mass., not far from the family-owned mill. His father was a successful publisher of textbooks. His mother saw to the education of her offspring, including lessons in cow milking, counterpoint, fencing, horseback riding, good English, and poker, not to mention French and German. Family chamber music recitals, a serious affair directed by a visiting student from Juilliard, were occasionally disrupted, he recalls, by sticky-fingered ginger ale fights among the little fiddlers. “It is the flavor of learning which makes any activity worthwhile,” he later told Amherst undergraduates.

An early bout with asthma, successfully treated by a season on a cattle ranch in Arizona, gave him firsthand knowledge of medical matters and a practical attitude toward adversity. “Illness can be a very educational experience, and in recognizing this I am not pleading some masochistic perversion,” he reflected in a talk titled “The Advantages of Illness, the Benefits of Disease.” “Even when we fight battles, we don’t merely liquidate our enemy. We also learn from him.” The would-be M.D. perfected his surgical skills on unsuspecting poultry and crystallized his aspirations under the strict, albeit loving, tutelage of the late Josephine Hopkins Norton’30, his nanny, who was working her way through medical school at the time and whom he credits with weaning him off pirate cutlass in exchange for Bard-Parker scalpels.

Graduating cum laude in English at Amherst, he took his M.D., also cum laude, from Harvard Medical School. While at Harvard, he spent a memorable summer in the Andes studying and helping to develop a vaccine for verruga peruana (Oroya fever), a fatal illness borne by sand flies. He also acquired a speaking knowledge of Spanish. The experience whetted his taste for medicine in exotic climes.

But Dr. Plimpton really got his feet wet serving in the 3rd Army, 83rd Field Hospital, during World War II, for which he later earned a battle star. “Doctor, you are now a surgeon!” he was told by his commanding officer. Based with his unit in the Rhineland, treating battle casualties on the spot, he learned to operate literally under fire and relished the high stakes challenge. Returning to Harvard after the war, he pursued an M.A. in biochemistry. While intrigued by bench work, specifically his studies on hexokinase, an enzyme important in sugar transport, he sorely missed the human element of the hospital environment. “A test tube is fine, but it’s people that are fun.”

Among Medical Thoroughbreds at P&S

Medicine to him has always been a profoundly human experience. “It should really be obvious,” he mused in a talk titled “Humanism and Medicine,” “that part of the fun of medicine is teaching. . . . In medicine the positions of teacher-student and doctor-patient are inextricably interwoven. At its very best, the doctor-patient relationship becomes a joint exploration into the meaning of life.”

To pursue the clinical experience at its best, Dr. Plimpton entered Columbia, where he trained in medicine and earned an M.S.D. degree under the tutelage of the legendary Robert Loeb. Other teachers who made a deep impression were “Big Bill” Palmer, chairman of medicine, and Dana Atchley. Dr. Plimpton describes the Department of Medicine of that day as a “stable of thoroughbred race horses.
on which Big Bill Palmer rode herd. P&S was definitely where the medical action was.” Among that memorable team he fondly recalls “the ever elegant, ever eloquent Yale Kneeland...Randy West, a Shakespearean character who looked like Falstaff and mastered blood,” and many others. “You’d never go home on your night off, you just couldn’t bear to leave the place.” He shakes his head. “That’s when the children [a daughter and three sons] began saying, ‘Daddy’s the man who comes to lunch on Sundays—sometimes!’”

As chief resident, he had admitting privileges to Harkness Pavilion and, sweeter still, got to call Dr. Loeb Bob at the daily “Sunrise Service.” The experience, he reflects, “wasn’t just a summary of who’d been admitted, it was Bob Loeb’s review of everything medical under the sun, including the very latest findings.” Among Dr. Plimpton’s other duties, he enjoyed choosing case, speaker, and pathologist for the Clinical Pathological Conferences, a responsibility he later passed on to his colleague, the late Abbie I. Knowlton ’42, with whom he worked for many years in the endocrine clinic and maintained a lifelong friendship. Dr. Plimpton later joined the trustees and served an extended tenure as chairman. Beirut, then known as “the Paris of the Middle East,” had a unique cosmopolitan flavor with Sunni and Shiite Muslims living side by side in apparent harmony with Druze, Jews, and Maronite Christians. The tenuous idyll exploded in 1958 and President Eisenhower sent in American troops. Summoned home by Dr. Loeb—“Either you come back here or you get off the faculty list!”—Dr. Plimpton reluctantly left Lebanon. But a new adventure in education was about to begin.

