



COLUMBIA UNIVERSITY

*College of Physicians
and Surgeons*

COLUMBIA UNIVERSITY | COLLEGE OF PHYSICIANS AND SURGEONS



P&S

ANNUAL REPORT 2007

Columbia University Medical Center



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FROM THE DEAN



Last year I wrote as the new dean, sharing with you my goals for the future of an institution I had only just begun to lead. I described an objective that was both lofty and achievable: building on an outstanding foundation to ensure that Columbia University College of Physicians & Surgeons would proudly occupy its rightful place as one of the top five medical schools in the world, if not arguably No. 1.

Since then, we have undertaken a number of efforts aimed at reaching that goal, and it is no exaggeration to say that the clinical care, educational programs, and research initiatives found at P&S are getting better with every passing day. This is no small feat. It may not be so difficult to bring about noticeable change and improvement in a routine environment, but to take a world-class institution like P&S to even greater heights requires truly great people combined with their extraordinary dedication and effort.

As you read this year's annual report, I hope you will be impressed and gratified by the array of major new initiatives that cut across all fields and disciplines. Some highlights are worth singling out for your attention:

- The Lieber Clinic, a first-of-its-kind comprehensive clinic for schizophrenia care located within Columbia's Lieber Center for Schizophrenia Research.
- A new Division of Geriatric Medicine, an urgent need in an aging society that at the same time is seeing a dearth of trained geriatricians — and fewer medical students choosing to pursue training opportunities in the field.
- A \$51 million grant as part of the National Institutes of Health's inaugural Clinical and Translational Science Awards. As one of the first schools to have CTSA centers, Columbia will be part of a national initiative to transform clinical and translational research.
- Discovery of a new gene, SORL1, that contributes to Alzheimer's disease through a previously unknown cellular pathway.
- Renovation of the Augustus C. Long Health Sciences Library, creating 30,000 square feet of classroom space, study spaces, and digital storage as part of a new education center.
- Development of a new electronic health record for Columbia's 1,200-member ColumbiaDoctors, the P&S faculty practice organization. The EHR will be used by physicians treating outpatients and will interface with the hospital's inpatient EHR.

These are only a few highlights from a year filled with such achievements, a year in which we are moving toward a new pinnacle of excellence for Columbia. It also has been a year in which we have made great progress toward one of my top priorities for this institution: attracting the best possible minds to our programs, including leading clinicians and researchers, as well as medical students and residents who represent the brightest possibilities the future of health care has to offer.

In less than two years, we have recruited such top talents as neurogeneticist Maria Karayiorgou, M.D., Ph.D., whose research in founder populations is helping to pave the way toward a better understanding of schizophrenia; Linda Fried, M.D., M.P.H., a renowned geriatrics specialist who has joined us as dean of the Mailman School of Public Health and whose joint appointment in P&S will strengthen partnerships between the two schools; and leading infectious diseases authority Lawrence R. Stanberry, M.D., Ph.D., who now chairs our Department of Pediatrics and was a lead member of the research team that produced the first scientific evidence that a vaccine could protect humans against genital herpes.

In medicine, we understand that we dedicate our work to a future we ourselves may not live to see: the future generations we educate, the painstaking research advances we glean in the laboratory, the changes in clinical care that will

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transform not just one person's life but countless lives. Some of these achievements may benefit us now, but many will reach fruition only later, when we as individuals are no longer around to take credit. It is a truly great institution that takes on the work needed every day, while all the time keeping an eye on that distant future, never seeing the latest achievement as a finish line, but rather just the next starting point.

I would like to thank everyone who helped to make this year one of those next starting points for great years and decades to come.



Lee Goldman, M.D.



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NEW HORIZONS FOR CLINICAL AND TRANSLATIONAL RESEARCH

In October 2006, Columbia became one of the first 12 academic health centers across the nation to receive a National Institutes of Health inaugural Clinical and Translational Science Award — an initiative aimed at transforming how clinical and translational research is conducted in the United States. CTSA centers will form a national consortium focused on innovation, streamlining, and expediting clinical research and the delivery of new treatments to patients. NIH director Elias Zerhouni, M.D., called the initiative “the first systematic change in our approach to clinical research in 50 years.”

Columbia will receive \$51 million from the initiative over five years. The funding has transformed the Irving Center for Clinical Research into the Irving Institute for Clinical and Translational Research with an ambitious aim: to re-engineer Columbia’s research enterprise into a multidisciplinary team model, using collaborative efforts to move basic science discoveries from the lab into groundbreaking treatments in the hospital room, clinic, or doctor’s office.

“We expect this investment to allow exponential growth in clinical research here at Columbia University Medical Center,” says Henry Ginsberg, M.D., principal investigator on the CTSA grant.

It will allow Columbia to expand its clinical and translational research space significantly, including a new center for community-based clinical and translational research, as well as an educational center where master’s and Ph.D. students can better interact and collaborate on research.

The TRANSFORM programs (**T**Raining **A**nd **N**urturing **S**cientists **F**OR **R**esearch that is **M**ulti-disciplinary) will provide training, support, and nurturing in a team-oriented environment to the next generation of clinical and translational researchers. Senior faculty will provide leadership and serve as mentors. The training and career development that comprise TRANSFORM will produce clinical and translational researchers well prepared to direct multi- and interdisciplinary research.

The CTSA will, for the first time, be able to provide support for clinical research ongoing in several of the intensive care units and emergency departments. The CTSA also will support the development of Irving Fellowship positions for junior faculty and a new Ph.D. program in clinical research. The Ph.D. program will be one of just a few programs in the country focused on clinical research.



“We expect this investment to allow exponential growth in clinical research here at Columbia University Medical Center.”

— Henry Ginsberg, M.D.

HENRY GINSBERG is the Irving Professor of Medicine and director of the Irving Institute for Clinical and Translational Research

Melissa Begg, Sc.D., and Henry Ginsberg, M.D., co-directors of the Irving Institute for Clinical and Translational Research

COME TOGETHER: PILOT RESEARCH PROJECTS

The four health sciences schools at Columbia — medical, nursing, dental, and public health — together are home to a unique breadth and depth of expertise in health care. A new four-school pilot project encourages investigators at each of these schools to collaborate across their respective fields and disciplines, working together to answer broad questions that cannot be addressed by one field alone. The interest in joining forces was so strong that 13 collaborations applied for the inaugural pilot project grant.

The winner: a four-school team that will study why Hispanics with peripheral vascular disease fare worse than whites. Led by K. Craig Kent, M.D., professor of surgery and chief of the division of vascular surgery, who initially discovered the disparity, the team will receive up to \$300,000 over two years thanks to the David A. Gardner New Initiatives Fund, created by CUMC Board of Visitors member Lynn Shostack in memory of her husband. “In research today, it is impossible for one person to have all the skills

and expertise necessary to fully investigate such a broad question," Dr. Kent says. "The most successful researchers are those who develop robust collaborations with a wide range of investigators who offer complementary perspectives and knowledge."

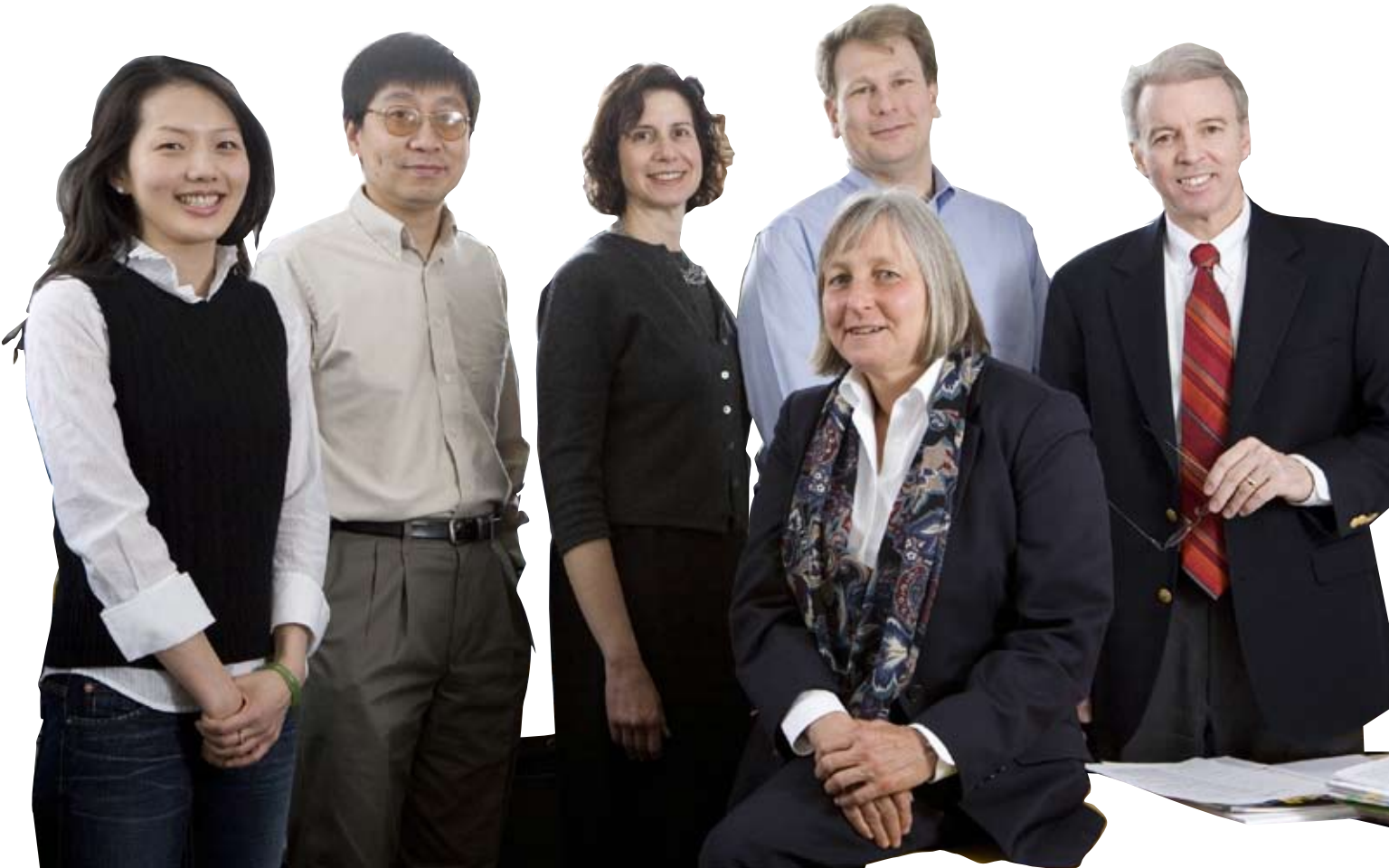
The Gardner Fund is also supporting the inaugural P&S Dean's Pilot Project Award for a group of researchers representing five disciplines. They will receive a \$150,000 grant over two years to

study neuraminidase inhibitors — compounds that may hold the key to preventing the most common types of bacterial pneumonia. The pilot project aims to encourage collaborative research that will result in a major, funded NIH project.

The principal investigator is Alice Prince, M.D. (pediatrics and pharmacology), and co-PIs represent pediatrics, microbiology, medicine, and biological sciences.

P&S PILOT AWARD WINNERS

From left: Stephanie Hsiao, Liang Tong, Lisa Saiman, Adam Ratner, Donald Landry, and Alice Prince (seated).



NEW GRANTS FUND NEXT-GENERATION AIDS EFFORTS

The incidence of HIV in some New York City populations is actually higher than it is in many nations in Africa, widely considered the epicenter of the HIV/AIDS pandemic. More than 100,000 New Yorkers are living with HIV, and the city has more AIDS cases than San Francisco, Los Angeles, Miami, and Washington, D.C., combined. Among young gay men of color in New York City and several other urban areas in the United States, the virus is spreading at a rate twice that in Uganda.

Two major new grants from the National Institutes of Health will help AIDS experts at Columbia work to change this situation. A \$20 million

seven-year grant from the NIH supports the Columbia Collaborative HIV/AIDS Clinical Trials Unit, led by Scott Hammer, M.D., the Harold C. Neu Professor of Infectious Diseases, in conducting clinical trials that provide New Yorkers with access to the latest drugs and vaccine candidates. "Clinical trials give patients access to new drugs and new strategies to make treatments more effective, more durable, and more tolerable," Dr. Hammer says. "The advances we've seen to date would not have been possible without a commitment on everyone's part to a strong clinical research effort."