At the Tiller of Amherst in the Turbulent 60s

John Jay McCloy, chairman of Chase Manhattan Bank and the Amherst trustees, had gotten wind of Dr. Plimpton’s administrative talents and leadership skills. Inviting him down to his office to discuss the search for the next president of Amherst, the banker stunned the doctor by offering him the job. “Mr. McCloy, you should see your psychiatrist more often,” replied a flabbergasted Dr. Plimpton, who promptly left the room. After thinking things over a bit, however, still suffering from the “itchy foot” syndrome and with his wife’s blessing, he decided to take the job.

In the notes and comments to “The Spoken Word,” Edward S. Morse, an Amherst alumnus and trustee, wrote: “There is no record that Dr. Plimpton actively practiced medicine at Amherst during
his presidency, but to many alumni he was the guiding college physician, concerned with the students’ pulse and temperature, guiding the health of body and mind, and preserving a spirit of sanity in the undergraduate community throughout his 11, some of them tumultuous, years as president of the college.”

“If you’re crazy enough to be a college president, the 1960s was the time to be it!” Dr. Plimpton once quipped. He put it a bit more judiciously in his commencement address of 1968, a time when all hell was just beginning to break loose at college campuses around the country: “A college is a wonderful means for bringing the older and the younger together. Each group keeps the other curious, hence young and wise.”

Like their peers at Berkeley, Columbia, and elsewhere, Amherst students demonstrated and took over buildings, submitting lists of “non-negotiable” demands to a sympathetic, albeit ruffled, president. “The students were right, of course,” he insists, looking back. “They wanted to call attention to injustices in this country and to what we were doing overseas. But it seemed to me that my main job was to keep the college running.” Dr. Plimpton’s inclination was to “keep talking, keep talking,” despite disruptive student tactics and pressure from some of the trustees to “call in the cops and get rid of the bastards.” His nephew, author George Plimpton, recalls his uncle being upset at spelling mistakes in the list of demands but adds, “I’ve never met an Amherst graduate who didn’t admire him enormously.”

Fortunately, the president prevailed, peace was maintained, and change did come to Amherst and America. But Dr. Plimpton prefers to remember other highlights of his tenure. “I could snap my fingers and have Robert Frost come down and talk to us as Simpson Lecturer.” Poet and president became fast friends. “I would walk him over to the Lord Jeff Inn after dinner, and he said, ‘Cal’—this would be about 11 o’clock—‘You aren’t tired, are you? No, well, let’s walk back again.’ So we walked back and forth this way for a quite a while, during which we had a superb conversation. I wish I’d had a tape recorder.” Frost felt right at home on campus, as he put it, pulling “ideas out of the boys’ heads they didn’t even know they had.”

Other memorable personalities in the Amherst orbit include poet Archibald MacLeish, novelist Ralph Ellison, physicist Niels Bohr, mathematician Kurt Goedel, and President John F. Kennedy, who flew in to deliver one of his last speeches before his assassination, from which Dr. Plimpton fondly recalls this line: “When power corrupts, poetry cleanses.”

Another revered acquaintance made in the line of duty was the Rev. Dr. Martin Luther King when both spoke at a commencement ceremony at another college. Despite a bad cold, Dr. King thrilled the crowd. “Don’t fall asleep during a revolution,” he declaimed from the podium before excusing himself. “I’m sorry I can’t stay for this whole affair. I have to go to jail in Atlanta tomorrow morning.”

Among his accomplishments at Amherst, Dr. Plimpton takes particular pride in recruiting a number of fine professors, including the first women, and helping to found the experimentally inclined Hampshire College.

Ennobled by Commitment

“We need an idea so big,” he once said, “that we are willing to lose ourselves in it.” To this end, education, and more specifically institutions of higher learning, have served him well as he served them. “Whenever you see something that’s bigger than you, more valuable than you, more interesting than you, it has an ennobling effect.”