HIV PREVENTION

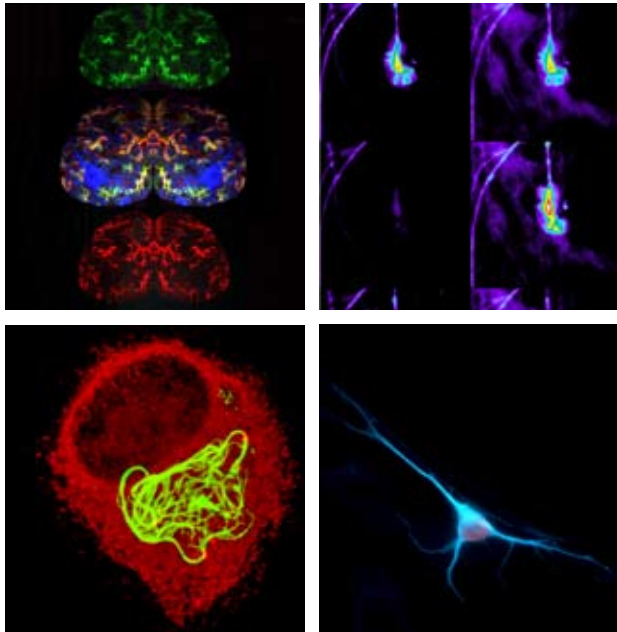
An additional \$3 million seven-year grant will help the Center for Innovative Research to Control AIDS, directed by Wafaa El-Sadr, M.D., M.P.H., professor of clinical medicine and epidemiology and chief of infectious diseases at Harlem Hospital, test ways other than vaccines to prevent HIV transmission. She is also director of the International Center for AIDS Care and Treatment Programs (ICAP) and director of the Center for Infectious Disease Epidemiologic Research (CIDER) at the Mailman School of Public Health.

WAFAA EL-SADR

ICAP supports the rapid expansion of HIV/AIDS prevention, care, and treatment programs in 14 countries in sub-Saharan Africa and Asia. For almost two decades, Wafaa El-Sadr has led the Division of Infectious Diseases at Harlem Hospital. She has been instrumental in the development of an internationally recognized comprehensive HIV/AIDS program specifically designed to meet the needs of patients from the Harlem community. Through her research, she has made substantial contributions to both the prevention and treatment of HIV/AIDS and tuberculosis.



NEW HEIGHTS IN RESEARCH PRODUCTIVITY



Medical center graduate education faculty in 14 P&S and public health disciplines are ranked in the top 10 nationwide for scholarly productivity, up from 10 last year.

Four P&S programs are rated No. 1 in the nation: biochemistry, nutrition, pharmacology, and physiology. This was the second year for the nationwide ranking of graduate programs for faculty research productivity. Other programs ranked in the top 10 are environmental health sciences (#2), pathology (#2), biostatistics (#4), cell biology (#4), microbiology (#4), genetics (#5), molecular biology (#5), neurobiology/neuroscience (#7), biophysics (#6), and public health (#10).

“Columbia provides a challenging and invigorating environment for research — challenging because one’s colleagues and trainees ask probing questions and have the highest standards and invigorating because the standards are very high and so much exciting science is going on around you.”

— Andrew R. Marks, M.D.

ANDREW R. MARKS joined P&S in 1997 as founding director of the Clyde and Helen Wu Center for Molecular Cardiology. He is now chair and professor of the Department of Physiology & Cellular Biophysics.



NEW FOCUS ON GERIATRICS

By 2030, one of every five Americans will be 65 years old or older. Despite their growing numbers, seniors find it increasingly difficult to get care from doctors who specialize in their unique needs. The number of geriatric specialists dropped from 8,800 to 7,100 over the past decade, with no end in sight: Roughly one-third of the available geriatric fellowships in the United States went unfilled in the 2005-2006 academic year.

A new Department of Medicine Division of Geriatric Medicine and Aging, located at the Allen Pavilion in upper Manhattan, will ensure that the aging citizens of northern Manhattan and the Bronx do not fall through this "care gap." It fo-

cuses on improving care for seniors well beyond the New York area by creating a nexus for clinical research in geriatric medicine.

"The new division will link experts from a wide spectrum of disciplines and turn the Allen Pavilion into a model of care for older adults across the country," says Dr. Evelyn Granieri, director of the division of geriatrics and associate professor of medicine. Clinical subspecialties such as cardiology, neurology, orthopedics, and urology have come together under one roof to serve the needs of the aging population, while at the same time seeking answers to key questions about geriatric health needs, such as new models of care focused on disease prevention.

LANDMARK TRIAL RESULTS CHANGE THE WAY WE THINK ABOUT PSYCHIATRIC MEDICATIONS

Second-generation antipsychotic drugs appear to offer little advantage over older drugs for people with schizophrenia who require a change in treatment, performing no better than placebos and often producing intolerable side effects, reported the groundbreaking Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) study, led by psychiatry chair Jeffery A. Lieberman, M.D. These findings, published in the *New England Journal of Medicine* in October 2006, challenge the common perception that second-generation antipsychotics are safer and more effective

compared with less expensive, older medications. "It's been shown that, all too often, new medications do not live up to their advance press when used in real-world practice," says Dr. Lieberman, noting that the CATIE results can help guide physicians in individualizing schizophrenia treatment.

With more than 1,400 participants at 57 sites around the country studied for 18 months, CATIE is the largest and longest study of schizophrenia and the effectiveness of antipsychotic treatments.

Treatments on the Cutting Edge: Patient Care

This was another year of remarkable milestones for clinical care at Columbia, made possible by the robust partnership between P&S and NewYork-Presbyterian Hospital.

Experiences by patients and their families described here are unique in their impact but paint a portrait of extraordinary care from Columbia's world-class team of medical experts.



SAVED FROM BRAIN DAMAGE BY AN UNDERUSED THERAPY

Stephan Mayer, M.D., who directs the neurological intensive care unit at the Neurological Institute, was the first physician to test Arctic Sun, the unique cooling system now available at Columbia. It uses pads wrapped closely around the patient's legs and torso and hooked up to a console that pumps cool water through them. This process cools the body from the normal 37 degrees Celsius to about 33 degrees — more quickly and effectively than ice packs or cooling blankets — before a patient is carefully re-warmed. Studies have shown that cooling cardiac arrest patients improves their chances of a good neurological outcome.

A patient who had a good outcome is Zeyad Barazanji, Ph.D. If he had not been rushed to Columbia for care when he suffered a cardiac arrest while on his gym's treadmill, he might be a very

different man today. His trainer at the gym used an automated external defibrillator to restore normal rhythm, saving his life. More than a year after his attack, Dr. Barazanji has been pronounced "neurologically normal" because he benefited from an innovative treatment called therapeutic hypothermia — cooling the brain. The technique dates back to the first part of the 20th century, but modern approaches are being pioneered at Columbia.

Dr. Mayer estimates that only 5 percent of hospitals in the country use the technique. He is now exploring expansion of the treatment to stroke patients. "This is a therapeutic grand slam," he says. "If this were a drug and it improved outcomes at this rate, everyone would be prescribing it, but in the United States, very few people are getting this treatment."

"This is a therapeutic grand slam. If this were a drug and it improved outcomes at

HIGHLIGHTS IN PATIENT CARE



The Morgan Stanley Children's Hospital, staffed by the Columbia Department of Pediatrics, is a pioneer in the development of Cool-Cap therapy for perinatal asphyxia and is one of only two centers in the city offering this treatment as a routine therapy.

This year, Columbia's principal affiliate, NewYork-Presbyterian Hospital, ranked

No. 6 among U.S. hospitals, and 160 members of the P&S faculty were listed in New York Magazine's Best Doctors 2007 issue. Both are good indicators of high-quality patient care.

A new genomics-based blood test, developed in part at Columbia, is replacing the invasive endomyocardial biopsy as the gold standard for detecting organ rejection after



this rate, everyone would be prescribing it.”

heart transplantation. Mario C. Deng, M.D., associate professor of medicine and director of cardiac transplantation research in the division of cardiology, was co-principal investigator of the study that established the AlloMap test’s superiority.

A multidisciplinary team of researchers has received a \$10.8 million, five-year grant from the National Institutes

of Health to investigate why people with type 2 diabetes are dangerously susceptible to heart disease, the leading cause of death for people suffering from diabetes. Ira Tabas, M.D., Ph.D., professor and vice chair of research in the Department of Medicine, Alan Tall, M.D., a professor of medicine in the Division of Molecular Medicine, and Domenico Accili, M.D., a professor of medicine and Co-

lumbia’s co-director of research at the Naomi Berrie Diabetes Center, will use the grant to expand on their previous work in macrophage death, linking it to atherosclerosis, as well as in the role of lipoproteins and insulin action on artery degeneration.

In a New York City first, Columbia interventional cardiologists implanted the new Watchman stroke-prevention

device in a patient with chronic atrial fibrillation, an irregular heartbeat associated with a six-fold increased risk of stroke. This procedure was part of a multicenter trial comparing the device to standard therapy with the blood thinner Coumadin.

SAVING THE SMALLEST



Jennifer, Richard, and Rick Loschiavo

Since opening in 2004, the Center for Prenatal Pediatrics has served close to 1,400 patients. Its faculty, led by medical director Lynn L. Simpson, M.D., and Mary D'Alton, M.D., the Willard C. Rappleye Professor of Obstetrics and Gynecology and department chair, offer a full range of prenatal diagnostic testing, specialist consultations, genetic counseling, and pregnancy management with planning for future pediatric care. With one of the largest and most experienced prenatal pediatric teams in the country and a designation from the state of New York as a Regional Perinatal Center, Columbia cares for the most difficult and highest-risk cases. In a report released by the New York State Department of Health, the program ranked as a statewide leader for best outcomes for surgeries performed on children with congenital heart defects.

One family that has benefited is the Loschiavo family. A prenatal ultrasound at 22 weeks of gestation revealed their son's diaphragmatic hernia, with parts of the small intestine invading the chest cavity and leading to pulmonary hypoplasia. The family's doctor suggested terminating the pregnancy. Instead, Jennifer and Rick Loschiavo contacted Columbia's Center for Prenatal Pediatrics, an internationally renowned specialty program in which an interdisciplinary team of maternal-fetal medicine specialists, neonatologists, social workers, and other experts provide coordinated care, with access to a nationally recognized neonatal intensive care unit. After hernia repair surgery at just 4 days of age, Richard Loschiavo today is a healthy, thriving toddler.

HIGHLIGHTS IN PATIENT CARE

In July 2007, 8-month-old Elijah Moulton received a transplant of five intestinal organs (liver, small bowel, pancreas, colon, and stomach) to treat a malformation of the gastrointestinal tract called total intestinal atresia, the second case seen in the United States. The transplant involved a seven-hour operation at Morgan Stanley Children's Hospital, performed by P&S professor of clinical surgery Dominique

Jan, M.D. Dr. Jan performed the world's first successful intestinal transplant in 1991, involving two organs. As many as seven organs can safely be transplanted at the same time, he says. Without the surgery Elijah would have died due to malnourishment and infections. "Everything was abnormal," Dr. Jan says. Not long after the transplant, the child was taking food by mouth for the first time in his life.

Columbia's 1,200-member faculty practice organization, ColumbiaDoctors, has signed an agreement with AllScripts to develop a comprehensive outpatient electronic health record system. The record will be designed to integrate with the hospital's inpatient electronic health record and is expected to improve productivity and continuity of care.

Columbia is one of only a few select centers in the country, and the first in New



Ketan Badani, M.D.

THE BIGGEST WINNER



Columbia's Center for Obesity Surgery helps patients regain their lives by losing significant amounts of weight, either through gastric bypass surgery or innovative alternative procedures its surgical director, Marc Bessler, M.D., has helped to pioneer.

The average gastric bypass patient at the center loses 70 percent of his or her excess weight, and more than 95 percent of patients lose at least half of their excess body weight. Lap-Band patients lose about 50 percent of their excess weight on average and sometimes as much as 70 percent. The center is one of only three in the United States approved to offer weight loss surgery for teens ages 14-18, as part of a tightly regulated FDA study evaluating the benefits of Lap-Band

surgery in this age group. In 2006, it was one of only seven centers nationwide to be ranked a 1A bariatric surgery center, the highest possible accreditation from the American College of Surgeons. The top-level designation is a first in New York state. It also received a top ranking from the health care ratings organization HealthGrades.

One patient, Cindy H., weighed 278 pounds and could barely make it up the second flight of stairs to her fifth-floor apartment before getting winded. Feeling depressed and isolated, she sought Lap-Band surgery at the center. Nearly five years later Cindy weighs 140 pounds, walks six miles a day, and no longer needs medication to manage weight-related health problems.

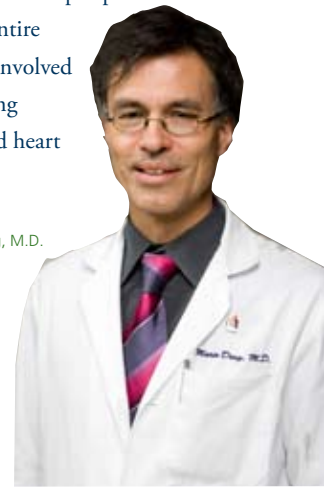
York City, to offer state-of-the-art robotic urologic surgery using the High Definition daVinci-S surgical system. The internationally recognized program is led by Ketan Badani, M.D., a world leader in robotic surgery who has worked extensively to develop new nerve-sparing techniques to preserve sexual function after robotic prostatectomy — without compromising cancer control.

Accelerated partial breast irradiation, now being studied at Columbia, may offer women a less arduous, shorter course of radiation treatment for breast cancer. APBI is delivered directly to the cavity from which the breast cancer was removed rather than to the entire breast, and at a much higher daily dose compared with standard whole breast radiation therapy.

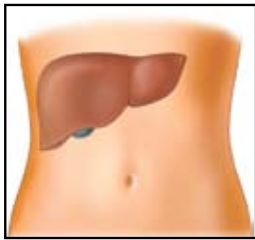
Mario C. Deng, M.D., director of cardiac transplant research, and Yoshifumi Naka, M.D., Ph.D., director of the cardiac transplantation program, published "Mechanical Circulatory Support Therapy in Advanced Heart Failure," a state-of-the-art overview of mechanical circulatory support devices and their role in the care of patients with advanced heart failure. The book features side-by-side perspectives from

professional care teams and their patients, providing a comprehensive perspective on the entire process involved in treating advanced heart failure.

Mario Deng, M.D.



A GIFT OF LIFE



Since 1998, hundreds of adults and children have found a new life at Columbia's Center for Liver Disease and Transplantation, led by Jean C. Emond, M.D., and Robert S. Brown Jr., M.D., M.P.H. The center, one of the first liver programs built from the inception as a multidisciplinary unit, has cared for thousands of patients with liver disease and liver cancer, and its surgeons have performed nearly 1,000 liver transplants with survival rates that consistently outrank other hospitals nationwide. Its innovative research programs allow patients to receive novel treatments that are available through only a few programs in the nation.

One of those patients is Alyssa Palazzo-Barrezueta, who was just 3 when she received a liver transplant at Columbia. Seemingly healthy at birth, Alyssa became ill at just 2 months of age. Today, she is a happy, healthy 8-year-old.

Integrating medical, diagnostic, and radiologic expertise, the center brings together a team of hepatologists, gastroenterologists, hepatobiliary surgeons, diagnostic radiologists and pathologists, advanced-care nurses, social workers, and patient support staff to provide seamless, interdisciplinary care.

The center also forms a key component of a major joint Transplantation Initiative between Columbia University Medical Center and New York-Presbyterian, launched in 2007. The new Transplantation Initiative aims to develop a full-spectrum, leading-edge transplantation center of excellence for translational research and medical and surgical care. The initiative, involving heart, lung, kidney, and liver transplantation, is led by internationally renowned liver transplant specialist Dr. Emond, the Thomas S. Zimmer Professor of Surgery.

HIGHLIGHTS IN PATIENT CARE

Columbia's pathology program offers a nationally renowned diagnostic testing and consultation service, with subspecialty expertise in all areas of anatomic and clinical pathology. Its more than 50 attending physicians and doctoral level scientists complete more than 4 million procedures per year.

Scott Hammer, M.D., the Harold C. Neu Professor and chief of infectious diseases, has authored two new guidelines for HIV treatment. He is lead author and chair of the panel of the International AIDS Society-USA recommendations for treatment of the disease in developed nations, published in the *Journal of the American Medical Association*. He also chaired the writing committee for new guidelines published by

the World Health Organization for public health responses to the disease in developing nations.

A new "sedation-free" transnasal esophagoscopy or TNE, has replaced traditional biopsy procedures for many Columbia patients at risk for esophageal cancer. Offered by the Department of Otolaryngology/Head & Neck Surgery, the TNE procedure bypasses

the gag reflex entirely, allowing the patient to be sitting up and fully awake for the five-minute biopsy.

Columbia's Voice and Swallowing Center uses non-surgical methods to help patients change their voices through modifying muscle behavior, helping, for example, men with high-pitched voices sound less like teenage girls. Clinical director Thomas



Murry, M.D., has worked with singers, actors, and teachers, among others, to retrain their vocal cords. “Changing the voice is just like changing a golf swing: You simply need to learn how to change the physical pattern,” he says.

A National Heart, Lung, and Blood Institute working group chaired by Karina Davidson, Ph.D., co-director of Columbia’s Behavioral Cardio-

vascular Health and Hypertension Center, calls for more research on the link between depression and cardiovascular problems and guidelines for diagnosing and treating depression in heart patients.



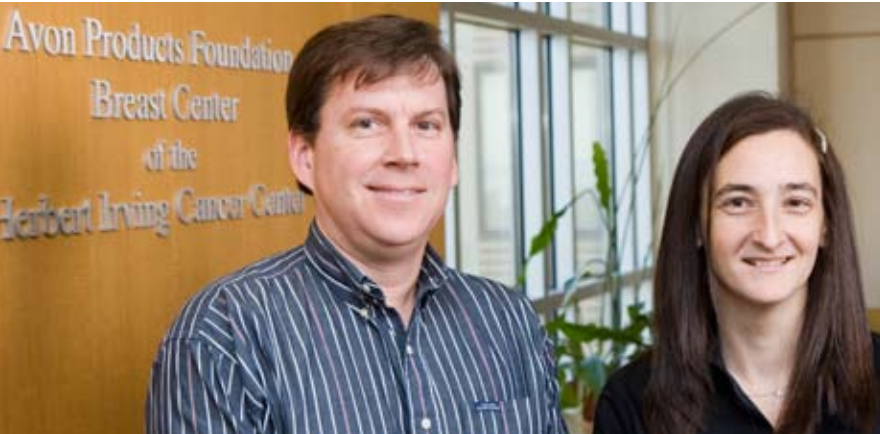
Columbia’s HIV Center for Clinical and Behavioral Studies celebrated its 20th an-

niversary. Founded in 1987, the center investigates the behavioral causes and consequences of HIV/AIDS.

David J. Rothman, Ph.D., professor of social medicine, is associate director of the Prescription Project, a new campaign championing change in medical prescribing to end conflicts of interest. Funded by a \$6 million grant from the Pew Charitable Trusts, the project is

working with medical and consumer stakeholders, policymakers, and both public and private payers to promote best practices in prescribing, increase the use of evidence-based systems, and reduce conflicts of interest.

THE LATEST IMAGING TOOLS



Leader and co-leader of the Breast Cancer Program in the Herbert Irving Comprehensive Cancer Center: Ramon Parsons, M.D., Ph.D., and Dawn Hershman, M.D.

BREAST CANCER

Underserved women in New York now have access to the latest diagnostic imaging and screening tools for breast cancer with the opening of the Avon Foundation Breast Imaging Center and Research Lab at Columbia. The Imaging Center offers patients state-of-the-art screening and diagnostic technology, including digital mammography, ultrasound-guided core biopsy, stereotactic-core needle biopsy, and a mammography reporting system to track patient history and promote timely follow-up.

The center also features bilingual staffing, a full-time nurse “patient navigator” to help guide patients through the health care system, and an onsite resource center that offers written, video, and electronic information in English and Spanish about breast cancer and other women’s health issues.

Opened on the same day, the Avon Foundation Breast Cancer Research Laboratory at Columbia University is a state-of-the-art facility that aims to better understand genetic pathways involved in breast cancer and how to control these to prevent or stop the progression of cancer. Its

research is led by Ramon Parsons, M.D., Ph.D., the Avon Foundation Professor of Medicine and Pathology and the discoverer of the important tumor-suppressor gene PTEN, which when altered plays a key role in breast cancer.

BONE DISEASE

Columbia is now one of only four centers in the United States to offer an Xtreme CT Scanner, which visualizes the internal structure of bones and can assess not only how much bone is present but also the quality of that bone. Housed within the Toni Stabile Osteoporosis Center, the scanner is a powerful tool for diagnosing bone disease. It combines high-resolution X-ray examination with computer programming to reconstruct a three-dimensional picture of bones. The scanner still awaits U.S. Food and Drug Administration approval for clinical use but is being used in six major Columbia studies.

“In the future, this scanner will be used as a predictor of who will fracture and could be used to evaluate bone quality and strength in many more people than a bone biopsy could,” says Elizabeth Shane, M.D., professor of clinical medicine in the endocrinology division and president of the American Society of Bone and Mineral Research. “It gives us a great deal more information than a routine bone density scan because it provides us with a three-dimensional picture of the internal structure (microarchitecture) of the bones of the forearm and the lower leg. It allows us to see that different bones have different structures, to measure the strength of that bone, to understand why some bones of some people are stronger than others and how various treatments affect the bone.”

SURGICAL INNOVATION

WHIPPLE PROCEDURE

Patients with a rare pancreatic tumor called an insulinoma, noncancerous but dangerous in other ways if not removed, often require a Whipple operation, a procedure developed at Columbia by P&S graduate and surgeon Allen Oldfather Whipple.

This year, William B. Inabnet, M.D., chief of endocrine surgery, devised a totally novel alternative to the Whipple for these cases, leading to ideal results for a patient with insulinoma. In the first surgery to use the approach, interventional gastroenterologist Peter Stevens, M.D., placed a temporary stent into the pancreatic duct before surgery to protect it, allowing Dr. Inabnet to enucleate the insulinoma with minimally invasive laparoscopic surgery. The patient went home just two days after surgery, with no complications.



Allen Oldfather Whipple

SHORT BOWEL SYNDROME

Another complex surgical challenge is short bowel syndrome, a condition that mainly affects infants and young children, leaving them unable to digest food properly. This year, Columbia surgeons tested a new surgical technique to correct this problem, Serial Transverse Enteroplasty — STEP — first described just three years ago. Surgeons make multiple incisions into a short, dilated segment to create a longer, thinner segment of intestine. Although the new segment is initially zigzag in shape, it becomes straight as it heals. Columbia surgeons are now tracking outcomes and working to establish clear guidelines about which patients are the best candidates for this novel procedure. They performed what is thought to be the first STEP procedure in a child with short bowel syndrome who had already received a liver transplant.

NOTES

In a unique operation that made headlines around the United States, Columbia specialists performed an experimental surgical procedure to remove a woman's gallbladder with flexible instruments passed through her vagina. This minimally invasive procedure, called NOTES — Natural Orifice Translumenal Endoscopic Surgery — still requires a small incision in the vaginal wall to access the organ but is less painful and allows for faster recovery time than traditional laparoscopic surgery.

NEW CLINICAL SERVICES

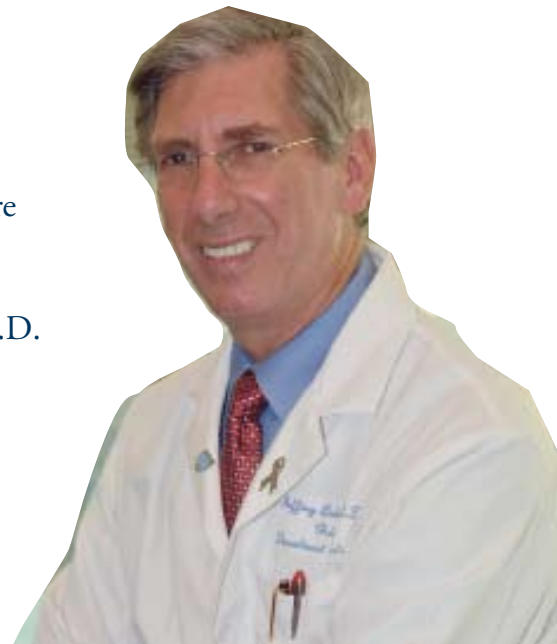
A first-of-its-kind **comprehensive clinic for schizophrenia care** was established this year within Columbia's Lieber Center for Schizophrenia Research as part of a major expansion funded by a \$9.2 million gift from the center's original benefactors, Stephen and Connie Lieber. The new treatment center, a bench-to-bedside facility, sets a new standard of care for people with schizophrenia, which affects 2.4 million people in the United States alone and is the fourth leading cause of disability in the developed world. The center offers the latest diagnostic and therapeutic tools, as well as access to the leading-edge experimental advances of the larger Lieber Center. "The comprehensive clinic for schizophrenia care will enable groundbreaking research to be translated swiftly into clinical care for patients with mental illness," says Jeffrey A. Lieberman, M.D., chair of psychiatry and director of the Lieber Center.

The body's adrenal glands may be small, but they produce hormones that are essential to the normal function of the entire body. **Managing adrenal disorders** is a challenge that requires a multidisciplinary team — like that found at Columbia. Here, endocrine specialists, nuclear medicine experts, radiologists, vascular surgeons, cardiologists, and genetic counselors work together to meet the highly specific testing and treatment needs of patients with unusual disorders such as Cushing's syndrome, pheochromocytomas, and aldosteronomas (which cause up to 10 percent of all cases of high blood pressure). The faculty focuses on adrenal disorders in one of the few specialty programs in the United States. More than 95 percent of the center's surgeries are performed using minimally invasive techniques designed to speed and ease recovery. Dr. James Lee serves as the director of the Columbia University Adrenal Center.

"The comprehensive clinic for schizophrenia care will enable groundbreaking research to be translated swiftly into clinical care for patients with mental illness."

— Jeffrey A. Lieberman, M.D.

JEFFREY A. LIEBERMAN is the Lawrence E. Kolb Chairman of Psychiatry and director of the New York State Psychiatric Institute. He also holds the Lieber Chair and directs the Lieber Center for Schizophrenia Research.



Columbia brought its world-class **fertility program** to women in **Westchester County** this year with the opening of a new White Plains campus of the renowned Center for Women's Reproductive Care, led by medical director Melvin Thornton, M.D. Undergoing fertility treatments often requires a significant time commitment from patients. Most patients undergoing IVF spend 7 to 10 days each month traveling to and from the fertility center, so travel for treatment appointments is one of the primary barriers to accessing care. The new Westchester center offers the same high-quality care as that found on the Manhattan campus, including embryo and oocyte cryopreservation, frozen embryo transfer, pre-implantation genetic diagnosis, and egg donation as well as traditional intrauterine insemination and in vitro fertilization.