The “big thing” for him has always been the university. “Universities are one of man’s greatest and hardiest institutional inventions...They have the leisure to think instead of having to squeeze out a solution by the pressure of the moment.” To protect and foster that intellectual leisure for others he has been willing to face the moment’s pressures head-on. Next stop, Flatbush.

A Brobdignagian in Brooklyn

Eager to get back to the nitty gritty of medicine, in 1971 Dr. Plimpton became president of Downstate Medical Center in Brooklyn—but not before he took a five-day and four-night journey by canoe around New York waterways, ostensibly to reconnoiter his new terrain and, incidentally, to call attention to an underappreciated resource told in a hilarious

He spent the next decade in the presidential hot seat, doubling as dean of what was, at the time, the third largest medical school in the United States, with 17 affiliated hospitals to oversee and a sprawling inner-city community to serve to the best of his ability, despite a slumping national economy and a statewide budget crunch. “Brooklyn is a wonderful place very much like London,” he says, “a collection of small towns with every race under the sun represented. We needed good doctors in the worst way.”

Dr. Plimpton worked hard to bring in the medical talent. Among his “red hot recruits” at Downstate was Dr. Samuel Koontz, a top-notch African-American surgeon from Stanford, willing to trade suburban comfort for the chance to make a difference in Brooklyn’s simmering urban hot pot.

Following completion of his term of office at Downstate, Dr. Plimpton was named special consultant in international affairs to the National Library of Medicine, a brief scholarly interlude cut short by another call to service.

Return to Middle East

In 1982, things started to heat up again in the Middle East. Israel invaded Lebanon in June. AUB Acting President David Dodge was kidnapped in July. This was followed in 1983 by attacks on U.S. Marines and an explosion at the U.S. Embassy in Lebanon. The mounting tension for American University trustees, faculty, and students culminated on Jan. 18, 1984, with the assassination of AUB president Malcolm Kerr.

At age 66, when most people contemplate retirement, the self-styled “unemployed physician and untrained New England schoolmaster” took up the fallen baton as the 10th president of AUB. “Lots of people thought I was out of my mind,” he says.

On the way to Beirut to bolster the spirits of the beleaguered faculty he encountered Mother Teresa, who was headed there to preach peace. “Look, Mother,” he cautioned, “there’s a war going on, you ought to watch out.” “Oh, no,” she countered, a like-minded advocate of tight spots, “we always go where we’re needed most.”

Dr. Plimpton had his hands full in Beirut, with the welfare of some 4,500 students, 450 faculty members, and 12,000 campus workers to look after, while the bombs burst and war raged all around. Somebody needed to hold the fort of this “island of sanity, a sanctuary for intellectual development”—at least till the cavalry came. In fact, the fighting grew so fierce and the situation so risky, he was forced to run the school from Syria, Cyprus, and the New York office, with short strategic hops to Beirut. “A lot of things are discouraging,” he told a reporter for the Cape Cod News at the time. “Have you tried treating cancer lately? It’s a very discouraging disease...but you don’t give up.”

His mission was clear. “We have to continue to do our business,” he was quoted in the Christian Science Monitor at the time of his appointment. “That business,” he said, “is educating people—not indoctrinating but educating them—to think for themselves and let the chips fall where they may.” Like other institutions in an embattled Lebanon, the university, though spared heavy bombing, took a spiritual hit. Still, the American University of Beirut survives today and continues to set a standard for higher education in the Middle East.

A Restless Retiree

Men like Calvin Plimpton are not inclined to sit still. In 1990, he applied to the Peace Corps to teach English in central Europe but was turned down.

Still, his interest in things larger than himself continues unabated. Until recently a member of the Council on Foreign Relations, he spoke out against military action in the Persian Gulf. His numerous honors and awards have included the Order of Cedars, commander rank, of the government of Lebanon; the Jane Award of the National Geographic Society; and honorary degrees from institutions of higher learning around the country and the world. He was saluted in 1998 as Distinguished Alumnus of the Year by the Society of the Alumni of Columbia-Presbyterian Medical Center.