Faculty from Columbia's top-ranked obstetrics and gynecology department have teamed with Revolution Health Group to launch a premier new **Internet destination for pregnancy and maternal health**. The site will feature Columbia specialists as consumer health experts, participating in weekly blogs and offering timely original articles. "Evolving technology and advances in care are providing women with an ever-increasing array of options in pregnancy care," says Mary D'Alton, M.D., chair and Willard C. Rappleye Professor of Obstetrics and Gynecology. "Expanded options require more decision-making, and we take seriously our role in helping women navigate the issues and make better, more informed choices."

REVOLUTION HEALTH DOCTORS AT P&S

From left: Rini Banjeree Ratan, Laurie Zephyrin, Mary D'Alton, Karin Fuchs, and Clarissa Bonanno



Dramatic Discoveries: Research

Columbia has long been a national powerhouse in basic, clinical, and translational research, counting two Nobel Prize winners among its current faculty and serving as the hothouse for countless major scientific discoveries, from “Chargaff’s Rules” that provided the last key stepping stone to the elucidation of the structure of DNA to the development of cardiac catheterization.

The past year marked many more milestones in research at Columbia, which ranked first in the New York area in funding from the National Institutes of Health and was 13th nationwide, up from the previous year.



A NEW ALZHEIMER'S GENE

A Columbia-led international consortium of researchers has identified the first gene linked to Alzheimer's disease since apoE was tied to disease risk in 1993. The gene, named SORL1, is involved in a previously unknown cellular pathway, through which the toxic amyloid beta peptides that cause the disease can build up in the brain.

In the study, which involved more than 6,000 participants, certain patterns of mutations in the SORL1 gene were found to be more prevalent in people with Alzheimer's disease. The findings held true for two groups of white Americans, one group of African Americans, and one group of Israeli Arabs. "Hundreds of genes have been linked to Alzheimer's in the past 15 years, but those findings have not been replicated," says study leader Richard Mayeux, M.D., the Gertrude H. Sergievsky Professor of Neurology, Psychiatry, and Epidemiology, director of the Gertrude H. Sergievsky Center, and co-director of the Taub Institute for Research on Alzheimer's Disease and the Aging Brain. "We think SORL1 is different because we built several replicates into the study, and those replicates include different ethnic groups. The job now is to find compounds that increase SORL1 expression and reduce amyloid beta production."

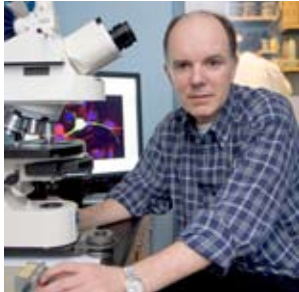
ALZHEIMER'S RESEARCHERS

P&S researchers involved in the discovery of a new Alzheimer's gene gather around sheets showing genetic histories of Alzheimer's patients from the Dominican Republic. From left: Scott Small, Joseph Lee, Rafael Lantigua, Vincent Santana, and Richard Mayeux.

That job will be made easier thanks to a new \$3 million grant from the Merrill Lynch Foundation, which focuses on identifying the genetic roots of Alzheimer's disease and understanding how these genes function. The grant will support Columbia's family studies to identify genetic variants that explain the complex inheritance of Alzheimer's disease, as well as functional genomic studies to investigate how alterations in the amyloid and tau proteins result in the destruction Alzheimer's disease inflicts on the brain.



RESEARCH HIGHLIGHTS



Serge Przedborski, M.D., Ph.D.

Toxins released from astrocytes, the cells that usually nourish motor neurons, can actually kill the neurons in some cases of amyotrophic lateral sclerosis, according to a new study led by Serge Przedborski, M.D., Ph.D., co-director of Columbia's Center for Motor Neuron Biology and Disease.

Scientists at Columbia have identified a key molecular process that could lead to the rupture of arterial plaques. Published in the Proceedings of the National Academy of Science, the research, led by Ira Tabas, M.D., Ph.D., the Richard J. Stock Professor of Medicine, explains what causes the death of macrophages, white blood cells that accumulate in the arterial plaques of patients with arteriosclerosis. These findings could result in therapies to prevent plaque rupture, which can lead to heart attacks and strokes.

New York state and its neighbors — New Jersey, Connecticut, and Pennsylvania — accounted for 64 percent of all cases of Lyme disease reported to the Centers for Disease Control and Prevention last year. That startling statistic demonstrates why this year's launch of the Lyme and Tick-borne Diseases Research Center at Columbia is so important. Lyme is the fastest-growing, vector-borne disease in the United States, yet early diagnosis is often missed, and treatment for the disease, when it is



Brian Fallon, M.D.

not caught early, remains mired in controversy. Deciphering the puzzle of Lyme is the mission of the new center, led by Brian Fallon, M.D., who completed a PET imaging study of chronic Lyme disease showing that functional brain imaging may be used to identify biomarkers with potentially valuable diagnostic and treatment implications for patients with chronic Lyme disease. Research by the center's multidisciplinary

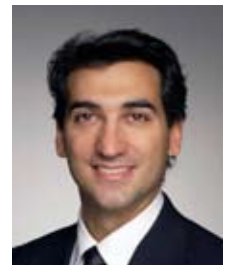
team focuses on the elucidation of the mechanisms underlying the disease, the development of novel therapies, and education of medical students and physicians to better understand, diagnose, and treat this complex disease.

Scientists at Columbia's Taub Institute for Research on Alzheimer's Disease and the Aging Brain have successfully restored normal memory and synaptic function in mice with Alzheimer's disease. By boosting levels of a newly discovered enzyme known as ubiquitin C-terminal hydrolase L1 (Uch-L1), investigators Ottavio Arancio, M.D., Ph.D., assistant professor of pathology, and Michael Shelanski, M.D., Ph.D., chair of pathology, were able to improve the animals' ability to create new memories.

Columbia researchers have identified a protein in nerve cells that acts as an "on-off switch" for chronic pain, a condition that affects 48 million people in the United States and has few treatment options. Richard Ambron, Ph.D., professor of anatomy and cell biology, and Ying-Ju Sung, Ph.D., assistant professor of clinical pathology, in collaboration with Donald Landry, M.D., Ph.D., profes-

sor of medicine, and associate research scientists Shi-Xian Deng and Yuli Xie, have applied for a patent to develop a new class of drugs that will block chronic pain by turning off this "switch," an enzyme called protein kinase G.

Adolescent girls are eight times more likely to injure their knees than boys are, according to a study led by Columbia assistant professor of surgery Christopher Ahmad, M.D. The study suggests that the imbalance between a girl's strong quadriceps and weaker hamstring muscles, as well as earlier skeletal maturity — which leads to playing sports in a more upright position — may be key factors in higher injury rates.



Christopher Ahmad, M.D.

BONES OFFER CLUES TO TYPE 2 DIABETES

In 2007, Columbia scientists announced an exciting new discovery that may point to new treatment possibilities for people with type 2 diabetes — found in our own bones.

The researchers, led by Gerard Karsenty, chair of genetics & development, found that bone cells generate a hormone called osteocalcin, which they found regulates sugar metabolism. In addition to increasing the amount of insulin and reducing fat stores, osteocalcin increases both the secretion of and *sensitivity* to insulin — the primary problem in people with type 2 diabetes.

Scientists have known of the existence of osteocalcin for years, but its exact function has

remained unclear. In mouse-model studies, the scientists were able to prevent the development of type 2 diabetes and obesity by increasing the activity of osteocalcin, even when the mice ate a high-fat diet. People with type 2 diabetes have low osteocalcin levels.

The study is the first to show that our bones are not just the hangers for our bodies; they are an active, functioning organ that is part of the endocrine system. “The discovery that our bones are responsible for regulating blood sugar in ways that were not known before completely changes our understanding of the function of the skeleton and uncovers a crucial aspect of energy metabolism,” says Dr. Karsenty.

RESEARCH HIGHLIGHTS

Urban teen girls who have been physically abused by a boyfriend and teen boys with a history of sexual abuse appear more likely to attempt suicide, according to Elyse Olshen Kharbanda, M.D., assistant professor of clinical pediatrics, and her research team, who anonymously surveyed more than 8,000 New York City public school students in 2005. Suicide is the third leading cause of death in adolescents.

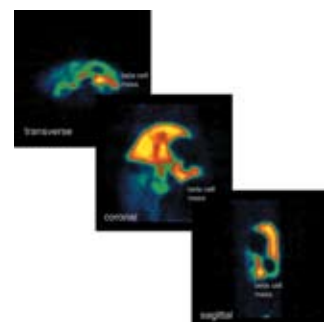
A Mediterranean diet focused on fruits, vegetables, and

olive oil with little red meat and dairy products may lower the risk for Alzheimer’s disease, reports a team led by assistant professor of clinical neurology Nikolaos Scarmeas, M.D. In a 2,000-person study, each level of adherence to the Mediterranean diet (on a nine-point scale) was associated with a 9 percent to 10 percent decreased risk for Alzheimer’s. The study appeared in the *Archives of Neurology*.

The Columbia Center for Homelessness Preven-

tion launched a pilot studies program, which will fund four to six pilot studies each year. Awards will go to innovative approaches aimed at preventing chronic homelessness among people with mental illness and to population-level interventions to prevent homelessness among vulnerable populations that may not be reached by high-risk approaches.

The first pictures of insulin-producing “beta” cells inside a live animal have been captured by Columbia



scientists using a PET imaging technique that measures total beta cell mass. The technique has commonly been used to study the brain. Paul Harris, Ph.D., Antonella Maffei, Ph.D., and other researchers in the Department of Medicine



“The discovery that our bones are responsible for regulating blood sugar in ways that were not known before completely changes our understanding of the function of the skeleton and uncovers a crucial aspect of energy metabolism.”

— Gerard Karsenty, M.D., Ph.D.

GERARD KARSENTY is the Paul A. Marks Professor and chair of genetics & development and professor of medicine.

and the Naomi Berrie Diabetes Center will soon test the technique in human trials. If it works, it could help answer a long-troubling question: What happens to the number of beta cells as diabetes progresses?

Teenagers who watch three or more hours of television per day may have a higher rate of attention and learning difficulties into their adult years, according to Jeffrey G. Johnson, Ph.D., associate professor of clinical psychology. The study, published in the Archives of

Pediatric and Adolescent Medicine, followed 678 upstate New York families over the course of two decades. The 33.2 percent of participants who watched more than three hours of TV at age 14 were more likely to have attention difficulties, poor grades, and overall academic failure in secondary school and difficulty obtaining postsecondary education.

Afrian-American women experience the longest delays in diagnosis and treatment of breast cancer, helping

to explain the disproportionate death rates from the disease in this group of women. Diagnosis is delayed for these women by an average of 20 days and treatment by an average of 29 days, report Suzanne Smith, M.D., associate professor of clinical radiology, and colleagues.

Having diabetes should not automatically disqualify patients from the transplant waiting list, according to a study led by a large team of Columbia scientists, including senior author Yoshifumi

Naka, M.D., the Herbert Irving Professor of Surgery. Instead, the degree of damage should be assessed. Transplant recipients with uncomplicated diabetes had median survival rates not significantly different from patients without diabetes in the study, published in the journal *Circulation*.

COLUMBIA RESEARCH LEADS TO NEW PREGNANCY SCREENING RECOMMENDATIONS

New recommendations from the American College of Obstetricians and Gynecologists advise that all pregnant women, regardless of age, should be offered screening for Down syndrome before the 20th week of pregnancy. This recommendation is based on the results of the landmark FASTER (First and Second Trimester Evaluation of Risk) trial, a 38,000-patient study led by Mary D'Alton, M.D., chair of obstetrics and gynecology at P&S.

The study demonstrated the accuracy of first-trimester screening using the combined results of measurement of the nuchal translucency (thickness of the skin on the back of the baby's neck), along with two blood markers (free or total β -hCG and pregnancy-associated plasma protein A, or PAPP-A). This test, known popularly as the Ultrascreen, was found to be more accurate than the second trimester "triple screen" test and at least as accurate as the "quad screen" test, while having the advantage of offering results much earlier in pregnancy.



RESEARCH HIGHLIGHTS

Antidepressant medications could increase the risk of suicide in children, according to a large study led by Mark Olfson, M.D., professor of psychiatry. The study, which involved nearly 5,500 adults and children, found that children ages 6 to 18 who were treated with antidepressants were 1.5 times more likely to attempt suicide and 15 times more likely to die of the attempt than those not treated with an antidepressant. No such trend was seen among adults who used the drugs.

Researchers at Columbia have developed a model to help predict the risk of spontaneous hemorrhage in patients with arteriovenous malformations (AVMs), masses of abnormal blood vessels that grow in the brain. According to Christian Stapf, M.D., adjunct assistant professor of neurology, the model shows that patients without specific risk factors (such as unruptured AVMs at the surface of the brain and superficial veins) had a very low bleeding risk, and those with AVMs deep in the brain

and with deep venous drainage showed an increased risk of hemorrhage.

Drug-eluting stents have the same rate of death or heart attacks as bare metal stents, reports a meta-analysis of several multicenter trials involving more than 5,000 patients. Gregg W. Stone, M.D., the director of research and education for the Center for Interventional Vascular Therapies, led the study, which was published in the *New England Journal of Medicine* and contradicts previous research

that found that overall rates of heart attack and death are higher with drug-eluting stents due to thrombosis.

Columbia has developed an exclusive licensing agreement for a next-generation DNA sequencing technology, developed by professor of chemical engineering Jingyue Ju, Ph.D., to Intelligent Bio-Systems. Columbia, in collaboration with IBS, is one of only two recipients of a Near-Term Technology Development for Genome Sequencing grant.

NEW NIH FUNDING TO ACCELERATE DNA SEQUENCING



A team of genetics researchers at Columbia has received \$2.8 million in funding from the National Human Genome Research Institute. The goal: to develop novel molecular engineering approaches to decipher the genome on a chip. Jingyue Ju, Ph.D., professor of chemical engineering and head of DNA sequencing and chemical biology at the Judith P. Sulzberger M.D. Columbia Genome Center, leads the project, which focuses on using a fluorescence imaging chip system for massive parallel DNA sequencing.

The grant is part of a larger series of grants focused on dramatically reducing the cost of DNA sequencing so that an individual's genome can be sequenced as a routine part of medical research and health care. It currently costs around \$10 million to sequence three billion base pairs, the amount of DNA found in the human genome. If that cost could be cut to \$100,000, it would become feasible to sequence the genomes of hundreds, even thousands, of people for disease studies. Ultimately, the Genome Research Institute aims to cut the cost of whole genome sequencing to just \$1,000, which could integrate the process into routine medical care.

The \$425,000 grant is for the development of a high-throughput DNA sequencing synthesis platform.

People who have suffered a first ischemic stroke often have elevated levels of inflammatory biomarkers in their blood that predict an increased risk of another stroke, according to a study published by Mitchell Elkind, M.D., associate

professor of neurology. These biomarkers, including lipoprotein-associated phospholipase A2 (LpPLA2) and high-sensitivity C-reactive protein (hs-CRP), are associated with stroke prognosis and may help guide clinical care.

Preschoolers with attention deficit hyperactivity disorder can be safely and effectively treated with low doses of medication, according to the first long-term, large-scale study designed to determine the safety and effectiveness of treating

young children with Ritalin. Led by Columbia professor of psychiatry Laurence Greenhill, M.D., the study found that children improve with low doses of the medication but are more sensitive to side effects and should be monitored closely.

Low birth weight infants may have cognitive and physical problems that persist through childhood and into adolescence, according to a study published by Columbia researchers in the Archives of Pediatric and Adolescent

Medicine. Lead author Agnes Whitaker, M.D., co-director of the Columbia Developmental Neuropsychiatry Program for Autism and Related Disorders, noted that the findings suggest that enhanced maternal-fetal and neonatal care could improve these outcomes.



Mitchell Elkind, M.D.

RESEARCH HIGHLIGHTS

Bivalirudin, a new clot-prevention drug, lowers the risk of major bleeding by 47 percent compared with standard combination drug treatments, according to the Acute Catheterization and Urgent Intervention Triage Strategy trial, led by the Cardiovascular Research Foundation under the direction of Gregg Stone, M.D., professor of medicine. The results were published in the *New England Journal of Medicine*.

Local Spanish speakers do not have a single word that corresponds to the English *wheeze*, Columbia researchers have found. The word is a key component of medical history questionnaires and could confound asthma research in Spanish-speaking populations. Rachel Miller, M.D., assistant professor of clinical medicine and environmental health sciences, heard 12 different words when she and her team asked local bilingual residents to translate *wheeze* into Spanish.

Growth factors given to stimulate white cell production and reduce the risk of infection in women receiving chemotherapy for breast cancer are also associated with an increased risk of blood diseases, according to a new study published in the *Journal of the National Cancer Institute* by assistant professor of medicine Dawn Hershman, M.D. Women who have had this treatment have an increased risk of developing either a form of leukemia or a disease called myelodysplastic syndrome. Although the risk is small, Dr.

Hershman cautions that it should be taken into consideration when making treatment decisions.

Men are three times more likely than women to have a good neurological outcome after the use of the clot-busting drug tPA (tissue plasminogen activator) within three hours after stroke, according to a study published in *Neurology* and led by Mitchell Elkind, M.D., associate professor of neurology. Columbia professors Richard Axel, Saul Silverstein, and Michael Wigler originally



P&S is a leader across a broad spectrum of research areas — a testament to our expertise in virtually every discipline.

helped make tPA possible with their discovery of co-transformation, a method for introducing any gene into cultured animal cells, resulting in the production of specific proteins.

Using an MRI technique first developed at Columbia, associate professor of neurology Scott A. Small, M.D., has conducted the first observation of neurogenesis, the growth of neurons within a living brain. The study demonstrated how exercise, shown to be beneficial in fighting memory loss, affects the brain. Researchers were able to see that exercise targets a region of the hippocampus known as the dentate gyrus, which underlies normal age-related memory decline that begins around age 30 for most adults.

A pregnant woman's exposure to the flu vaccine jump-starts the fetal immune system, according to a team of researchers led by Rachel Miller, M.D., assistant professor of clinical medicine and environmental health sciences. Dr. Miller's team used a new technique known as MHC tetramer staining to study cord blood B and T cell immune responses

following maternal vaccination against flu during pregnancy and found antibodies in approximately 40 percent of cord blood specimens examined. The study suggests that the neonatal immune system is not deficient and is capable of responding to environmental exposures.

Blacks with chronic obstructive pulmonary disease are less likely to receive a lung transplant and more likely to die or be removed from the transplant list than whites, according to research from Columbia assistant professor of clinical medicine David Lederer, M.D. The disparity was related to differences in socioeconomic status and cardiovascular risk factors. Dr. Lederer and his colleagues are now conducting a five-year study to identify ways to improve outcomes for minority patients with advanced lung disease.

An experimental gene therapy for Parkinson disease, which delivers a cell-survival gene called Akt to the dopamine neurons, has generated the best response to date among therapies designed to prevent neuronal death in the disease. The Akt treatment uses a viral

vector to directly activate signaling pathways within dopamine neurons. Lead author Robert Burke, M.D., director of the Morris K. Udall Parkinson Disease Research Center of Excellence at P&S, is now working to adapt the vector for human trials.

Of the nearly 1,500 spinal cord injuries that occur each year in children ages 18 and under, 70 percent result from motor vehicle accidents, according to one of the first studies to report on the incidence and causes of spinal cord injuries. Columbia researchers led by Michael G. Vitale, M.D., professor of orthopedic surgery, found that 68 percent of vehicle accidents involve children and teenagers not wearing seat belts.

Assistant professor of medicine Hina Chaudhry, M.D., has repaired heart damage in mice by activating a gene to make adult heart stem cells regenerate. The gene, cyclin A2, is active during fetal development but is "turned off" in adult mammals. Previous studies have shown that damaged hearts cannot repair themselves because cyclin A2, a critical regulator of cell division, is



Hina Chaudhry, M.D.

inactive and cannot direct cells to divide and multiply into new cells.

A protein called AMPK serves as the "fuel gauge" of our body's cells, controlling metabolic decisions such as whether fat is burned or stored. Columbia scientists led by Lawrence Shapiro, Ph.D., associate professor of biochemistry & molecular biophysics and of ophthalmology, have now mapped the three-dimensional structure of AMPK, a critical step toward developing new therapies for diabetes and possibly obesity.

Shaping Medicine's Future: Education

Since its founding in 1767, as part of King's College and as the first medical school to award an M.D. degree in the 13 colonies, Columbia University College of Physicians & Surgeons has been a pillar of excellence in medical education. The current student body continues that tradition, with P&S boasting the second highest MCAT scores and third highest degree of selectivity in a national ranking. We have achieved that distinction while at the same time maintaining an extraordinary commitment to diversity, with underrepresented minorities now making up some 20 percent of our undergraduate classes, third in the nation overall.

Meanwhile, our endowment for scholarships and loans has grown exponentially, nearly doubling between 2003 and 2007.

To continue to attract the finest minds in medicine, and offer them the best possible preparation as they become tomorrow's physicians, P&S is pursuing broad curricular reform. Goals include shortening the preclerkship preparation phase, a focus on problem- and team-based learning, and the addition of interessions and majors or areas of concentration. Plans also call for reorganizing the graduate program and allotting a percentage of student tuition for teaching and course leadership.



STATE-OF-THE-ART EDUCATION CENTER

The Hammer Health Sciences Center continues to undergo extensive renovations aimed at creating a state-of-the-art education center — including an ambitious renovation of the Augustus C. Long Health Sciences Library to establish a 30,000-square-foot Hammer Education Center. The renovations will create a cohesive education facility with more classroom space adjacent to library services, resources, and updated study spaces. Slated to open in 2010, the new education center will include classroom space, office suites, study spaces, and digital storage, with a new entrance and lobby interior. To free up space for the new center, Columbia donated 55,000 publications from the library to a university in Tanzania.





NEW NEUROSCIENCE DEPARTMENT CREATED

The extraordinary growth in neuroscience at Columbia has sparked the creation of a new Department of Neuroscience, which will continue to position P&S as a thriving environment for teaching and research in the neurosciences. The department, which evolved out of the Center for Neurobiology and Behavior, is headed by John Koester, Ph.D. When the Jerome L. Greene Science Center opens in Manhattanville, the department will move into that facility.

The department's primary teaching role will be educating medical and dental students in

preclinical neuroscience. It will provide innovative training opportunities for graduate students and postdoctoral fellows in the analysis of neural circuit function and the role of circuits in mediating behavior.

"This is an auspicious time to create such a new department," Dr. Koester says. "Neuroscience has become a mature, recognized academic discipline, with the potential for continued growth and progress."

EDUCATION HIGHLIGHTS

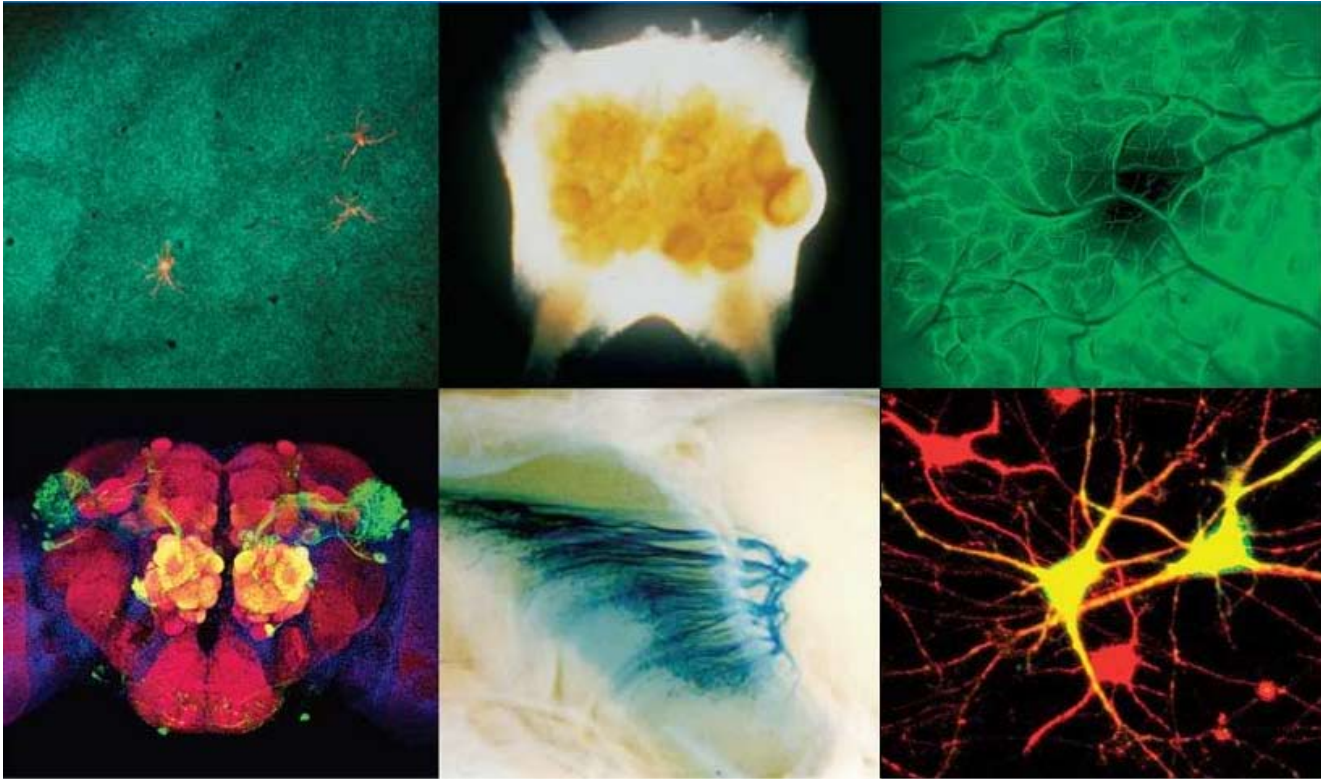
Nadia Goodwin '07, a native of Brooklyn, became the first graduate of Columbia's Summer Medical and Dental Education Program to graduate from P&S. Since 2001, the summer program, hosted by the P&S Office of Diversity, has helped to prepare minority college students for life as a medical student and provide them with a sense of excitement about a career in medicine. Dr. Goodwin, who enrolled in the program while a student at

Morgan State University, has started a residency in pediatrics at Einstein/Montefiore Medical Center in the Bronx. Dr. Goodwin participated in the summer program's first year, in 2001. Two other summer program participants at P&S are Philip Effraim, an M.D./Ph.D. student, and Marcel Green, a member of the Class of 2008. More than 200 alumni of the P&S summer program are enrolled in medical schools across the nation.