“There will always be the frontiers between the old and the new, the past and the future, the known and the unknown,” he once wrote. Averse to the idea of ever having “covered a field,” at 82 Calvin Plimpton is the living embodiment of a “médecin sans frontières,” though the organization might turn him down if he applied. ■
ALUMNI ASSOCIATION ACTIVITIES

ALUMNI COUNCIL

In addition to the regular contingent of active Alumni Council members, the list of attendees at the council dinner Nov. 15 included 27 P&S students and one international VIP, Dr. Zhe Dong, the newly appointed dean of international studies at Peking University in China. Alumni Association president David T.W. Chiu'73 invited Dr. Dong to report on a recent American-style round of restructuring of education and clinical teaching at his institution. While specialized schools of higher learning had been under the control of the Chinese Ministry of Education, Dr. Dong told of the changes now under way to place these schools under the direction of a newly created entity, the Peking University Health Science Center. Dr. Dong thanked Columbia for its role in helping to improve the quality of health care education in China. He proposed, furthermore, an opportunity for educational exchange, suggesting that P&S students might take four- to eight-week medical rotations in China to expose them to Chinese medical practices.

The evening’s guest speaker, Mitchell C. Benson’77, the George F. Cahill Professor and vice chairman of urology, delivered a summary of ongoing research projects in the department. Among the areas of departmental interest is the testing of the hypothesis that benign prostatic hyperplasia (BPH) may be the result of cellular senescence similar to that thought to occur in aging skin. Dr. Benson reported that the results of several experiments conducted to test this hypothesis appear to indicate that in BPH the presence of senescent prostate cells correlates strongly with prostate volume but poorly with patient age. Much of the basic research in his department focuses on the driving forces behind BPH and prostate cancer. Among other findings, the department has discovered a protein, called Protocadherin-PC, a human-only gene product produced in great quantity when prostate cancer cells become resistant to therapy. Thanks to generous funding from the T.J. Martel Foundation, the urology department also is engaged in two alternative medicine studies involving GCP (a fermentation product of soy), which, in theory, may serve as a non-toxic therapeutic intervention for resistant and recurrent prostate cancer.

At the dean’s dinner on Jan. 17, interim dean Thomas Q. Morris’58 introduced the new dean, Dr. Gerald D. Fischbach. “This is Dean Fischbach’s first official event at P&S, and it is with the Alumni Association,” said Dr. Morris. “That bodes well for us all.”

“Forty-one years ago, almost to the day, I was put on the waiting list at P&S,” said Dr. Fischbach, a Cornell graduate. “You can’t imagine how thrilled I was to get a letter from Columbia University President Rupp telling me that I was finally accepted.” Dr. Fischbach left his former position as director of the National Institute of Neurological Disorders and Stroke at the NIH to take the reins at P&S. “I’d been in an academic community and loved it since the day I started college. Here at P&S, I feel like I’m coming home again.”

Excited about the promise of the next decade for revolutionary advances in medicine and biomedical science, he said Columbia would play a leading role and pledged to build and improve the physical plant to make it more conducive to the top-notch faculty. “We should dream about what this great school can do and then make it happen.”

Gerald Fischbach
MINORITY STUDENTS/ALUMNI DINNER

Greeting the 25 under-represented minority students in the first-year class and alumni, family, and friends at an annual dinner, senior associate dean Dr. Gerald E. Thomson said, “You are really joining an extended family.” Himself an honorary alumnus, he was referring to the P&S Alumni Association, which co-sponsored the event along with the Black and Latin Students Association. Lester W. Blair’74, chairman of the Alumni Association Committee on Minority Affairs, also extended a welcome on behalf of the membership, adding, “The Alumni Association is here for you.” Dr. Thomson introduced the evening’s guest speaker, Susanna Morales’86, assistant professor of medicine at Cornell and a former member of the P&S faculty, saluting her as “a vigorous and knowledgeable spokesperson for the health care needs of the Latino population.”

Dr. Morales began by fondly recalling the 16 years she spent at P&S as medical student, resident, and faculty member in the Department of Medicine. “You know you’re coming home again,” she joked, “when the security guard in the Black Building is an old friend and patient.” BALSOC, she said, was for her “a touchstone, a community, an extended family.” Reviewing instances of cultural hostility, blindness, and lack of sensitivity to minority patients she witnessed in the course of her training, Dr. Morales called for a training regimen of “patient-centered, culturally competent care.”

Referring to a seminal paper by Dr. Harold Freeman, professor of clinical surgery at P&S, documenting that the life expectancy of an African-American man in Harlem was lower than that of a man in Bangladesh, she insisted that “affirmative action is a crucial component of creating a more just, equitable, and effective health care system.” Minority doctors, she pointed out, “are more likely to provide care to the poor and to people of color” and to provide that care with understanding and dignity.

She concluded with heartening words for the attentive minority students in the audience, predicting that, along with the panic, sleep deprivation, and multiple life sacrifices they would experience, they would ultimately “grow in confidence, grow in competence, and become leaders in our profession.”
CLASS NEWS

By Marianne Wolff ’52

1939
Listed as one of the 50 most influential gastroenterology professionals of the 20th century (by a panel of distinguished professionals and leaders), Henry D. Janowitz, who headed the Division of Gastroenterology at Mount Sinai from 1958 to 1983, has been honored by having the division he founded named the Henry D. Janowitz Division of Gastroenterology.

1947
Louis Lasagna was elected to Johns Hopkins University’s Society of Scholars, which honors former Hopkins faculty members. . . . Jack Wilsey was one of the participants of the 50th anniversary reunion of the 1st MASH unit of the Korean War (see also 1948 and 1949).

Corrections

The account of alumni reunion celebrations in the Fall 2000 issue failed to mention the 40th reunion party of the Class of 1960 at the Columbia-Princeton Club.

Coverage in the Fall 2000 issue of the Rudin Scholars reception failed to mention that occupational therapy students were among the recipients.
1948

**Bruce Meyer** met with two other P&S graduates to celebrate the 50th anniversary of the 1st MASH unit of the Korean War (see also 1947 and 1949).

1949

Having retired as president of Memorial Sloan-Kettering, **Paul A. Marks** is now working full time in a laboratory there. . . . **William R. Scott** participated in the 50th anniversary reunion of the 1st MASH, the principal medical unit in the Korean War, which cared for more than 15,000 casualties between 1950 and 1951. The reunion was held in Jackson Hole, Wyo. Three of the nine attending the reunion were P&S graduates (see 1947 and 1948). The reunion was featured in a live report on "CNN Live" and "Headline News."

1951

Retired from medicine, **Larry Ross** has become an exhibiting member of the Boca Raton Museum Art Guild and has had three successful entries in juried art shows.

1955

The sixth Claire Lucille Pace Humanitarian Award winner for the year 2000 was **John N. Schullinger**, professor emeritus of clinical surgery at P&S, for his devoted service to pediatric surgery at Columbia-Presbyterian and around the world for orphans in China, children in Poland, and others.

1958

Upon retiring from the University of Texas Health Science Center at San Antonio, **Marvin Forland** was named professor emeritus of medicine. One of Marv's former patients initiated a distinguished chair in medical ethics bearing his name. In addition, an annual scholarship has been endowed in his honor by the UT Medical School Alumni Association.

1959

**Richard G. Druss** has published a book, “Listening to Patients,” and hopes it will be of interest to his classmates as well as other P&S alumni. . . . **Kenneth A. Forde**, the Ferrer Professor of Clinical Surgery at P&S, received the Manhattan Central Medical Society Lifetime Achievement Award at the society's annual Charles Brown Memorial Lecture. The award is presented to an outstanding physician in clinical medicine, education, and community leadership. . . . **Allan G. Rosenfield**, dean of the Joseph L. Mailman School of Public Health at Columbia, received the 2000 Martha May Eliot Award to honor his exceptional achievement in the field of maternal and child health. His contributions to the field were summarized in a letter in support of his selection: “He has made safe, effective family planning methods and services his life work and in so doing has helped to improve the health of both mothers and their better-spaced and thus healthier children.”

1960

**Frederic G. Hoppin Jr.** has retired as professor of medicine and physiology at Brown University. According to Fred, he is still “doing pretty much the same, just not getting paid for it.”