Nadia Goodwin, M.D.



Columbia has received a grant from the Association of American Medical Colleges to partner with public health professionals in the integration of population health, public health, and prevention into the graduate medical education curriculum. Only 13 of 40 schools that applied received the grants, made possible by a joint agreement between the AAMC and the Centers for Disease Control and Prevention.



The newly created Irving Institute for Clinical and Translational Research will offer a master's degree in patient-oriented research.

Bard Hall, Columbia's first residence hall for medical students, celebrated its 75th anniversary during the 2006-2007 academic year.

Columbia hosted a city forum sponsored by the Association of Hispanic Mental Health Professionals, educating students and physicians on how stroke, Alzheimer's disease, and psychiatric disease affect the Latino community.

The student-run Columbia Student Medical Outreach (CoSMO) neighborhood free clinic provides free, high-quality primary health care to neighborhood residents who do not have health insurance. Saturday morning sessions in the Audubon Urgi-Care Center include not only medical care, but also the services of student social workers, health educators, Spanish-language interpreters, and nurses.

In the spring of 2007, P&S students launched a mentoring program in partnership with Big Brothers and Big Sisters of New York City. Fifteen medical students now participate in the program, which works with middle school children at the Health Academy of the Heights on 181st Street. The Academy is an empowerment school opened in 2006 where 6th through 8th graders study a college-prep health curriculum.

STUDENT'S BRAIN RESEARCH GAINS PROMINENCE

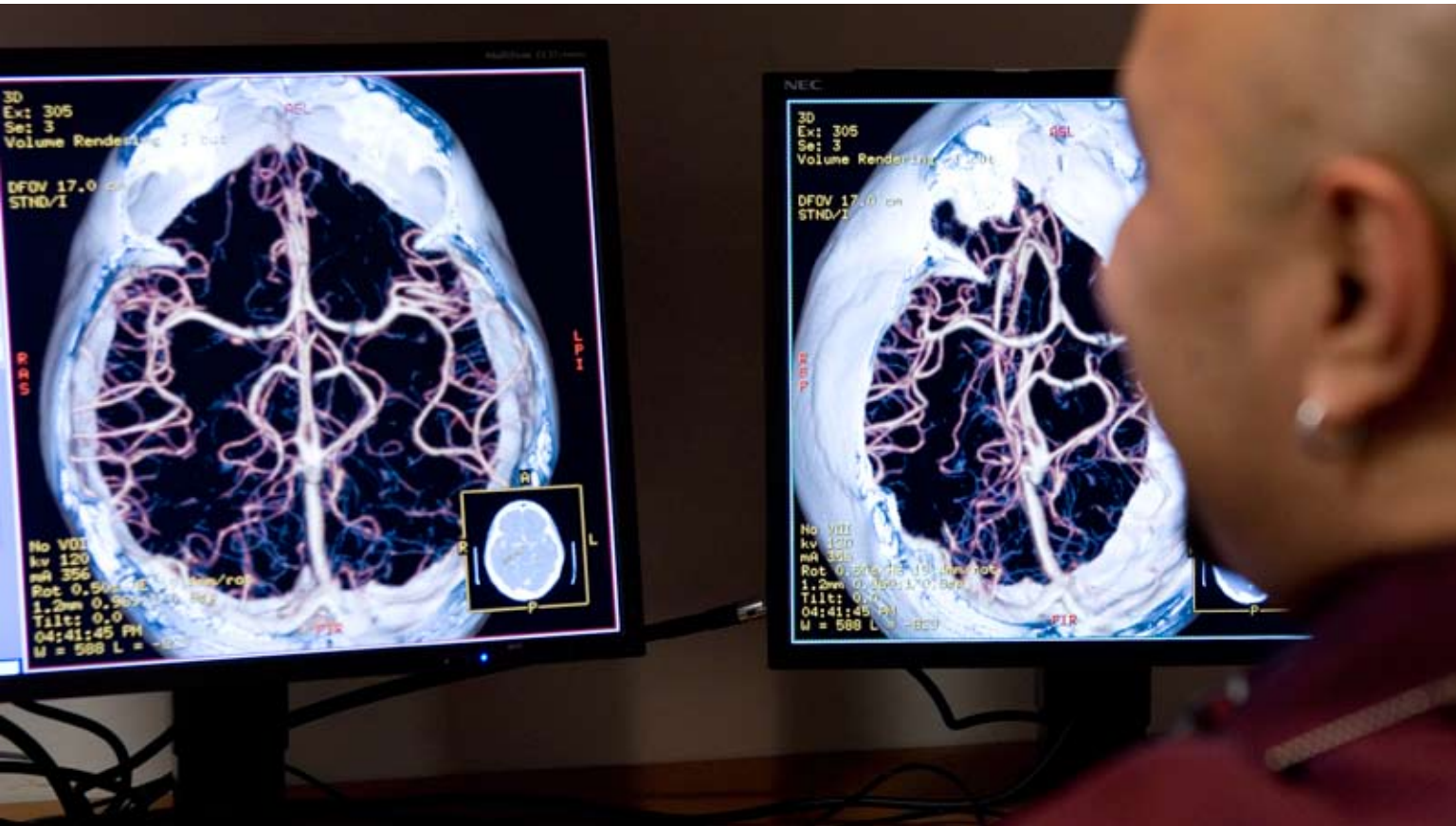
Many scientists count themselves fortunate to publish as a lead author in a major research journal within a few years of obtaining their degrees. Amit Etkin, M.D./Ph.D. student at the time, under Dr. Eric Kandel's supervision, garnered his second lead-author citation in *Neuron* this past year, with his discovery of an emotional control circuit in the human brain, which keeps emotionally intense stimuli from interfering with mental functioning.

Working with Joy Hirsch, Ph.D., professor of neuroradiology and psychology and director of the fMRI Research Center, and Eric Kandel, M.D., University Professor, Fred Kavli Professor, Howard Hughes Medical Institute senior investigator, and director of the Kavli Institute for Brain Sciences, Dr. Etkin used functional magnetic resonance imaging to explore how fear is regulated and controlled in the brain. When signals telling study subjects that an image representing happi-

ness or fear conflicted, say, a photo of a fearful face was labeled "happy," a region of the frontal lobe called the rostral anterior cingulate cortex was activated to resolve the conflict. Critically, the rostral cingulate dampened activity in the amygdala, a brain region involved in processing negative emotions, so that the emotional response did not overwhelm a subject's performance, thus achieving emotional control.

These results could significantly advance scientific understanding of psychiatric disorders involving emotional control, such as post-traumatic stress disorder or depression. "Interestingly, several studies have found that rostral cingulate activity predicts whether a depressed patient will respond to medication," says Dr. Etkin. "The findings from the current study, therefore, may help explain why more rostral cingulate activity may be beneficial."





EDUCATION HIGHLIGHTS

Second-year P&S students helped middle-school students explore the magic of medicine and science at “Super Science Saturday,” a program that gives students an informal introduction to science, medicine, and dentistry and potentially opens their eyes to the possibility of careers in science and health professions.

Last August, a group of 17 students from P&S and other Columbia programs traveled to Thailand to engage in a comprehensive workshop examining the challenges of bioethics and medical ethics. The two-week program, called **Bioethical Cross-cultural Education Program**, or **BIOCEP**, was launched by the Center for Bioethics under the direction of Dr. John Loike and leadership of

Dr. Ruth L. Fischbach, director of the Center. Students from Columbia College, Barnard College, the School of General Studies, and the Mailman School of Public Health joined Thai students of Bangkok’s Mahidol University for the program, which offered an unprecedented cross-cultural experience for students of all fields and backgrounds.

The Ewig Clinical Education Committee distributed seven new Ewig Awards to faculty in the Department of Medicine, honoring faculty who have shown excellence and dedication in clinical teaching. The 2007 recipients were Hasan Garan, M.D., Kenneth M. Prager, M.D., Sharon L. Wardlaw, M.D., Barron H. Lerner, M.D., Ph.D., Brian E. Scully, M.B., B.Ch., Paul G. Lee, M.D., and William C. Turner, M.D.



LEADING THE ADVISORY DEAN MOVEMENT

Columbia was not the first medical school in the nation to create an advisory dean program, but it has rapidly become a leading national voice among such programs. The leading medical education journal, *Academic Medicine*, featured an article on Columbia's advisory dean program, highlighting its rapid growth since it was introduced in the academic year 2003-2004.

The structured advisory dean program replaced a largely informal system of advising in which many students fell through the cracks. Each entering

student is assigned to one of five advisory deans, who offer career counseling, ongoing support and guidance, and a connection between the student and the faculty throughout the student's academic career. Among students in the class of 2007, the first class of students who had access to advisory deans throughout their medical school career, 90 percent found the advisory dean program to be a valuable initiative.

GARVEY TEACHING ACADEMY GAINS MOMENTUM

The Glenda Garvey Teaching Academy named its second class of fellows in 2007. The academy is named for the late Glenda Garvey, M.D., a P&S graduate and faculty member known as an outstanding clinician and teacher who trained more than 3,000 medical center students before her death in 2004.

The 2007 Garvey fellows from P&S are Marc L. Dickstein, M.D., associate professor of clinical anesthesiology, and Martin V. Pusic, M.D., assistant clinical professor of pediatrics. Other 2007 fellows are Leanne M. Currie and Arlene Smaldone (School of Nursing), Linda F. Cushman and Roger D. Vaughan (Mailman School of Public Health), and James Fine and Michael S. Yuan (College of Dental Medicine). They join the academy's founding members from P&S: Jonathan M. Barasch, M.D., Ph.D., associate professor of medicine and anatomy & cell biology; Blair Ford, M.D., associate professor of clinical neurology; and Jay H. Lefkowitz, M.D., professor of clinical pathology. Others in the founding class are David A. Albert, Vicky Evangelidis-Sakellson, and John L. Zimmerman (Dental Medicine); Melissa D. Begg, Sharon

Schwartz, and Michael S. Sparer (Mailman); and Mary Woods Byrne, Jennifer Dohrn, and Anne Griswold Peirce (Nursing). Thomas Garrett, M.D., professor of clinical medicine, is director of the Glenda Garvey Teaching Academy.

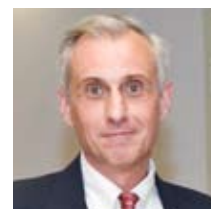
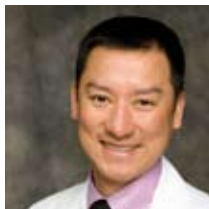
The academy also awarded its first series of grants for projects to develop innovative teaching tools, methods, or curricula. The two-year grants fund eight projects, which range from the development of educational DVDs to teach medical genetics to improving house staff teaching of medical students.

Grant recipients among P&S faculty were Wendy Chung, M.D., Ph.D.; Nicholas Fiebach, M.D.; John Encandela, Ph.D.; Katherine Nickerson, M.D.; Andrew Mutnick, M.D.; Patricia Miller, Ed.D.; Mathew Maurer, M.D.; and Lynne Quittell, M.D. Grants also were awarded to Ronald Bayer (Mailman); Heera Chang (Dental Medicine); and Penelope Buschman Gemma, Marlene McHugh, Anita Nirenberg, and Kathleen Hickey (Nursing).

2007 GARVEY FELLOWS

Top from left: Michael S. Yuan, Martin V. Pusic, Arlene Smaldone, and Roger D. Vaughan

Bottom from left: Marc L. Dickstein, Leanne M. Currie, Linda F. Cushman, and James Fine



In Our Community

Columbia is not just located in the Washington Heights community of northern Manhattan — it is *part* of the community and deeply committed to serving the diverse and often complex health care needs of the multiethnic neighborhood it calls home. Every year, new projects are created, and existing ones renewed, that bring Columbia medical students, residents, faculty, and staff together with their northern Manhattan neighbors to create a healthier community.

Images from Columbia in the Community

Top left: patient care at the Farrell Ambulatory Care Clinic. Right center: a child exchanges candy for a toy at the Naomi Berrie Diabetes Center. Bottom: P&S students help decorate a local school.



PARTNERING FOR COMMUNITY PEDIATRICS



Columbia's Department of Pediatrics, along with Morgan Stanley Children's Hospital of NewYork-Presbyterian, offers a model of community-focused care, an important element of education for medical students and residents in pediatrics at Columbia. The residency training program features a cultural competency curriculum that requires all pediatrics residents to graduate with skills in community health and advocacy as well as cultural competency. Last year, 14 of 60 residents completed independent projects focusing on specific issues in community child health, and some of their experiences are now being adapted for the P&S undergraduate medical curriculum.