1961

**Peter A. Banks**, who is associated with Brigham and Women’s Hospital in Boston, received the Distinguished Educator Award for the year 2000 from the American Gastroenterological Association for his achievement as an outstanding educator over a lifelong career. . . . **Charles A. Brill** is clinical professor of pediatrics and neurology at Temple University Children's Medical Center in Philadelphia. . . . **Hugh Clark** was listed as one of the “Best Doctors” by Seattle Magazine in 1998 and again in 2000. At the end of the year 2000 he was recertified in geriatrics. . . . **Thomas Mack** is chief of epidemiology in the Department of Preventive Medicine at University of Southern California. His division has an annual research budget of $35 million. . . . The fifth edition of “Reichel's Care of the Elderly. Clinical Aspects of Aging” was published by Williams & Wilkins in 1999, with **William Reichel** serving as editor emeritus. Bill is clinical professor of family medicine at George-
town University and also holds an academic title at Brown University.

1962
The National Kidney Foundation of New York and New Jersey has honored Nicholas A. Romas with the John Kingsley Lattimer'38 Award for outstanding achievement in urology.

1965
K.J. Lee, associate clinical professor at Yale and chief of otolaryngology at the Hospital of St. Raphael, is president-elect of the American Academy of Otolaryngology-Head and Neck Surgery, a body with more than 11,000 members.

1966
Mayor of Friendship Heights, Md., and active on the village council for 25 years, Alfred Muller was roasted at a fund-raiser in May 2000. In December, he was featured in the New York Times as a proponent of a successful stringent smoking ban for Friendship Heights.

Maynard B. Wheeler served a term as president of the American Association for Pediatric Ophthalmology and Strabismus; he considers this the high point of his career.

1967
Following his retirement from emergency medicine in New London, Conn., William B. Andrews attended the “alternate route” to teacher certification at Connecticut College and is teaching mathematics at New London High School.

Walter E. Berger III served 25 years as chief of cardiology at Kaiser Hospital in Redwood City, Calif. Now retired (though he still works part time as a cardiologist at UCSF), he is studying for a master’s degree in conservational biology at Stanford University.

David C. Brewster is serving a term as president of the New England Society for Vascular Surgery. Richard Hurd Jr., a semi-retired orthopedist and hand surgeon, is a backpacker by avocation. Over the past 20 years he has covered all 2,152 miles of the Appalachian Trail, finishing at Mount Katahdin, Maine, in the summer of 1999.

David Peretz, assistant clinical professor of psychiatry at P&S, chairs the advisory board of the American Institute of Life-Threatening Illness and Loss. He has co-edited 15 books in the field of death, dying, and bereavement. David’s first novel, “The Mosel Legacy,” has been published by Disc-Us Books. His screenplay based on the novel has been optioned by a film producer.

1969
A benefit concert, “Artists for the Cure,” was held at Carnegie Hall in September 2000 in tribute to Anne Moore’s work with breast cancer patients at New York Weill Cornell Medical Center. More than $250,000 was raised and the concert was favorably
reviewed by the New York Times. . . . Anthony G. Santomauro is chief of ambulatory gynecological surgery and director of endoscopic surgery at Bridgeport Hospital in the Yale New Haven Health System. In 1999, he received the award from the Council on Resident Education in OB/GYN and in 2000 the American Professors of OB/GYN Award, both for excellence in resident education.

1971
James F. Evans used a sabbatical leave to complete a master's degree in public health from Johns Hopkins University. He was elected to Delta Omega, the honorary society for academic excellence and use of education to contribute to the public's health. . . . Francis Iacobellis has been named chairman of the dermatology section of the New York Academy of Medicine.

1972
Michael F. McGuire, associate clinical professor at UCLA and chief of plastic surgery at St. John’s Hospital in Santa Monica, is president of the California Society of Plastic Surgeons and chairman of the board of directors of the California Medical Review, a quality improvement organization that provides innovative health care assessment services, educational programs, and community outreach for the state’s Medicare beneficiaries. In addition, Mike is national secretary of the American Association for Accreditation of Ambulatory Surgery Facilities, membership chair of the American Society of Plastic and Reconstructive Surgeons, ethics chair of the American Society for Aesthetic Plastic Surgery, and a member of the American Cleft Palate Association. In 1996 he started the Foundation for Surgical Reconstruction, which raises funds to cover reconstructive surgery for patients who are uninsured or have been denied coverage by their insurance companies. One special focus of this group is reconstructive breast surgery for cancer patients. . . . Alan H. Seplowitz, associate clinical professor of medicine at P&S, is a practicing endocrinologist. In August 2000 he co-chaired a session on clinical outcomes of pancreas transplantation in Type 1 diabetes mellitus at the 18th International Congress of the Transplantation Society in Rome.

1975
Eric A. Rose, the Milstein Professor and Chairman of Surgery at P&S, has published “Second Opinion.” The book serves as a resource to patients for whom surgery has been recommended, giving the patient a variety of options and alternatives and enabling patients’ participation in their own health care decisions.

1976
Melvin P. Rosenwasser has been named the Robert E. Carroll Professor of Hand Surgery at P&S.

1978
Peter C. Albertson has been promoted to full professor (with tenure) in the Department of Urology at the University of Connecticut Health Center . . . The University of Florida Health Science Center named Andrew M. Kaunitz “Researcher of the Year.” Andy is professor of OB/GYN at the University of Florida. His department chairman said of him: “While maintaining a busy and growing clinical practice, [he] has achieved a level of research and scholarly productivity that I can only call spectacular.” In Kaunitz’s own words, “I am hopeful that our research activities in contraception, menopause, and sexual dysfunction will lead to a healthier and improved quality of life for women in the United States and worldwide.” . . . Now a full colonel in the U.S. Army, Jonathan Newmark is based in Maryland, working for the U.S. government to coordinate response to chemical warfare and terrorism. He also conducts research on neuroprotective substances. He is a composer, and his string trio won a prize at the Southeastern Composers Symposium competition. Jonathan was the only one of the six winning composers without a music degree. Three of the other winners are on university music faculties.

1979
Carl Camras, professor and vice chairman of ophthalmology at the University of Nebraska, has
The co-author of “Liver Biopsy Interpretation,” now in its sixth edition (the standard textbook for evaluating liver biopsy pathology) also happens to be an accomplished artist and composer. Jay Lefkowitch’76, professor of clinical pathology at P&S, showed his “Theater Paintings” at the National Arts Club from Dec. 4-15, 2000. The exhibit was his second there.

Friends from medicine and the theater world, including actress Rosemarie Harris, crowded the gallery at the Dec. 4 opening.

Dr. Lefkowitch’s artistic career is intimately linked to medicine. He began sketching theater performances in London in 1978 while on a fellowship in liver pathology at the Royal Free Hospital. The hospital provided him with ample pathological specimens and an opportunity for study, and the city’s West End stages inspired his pencil and brush. He established the theater-going ritual of pencil “probes” in the Playbill done in the dark, later to be elaborated and embellished in ink and gouache at the drawing board. In more than two decades of dramatic “doodling” he has crystallized the essence of Broadway, Off Broadway, Japanese Kabuki, and opera in hundreds of impressions, a generous selection of which graced the walls of the National Arts Club.

Dr. Lefkowitch, recipient of the Charles Bohmfalk Award for Distinguished Teaching in the Clinical Year, the Teacher of the Year Award, and the University’s Presidential Award for Outstanding Teaching, has given generously of his time as faculty adviser to the Bard Hall Players and has produced a number of benefit programs for that group, including a concert of his own musical compositions at the Miller Theater. A dedicated alumnus, he also garnered Columbia’s Alumni Federation 2000 Alumni Medal for Conspicuous Service.

So how does he find time to combine such diverse pursuits? “I just don’t sleep very much.”

Dr. Lefkowitch and actress Rosemary Harris at the opening of his art exhibit
received a Senior Scientific Investigator Award from Research to Prevent Blindness. Carl’s field of interest is glaucoma. . . . Marie Csete received a Ph.D. in molecular biology from Cal Tech in June 2000. She is associate professor of anesthesiology and assistant professor of cell and developmental biology at the University of Michigan.

1980
Warren Grundfest was named chairman of biomedical engineering at UCLA. He continues his “day job” as director of laser research and technology development at Cedars Sinai Hospital.