For more than a decade, a rapidly growing number of partnerships with community organizations have allowed local residents to play a role in educating the health care providers of the future. These include:

GUESTS ON CAMPUS

A panel discussion on medicine and ethics featured Peter Blake, writer and consulting producer for the hit television drama "House," along with P&S faculty members Ken Prager, M.D., chair of Columbia's Medical Ethics Committee, and Robert S. Brown Jr., M.D., chief of the Center for Liver Disease and Transplantation.



Angela Lansbury, Jay Lefkowitz, M.D., and Lee Goldman, M.D.

The Medicine and the Arts seminar brought renowned Tony Award-winning actress Angela Lansbury to Columbia to discuss how the arts bring greater sensitivity and humanity to medicine.

Nicholas Wade, veteran science writer at the New York Times, discussed and signed copies of his book, "Before the Dawn: Recovering the Lost History of Our

Best Beginnings, an early childhood support program intended to prevent child abuse and neglect

The **Reach Out and Read** program, which involves local libraries and literacy support programs

The **Injury and Violence Prevention Center**, which grew out of a project begun by local residents

A domestic violence screening and intervention curriculum, developed as a result of hiring a community activist as a member of the teaching faculty

Project DOCC (Delivery of Chronic Care), a parent partnership aimed at teaching residents the effect of chronic illness on patients and their families

Columbia University Head Start, which improves school readiness for more than 300 low-income children in Washington Heights

Elementary School Health Partnerships, which this year received a federal Health Resources and Services Administration grant to expand to eight more schools, serving more than 8,000 children in the next three years

The Lang Medical Youth Program, a six-year science enrichment program that begins in the seventh grade

This past year, pediatrics residents assembled a multidisciplinary task force to move the children's hospital toward achieving "Baby Friendly Hospital" status, a World Health Organization designation for hospitals that support breastfeeding. The task force includes representatives from local WIC programs and Alianza Dominicana, working together with hospital faculty toward a major shift in culture surrounding newborn care and breastfeeding.

Ancestors." Mr. Wade examined how scientists use DNA analysis to understand prehistory. His visit was co-sponsored by the Department of Genetics & Development and the Center for Human Genetics.

Joan Didion, author of five novels and eight non-fiction books, was the guest lecturer for the 30th annual Alexander Ming Fisher Lecture.

Former major league baseball player Frank Torre and his brother, former New York Yankees manager Joe Torre, were joined by Mehmet Oz, M.D., to celebrate the 10th anniversary of Frank Torre's heart transplant. The two baseball stars signed baseballs during an event at the Donald F. Tapley Faculty Club.



Frank Torre, Mehmet Oz, and Joe Torre

MENTAL HEALTH FOR SENIORS IN HARLEM

The hospitalization rate for mental illness in Harlem is startling — about 80 percent higher than elsewhere in New York City. Older citizens of Harlem have long had trouble accessing good mental health care, because of the usual barriers to health care faced by elderly and low-income people and the stigma in the community associated with treatment for mental illness.

A new grant from the Fan Fox and Leslie R. Samuels Foundation has allowed the Thelma C. Davidson Adair Medical/Dental Center, which provides medical and dental services to Harlem families and cares for the elderly in particular, to integrate mental health services into its primary care program.

The new program channels psychiatrist services through primary care physicians. A psychiatrist reviews certain cases to ensure patients receive appropriate care and trains the center's primary care physicians to diagnose and treat mental illness. The program is based on studies that have shown that a collaborative care model, in which a mental health specialist works with the primary care physician to diagnose and treat depression, leads to improvements in symptoms, better compliance with care, and greater patient satisfaction. If the model program is successful, it may help guide mental health care delivery for other urban patient populations.

GUESTS ON CAMPUS



Jeffrey Lieberman (director of the NYSPI), Jim Ramstad, Charles Rangel, Lee Goldman (dean), and Patrick Kennedy.

The New York State Psychiatric Institute hosted a Congressional field hearing aimed at raising awareness about the lack of parity in health coverage for mental and addictive disorders. Congressman Charles Rangel (D-NY), Patrick Kennedy (D-RI), and Jim Ramstad (R-Minn.) convened the hearing to solicit testimony on this subject in support of a bill they have introduced.

SHARING A LOVE OF THE BRAIN



Ph.D. student Kelley Remole with fourth graders in The School at Columbia.

Neurobiology and Behavior Ph.D. student Kelley Remole not only studies neuroscience, she also likes to share her interest in the brain. She leads Columbia's activities for the national Brain Awareness Week and in April 2007 took her interest into a fourth-grade classroom in New York City.

Brain Awareness Week, co-sponsored by the Dana Alliance for Brain Initiatives and the Society for Neuroscience, encourages neuroscientists from around the country to organize community outreach events focused on the brain.

Growing up in the Minneapolis-St. Paul area, Ms. Remole worked at a science museum during high school. As a Ph.D. student at Columbia, she is studying how early disruption of brain development may increase the risk of schizophrenia in adolescence.

Dr. Roger D. Kornberg, the 2006 Nobel Prize winner in chemistry, was awarded the 2006 Louisa Gross Horwitz Prize. He was honored for his work revolutionizing the understanding of gene transcription.

Three generations of scientists who contributed to the fundamental understanding of the aging process received the 2007 Horwitz Prize: Joseph G. Gall, Ph.D., Elizabeth H. Blackburn, Ph.D., and Carol W. Greider, Ph.D.



Drs. Greider, Gall, and Blackburn

Dr. Shaffiq Essajee, senior pediatric adviser to the Clinton Foundation HIV/AIDS Initiative, delivered the keynote address at the Community Pulse conference organized by students. The one-day conference explored the relationships between health care providers and the communities they serve.

IMPROVING HEALTH LITERACY

About 90 million Americans have difficulty understanding and using health information. People from low-income backgrounds and those for whom English is not a first language face particular barriers to health literacy. Columbia's Health Education and Adult Literacy Program (HEAL) is designed to change that, by helping health care providers identify, screen, and follow up with patients who have low health literacy.

The program focuses on low-income families with children in northern Manhattan. It is developing culturally and linguistically appropri-

ate curricula for both families and health care providers. Using community members as focus groups, HEAL will help to identify why some individuals find it difficult to adhere to medication regimens and why provider instructions can be misunderstood. With feedback from the focus groups, HEAL will design plain-language health education materials aimed at combating the health literacy gap.

CONFERENCE ON HEALTH CARE IN THE COMMUNITY

Many P&S students choose Columbia because of its strong commitment to community programs. A group of P&S students sought to delve deeper into the issue of community by creating Community Pulse, a one-day conference on community and health, exploring how medical professionals can work *with* communities, rather than dictating *to* them. "We wanted to figure out how to determine what kind of services members of the community really need, beyond what we as clinicians or researchers think they need," explains Lauren Taggart Wasson '09, one of the conference organizers.

The conference brought together approximately 65 participants — students and faculty from the medical, dental, nursing, and public health schools and other schools of Columbia Univer-

sity and students and professionals from elsewhere, including New York University and the World Health Organization. Break-out sessions addressed partnerships between the medical center and the community, ethical considerations for community-based research, the training of physicians to be community members and leaders, the intersection of the community and family medicine, the local and global connection in health care, and health disparities among minorities.

Speakers discussed model programs, such as the cooperation among more than 10 entities in creating the Harlem Children's Zone Asthma Initiative, a community, home-based intervention designed to educate and provide services for families and children living with asthma.



“Many of us came to P&S because of its location in New York City and the Washington Heights community. Ultimately, we hope to become members of communities working together as partners in health care.”

— Lauren Taggart Wasson '09



Qais Al-Awqati



Spencer Amory



Paul Appelbaum



Richard Axel



Suzanne Bakken



Barbara Barlow

FACULTY HONORS

ELAINE ABRAMS, M.D., Pediatrics: chair of the primary therapy committee of International Maternal Pediatric Adolescent AIDS Clinical Trials

QAIS AL-AWQATI, M.D., Medicine and Physiology & Cellular Biophysics: received the 2007 Homer W. Smith Award, given jointly by American Society of Nephrology and the New York Heart Association Council on Blood Pressure

SPENCER AMORY, M.D., Surgery: received the Leonard Tow Humanism in Medicine Award presented annually by the Arnold P. Gold Foundation and the NYPH/Allen Pavilion physician of the year award

CONSTANTINE E. ANAGNOSTOPOULOS, Sc.D., Surgery: made an honorary professor of cardiac surgery at the University of Greece/Athens

PAUL APPELBAUM, M.D., Psychiatry: appointed to the Institute of Medicine's Committee on Health Research and the Privacy of Health Information; reappointed chair of the American Psychiatric Association's Council on Psychiatry and Law; and presented with the Isaac Hays, M.D., and

John Bell, M.D., Award for Leadership in Medical Ethics and Professionalism by the American Medical Association

RICHARD AXEL, M.D., Biochemistry & Molecular Biophysics: honored with a 2007 Double Helix Medal for Scientific Achievement

SUZANNE BAKKEN, RN, D.N.Sc., Biomedical Informatics: selected as one of the 100 most distinguished alumni of the UCSF School of Nursing

BARBARA BARLOW, M.D., Surgery: received the Humanitarian Award from the Defining Moment Foundation and the Lewis and Jack Rudin New York Prize for Medicine and Health

ROBYN BARST, M.D., Pediatrics: held a visiting professorship at the University of Bologna School of Medicine

LAXMI BAXI, M.D., Obstetrics & Gynecology: appointed an accredited representative of the International Federation of Gynecology and Obstetrics at the New York office of the United Nations

JULIA GLADE BENDER, M.D., Pediatrics: received a career development award as a 2007 Irving Scholar for development of agents targeting vascular endothelial growth factor as treatments for pediatric solid tumors

MARC BESSLER, M.D., Surgery: named associate editor of the Journal of Surgery for Obesity and Related Diseases

LORNA BREEN, M.D., Medicine: elected to the board of directors of the American College of Emergency Physicians, New York chapter

GARY BRITTENHAM, M.D., Pediatrics: appointed to the expert panel of the NIH's Conference on Best Practices in Transfusion Medicine for Patients with Sickle Cell Disease

CAROLYN BRITTON, M.D., Neurology: named president-elect of the National Medical Association

ALAN BROWN, M.D., Psychiatry: appointed to the editorial board of the Schizophrenia Bulletin



Laxmi Baxi



Julia Glade Bender



Marc Bessler



Carolyn Britton



Kathryn Calame



Stanley Chang

MITCHELL CAIRO, M.D., Pediatrics, Medicine, and Pathology: named to the Pediatric Special Interest Group of the American Society of Blood & Marrow Transplantation

KATHRYN CALAME, Ph.D., Microbiology and Biochemistry & Molecular Biophysics: elected to the Institute of Medicine

MARTIN CHALFIE, Ph.D., Graduate School Faculty: elected Fellow of the American Association for the Advancement of Science

STANLEY CHANG, M.D., Ophthalmology: received a Castle Connolly National Physician of the Year Award for Clinical Excellence; received the 2006 Hobie Award from the New York State Ophthalmological Society; and received the Jackson Memorial Lecture Award from the American Academy of Ophthalmology

WENDY CHAVKIN, M.D., Obstetrics & Gynecology: received the Felicia Stewart Advocacy Award from the American Public Health Association for her commitment to advocacy on behalf of reproductive health and rights

MICHAEL F. CHIANG, M.D., Ophthalmology and Biomedical Informatics: hon-

ored by the American Academy of Ophthalmology for a presentation on telemedical diagnosis of retinopathy of prematurity

PAOLO C. COLOMBO, M.D., Medicine: received a career development award as a 2007 Irving Scholar for studies examining the correlation between endothelial oxidative stress and chronic heart failure

ROBERT COWLES, M.D., Surgery: appointed a Fellow of the American Academy of Pediatrics

MARY D'ALTON, M.D., Obstetrics & Gynecology: appointed assistant secretary of the New York Obstetrical Society; appointed secretary of the American Gynecological and Obstetrical Society; and received the Society for Maternal-Fetal Medicine achievement award recognizing contributions to the field and her role as a mentor

RICHARD DECKELBAUM, M.D., Pediatrics: appointed a member of the advisory board for the Post-Katrina Support Fund Initiative; named president of the Global Health Education Consortium; awarded honorary membership in the American Dietetic Association; and appointed chair of the eonutrition task force, International Union of Nutritional Sciences

BRUCE DOHRENWEND, Ph.D., Psychiatry: received an award for best publication from the American Sociological Association

WAFAA EL-SADR, M.D., Medicine: one of 50 global health experts selected as 2007-2008 ambassador for the Paul G. Rogers Society for Global Health Research; received a Scroll of Merit award from the National Medical Association; was selected by the Infectious Diseases Society of America for the Edward Kass Lectureship; and delivered the annual Arthur Ashe AIDS Endowment Lecture at Weill-Cornell

DANIEL FEINGOLD, M.D., Surgery: named a Fellow of the American College of Surgeons

RUTH L. FISCHBACH, Ph.D., Psychiatry: elected Fellow of the American Association for the Advancement of Science