1982
Gail Skowron, associate professor at Boston University School of Medicine, is chief of the infectious diseases division at Roger Williams Medical Center in Providence, R.I. Her research in immune cell-mediated destruction of CD4 lymphocytes in HIV disease is funded by the NIH. . . . Richard P. Usatine received the 2000 Humanism in Medicine Award, given by the Association of American Medical Colleges, based on medical student nominations. The award recognizes his commitment to training humane physicians. He is assistant dean of student affairs and clinical educator in the Department of Family Medicine at UCLA.

1983
The Infectious Diseases Society of America gave its annual Squibb Award to Michael S. Donnenberg in recognition of outstanding achievement. Michael is professor of medicine and head of infectious diseases at the University of Maryland. His research is in the area of molecular pathology of pathogenic E. coli and is funded by the NIH. In 1989 he won the Maxwell Finland Award from the Massachusetts Infectious Diseases Society. Mike is also a member of the Emerging Infections Committee of the Infectious Diseases Society of America.

1984
Rachel Frydman Brem, associate professor of radiology at George Washington University in Washington, D.C., was appointed director of breast imaging.

1985
Jeffrey R. Avner is director of the pediatric emergency service at Montefiore Medical Center and professor of clinical pediatrics at Albert Einstein College of Medicine.

1990
Mary Bongiovì-Garcia, assistant clinical professor of psychiatry at P&S, is unit chief of the General Clinical Research Unit at New York State Psychiatric Institute, where she also serves as president of the medical staff.
As I watched the fireworks on Independence Day last year, I thought that it would have been more appropriate to celebrate eight days earlier, when the NIH and Celera Genomics jointly announced that they essentially completed the sequencing of the human genome. What in our common human history matched this, I thought as I read the New York Times? The printing press? The discovery of electricity? I was willing to take votes, but my children, my secretaries, and my patients regarded my enthusiastic announcement with reactions that varied from tolerant amusement to the patient acknowledgment that something, after all, may have actually happened that was really important—although they weren’t sure what.

This July 4th we have another chance to celebrate this momentous event, now that researchers have published their first interpretations of the human genome sequence. It gives us another opportunity to ponder the possibilities of what this might contribute to our development as a species. If we ever doubted the enormous competence of our own ability to unravel the mysteries of the physical world and to use the information to gain more control over how well—and for how long—we can live our lives, this should give us all heart. At the very least, the achievement should be publicized as a uniquely powerful testament to the superb caliber of American science—particularly as it is developed within what is certainly one of the major jewels in our country’s crown: the National Institutes of Health. It should be exploited too as a story of how the NIH and our other allied training programs for scientists breed entrepreneurial characters like J. Craig Venter, CEO of Celera, and Michael W. Hunkapiller of PE Biosystems, the company that designed the instrumentation essential to the rapid unraveling of the genome. These men and their collaborators took their expertise into the corporate world and persuaded the private sector to support a project of monumental scope and potential, using science born, developed, and supported in a major way by the U.S. taxpayer. What other government on Earth would permit such a departure from federally funded research centers and not claim the information as its own? What other economic system in the world would—or could—seize the opportunity and enable private groups to develop a triumph of this magnitude? That’s the real Fourth of July story.

How widely does the American public understand what has been achieved, how it happened, how long it took, and, most importantly, what it means for our common future? It’s important to acknowledge that the United States coordinated a multination effort to generate this information: Investigators from the United Kingdom, France, Germany, China, and Japan also contributed. As Francis Collins, director of the National Human Genome Research Institute, remarked: “...this is, after all, our shared inheritance and it’s nice that we’re working on it together around the world.”

We should generate some symbolic fireworks to imprint in history last year’s announcement and this year’s publication of the analyses. We should devote some time to creating a national awareness of what the culmination of a decade of work on decoding our own genetic blueprint—the unique information that makes us who we are—really means for humanity. And most of all, as the implications of what we have done unfold, I think we should work on some thoughtful answers about how we want to use this awesome power.

I wonder what Gutenberg thought as he saw the first copy of the Bible come off that press. Couldn’t have been more exciting than this.

Dr. Legato is professor of clinical medicine at P&S and founder and director of the Partnership for Women’s Health at Columbia.