HASAN GARAN, M.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching

SAADI GHATAN, M.D., Neurological Surgery: received a career development award as a 2007 Irving Scholar for tests of a new, noninvasive technique to examine the area of the brain responsible for epileptic seizures in susceptible children



Elsa Giardina



Arnold Gold



Joseph Graziano



James Guarrera



Eric Hall



Ziv Haskal

FACULTY HONORS

ELSA GIARDINA, M.D., Medicine: appointed chair of the strategic planning committee for the Sarnoff Cardiovascular Research Foundation's 25th anniversary

JAY A. GINGRICH, M.D., Ph.D., Psychiatry: selected to help plan the NIH Blueprint for Neurodevelopment and selected as new director of the Frontier Fund

ALEXANDER GLASSMAN, M.D., Psychiatry: awarded the Anna-Monika Prize, recognizing his work on the onset of major depression associated with acute coronary syndromes

STEPHEN P. GOFF, Ph.D., Biochemistry & Molecular Biophysics and Microbiology: elected Fellow of the American Association for the Advancement of Science

ARNOLD GOLD, M.D., Neurology: named the 2007 Edward J. Ill M.D. Physician of the Year for the State of New Jersey by the Edward J. Ill Excellence in Medicine Association

LEE GOLDMAN, M.D., Dean: awarded the 2007 John Phillips Memorial Award by the American College of Physicians

PAUL GORDON, M.D., Neurology: awarded a Fulbright scholarship for 2007-2008

ROBERT GRANT, M.D., Surgery: elected to membership in the American Association of Plastic Surgeons

JOSEPH GRAZIANO, Ph.D., Pharmacology: elected a Fellow of the Collegium Ramazzini and appointed to the National Advisory Environmental Health Sciences Council

PETER H.R. GREEN, M.D., Medicine: received the 2007 Mentors Research Scholar Award, honoring both mentoring and fund-raising by the Board of Directors of the American Gastroenterology Association's Foundation for Digestive Health and Nutrition, and received the Master Endoscopist Award at the 2007 ASGE Crystal Awards

ERIC GREENE, Ph.D., Biochemistry & Molecular Biophysics: received a White House Presidential early career award from the National Science Foundation

LAURENCE GREENHILL, M.D., Psychiatry: named president-elect of the American Academy of Child and Adolescent Psychiatry

JAMES GUARRERA, M.D., Surgery: elected to membership in the American Society of Transplant Surgeons

ERIC J. HALL, D.Phil., Radiation Oncology: awarded the Gray Medal from the International Commission on Radiation Units and Measurements

ZIV HASKAL, M.D., Radiology: served as program chair for the 2007 Society of Interventional Radiology annual meeting

CHRISTOPHER HENDERSON, Ph.D., Pathology: honored with the Sheila Essey Award for ALS Research by the American Academy of Neurology and the ALS Association

BARRY HONIG, Ph.D., Biochemistry & Molecular Biophysics: inducted into the American Academy of Arts & Sciences; received the 2007 Alexander Hollaender Award in Biophysics from the National Academy of Sciences for outstanding contributions in biophysics; and guest of honor at a symposium on implicit-solvent models at the American Chemical Society in Chicago



Christopher Henderson



Barry Honig



Joshua Hyman



Eric Kandel



Robert Klitzman



Marianne Legato

JOSHUA E. HYMAN, M.D., Orthopedic Surgery: became a member of the American Orthopaedic Association and inducted into the Orthopaedic Honor Society

WILLIAM B. INABNET, M.D., Surgery: appointed chair of the American Society for Metabolic and Bariatric Surgery's research committee; named to the executive council of the American College of Surgeons' Committee for Video-Based Education; and elected to membership in the Society of University Surgeons

PABLO JOO, M.D., Medicine: nominated for the Association of American Medical Colleges 2007 Humanism in Medicine Award

ERIC KANDEL, M.D., Physiology & Cellular Biophysics, Psychiatry, and Biochemistry & Molecular Biophysics: won the National Academies' 2007 National Communication Award for the year's best book; received the Benjamin Franklin Medal for distinguished achievement in the sciences from the American Philosophical Society; received the McKnight Recognition Award from McKnight Conference for Neuroscience; received the Louise T. Blouin Foundation Award; and received honorary doctorates from NYU and Rockefeller University

JESSICA KANDEL, M.D., Surgery: elected to membership in the American Surgical Association

DANIEL KASS, M.D., Medicine: received a mentored clinical scientist research career development award from the National Heart, Lung and Blood Institute

PETRA KAUFMANN, M.D., Neurology: received the Lea Rose Spinal Muscular Atrophy Research Award

KRZYSZTOF KIRYLUK, M.D., Medicine: received the 2007 Daland Fellowship in Clinical Investigation awarded by the American Philosophical Society

KATHLEEN KLINK, M.D., Medicine: awarded a Robert Wood Johnson Foundation Health Policy Fellowship

ROBERT KLITZMAN, M.D., Psychiatry: named by the New York governor to the ethics committee of the Empire State Stem Cell Board

ERICA KOVACS, Ph.D., Psychiatry: elected to the executive council of the American Psychological Association's Division 33 as a member-at-large

MARIANNE J. LEGATO, M.D., Medicine: delivered the keynote address on gender-specific medicine at a conference in Japan and invited to deliver the keynote address at the 3rd International Congress in Gender Medicine sponsored by the Karolinska Institute in Stockholm, Sweden

JAMES A. LEE, M.D., Surgery: received a 2007 bronze Telly award for work on an educational video to be part of COACH, an online surgical training program under development by Dr. Lee and surgery colleagues

PAUL LEE, M.D., Ph.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching

BARRON LERNER, M.D., Ph.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching

JENNIFER LEVINE, M.D., Pediatrics: named an AFLAC scholar for her work as medical director of the Center for Survivor Wellness in the Herbert Irving Child and Adolescent Oncology Center

JEFFREY LIEBERMAN, M.D., Psychiatry: received the American Psychiatric Association's highest honor, the 2007 Adolf Meyer Award, and was awarded the Lieber Prize for Schizophrenia Research from NARSAD, the mental health research association



Ian Lipkin



Jose Luchsinger



William Macaulay



J. John Mann



Richard Mayeux



Maurizio Miglietta

FACULTY HONORS

IAN LIPKIN, M.D., Pathology: elected a Fellow of the American Academy for Microbiology and the Institute of Medicine honored him with the Invited Lectureship, "Institute of Medicine, Infectious Disease Surveillance and Detection: Assessing the Challenges, Finding Solutions," in Washington, D.C.

ARNOLD LISIO, M.D., Medicine: co-recipient of a lifetime achievement award from the Manhattan-based Health Care Chaplaincy

ROGERIO LOBO, M.D., Obstetrics & Gynecology: named recipient of the North American Menopause Society's Bayer HealthCare Pharmaceuticals ET/EPT Research Award for 2007

STEVEN LOBRITTO, M.D., Pediatrics and Medicine: appointed at-large member of the liver and intestinal organ transplant and pediatric transplantation committees, Organ Procurement & Transplantation Network/United Network for Organ Sharing

JOSE A. LUCHSINGER, M.D., Medicine: received a career development award as a 2007 Irving Scholar for clinical testing of the diabetes drug Metformin as a preventa-

tive against cognitive decline and received a research grant from the Alzheimer's Drug Discovery Foundation for pilot testing of Metformin

WILLIAM MACAULAY, M.D., Orthopedic Surgery: received the third annual Lawrence D. Dorr M.D. Award for the most outstanding paper in surgical techniques and technologies, given by the American Association of Hip and Knee Surgeons

J. JOHN MANN, M.D., Neuroscience: received the International Association for Suicide Prevention's Stengel Research Award

ANDREW MARKS, M.D., Physiology & Cellular Biophysics: named president of the Harvey Society

RICHARD MAYEUX, M.D., Neurology and Psychiatry: received the 2007 Potamkin Prize, the most prestigious prize awarded by the American Academy of Neurology

BRIAN D. MCCABE, Ph.D., Physiology & Cellular Biophysics: appointed to the editorial board of PLoS ONE, a peer-reviewed scientific research publication from the Public Library of Science

PAUL C. MCCORMICK, M.D., Neurological Surgery: one of five alumni of Columbia College chosen to receive the John Jay Award, the college's highest honor

JAMES MCKINSEY, M.D., Surgery: named chair of the American College of Surgeons' medical student education committee

MAURIZIO A. MIGLIETTA, D.O., Surgery: received an award from the Federal Enforcement Homeland Security Foundation for his work with New York law enforcement

ANDREW MORAN, M.D., Medicine: received a research award from the Matheson Foundation to create a predictive computer model of the future cardiovascular disease epidemic in China

NICHOLAS MORRISSEY, M.D., Surgery: appointed to the editorial board of the Journal of Vascular Surgery



Yuval Neria



Carl Olsson



Ariel Pablos-Méndez



Timothy Pedley



Harold Pincus



Carlos Jose Rodriguez

YUVAL NERIA, Ph.D., Psychiatry: honored with the 2007 Klerman Award for outstanding clinical research from NARSAD, the mental health research association

SHARON OBERFIELD, M.D., Pediatrics: appointed a member of the clinical guidelines subcommittee of the Endocrine Society and of the pediatric endocrinology self-assessment subcommittee, American Board of Pediatrics, and appointed to a four-year term on the Diabetes and Digestive and Kidney Diseases Initial Review Committee, National Institute of Diabetes and Digestive and Kidney Diseases

CARL A. OLSSON, M.D., Urology: received a Boston University Alumni Award

ARIEL PABLOS-MÉNDEZ, M.D., Medicine: named managing director of the Rockefeller Foundation in New York City

KIRAN PANDIT, M.D., Medicine: elected to the board of directors of the American Academy of Emergency Medicine in India

JOSEPH PARKER, Ph.D., Genetics & Development: awarded a fellowship by the Wellcome Trust, an independent, UK-based charity that focuses on funding innovative research into human and animal health

TIMOTHY A. PEDLEY, M.D, Neurology: elected to the Institute of Medicine

HAROLD PINCUS, M.D., Psychiatry: named to a two-year term as chair of the NIH's Clinical and Translational Science Awards Evaluation Steering Committee

XAVIER PI-SUNYER, M.D., Medicine: awarded a doctor honoris causa degree from the Tor Vergata University of Rome

KENNETH PRAGER, M.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching, and received the Leonard Tow Humanism in Medicine Award presented annually by the Arnold P. Gold Foundation

RAVICHANDRAN RAMASAMY, Ph.D., Surgery: appointed to the American Federation of Aging Research's National Scientific Advisory Council

ADAM RATNER, M.D., Pediatrics: appointed to the peer review panel of the Flight Attendant Medical Research Institute, which was established to study the impact of secondhand smoke on flight attendants, and appointed to the editorial board of PLoS ONE, a peer-reviewed scientific research publication from the Public Library of Science

CARLOS JOSE RODRIGUEZ, M.D., Medicine: chosen as a Robert Wood Johnson Foundation Scholar and accepted into the Harold Amos Medical Faculty Development Program

ERIC A. ROSE, M.D., Surgery: selected as 2007's William W.L. Glenn Lecturer and named to the Department of Health and Human Services' National Biodefense Science Board



Allan Rosenfield



Herbert Schlesinger



David Shaffer



Craig Smith



Margaret Spinelli

FACULTY HONORS

ALLAN ROSENFELD, M.D., Obstetrics & Gynecology and dean emeritus of the Mailman School of Public Health: received the 2007 United Nations Population Award; elected as a Fellow of the American Academy of Arts and Sciences; received the Joseph Calloway Prize for the Defense of the Right to Privacy from the New York Civil Liberties Union Reproductive Rights Project; honored by the International Women's Health Coalition for dedication to health of women worldwide and commitment to reproductive rights and health; and honored by the Association of Schools of Public Health, which voted unanimously to rename the ASPH/CDC Global AIDS Fellowship Program in his honor

JAMES E. ROTHMAN, Ph.D., Physiology & Cellular Biophysics: elected Fellow of the American Association for the Advancement of Science

MARK J. RUSSO, M.D., Surgery: recipient of the 2006-2007 Blakemore Award and Prize for research on heart failure and heart/lung replacement

PRAKASH SATWANI, M.D., Pediatrics: appointed to the editorial board of the journal *Bone Marrow Transplantation*

CHARLES SCHLEIEN, M.D., Pediatrics: elected to fellowship in the American Heart Association by the Council on Cardiopulmonary, Perioperative and Critical Care and awarded a presidential citation by the Society of Critical Care Medicine

HERBERT J. SCHLESINGER, Ph.D., Psychiatry: received the George Goldman Merit Award for excellence in teaching from the Association for Psychoanalytic Medicine

DAVID SCHNADOWER, M.D., Pediatrics: named associate chairman of the pediatric emergency medicine collaborative research committee, American Academy of Pediatrics

BRIAN SCULLY, M.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching, and the Distinguished Practitioner Award for 2007 by the CUMC Society of Practitioners

DAVID SHAFFER, M.D., Pediatrics and Psychiatry: awarded a lifetime achievement award by the American Foundation for Suicide Prevention; will become president-elect of the International Academy for Suicide Research in 2009; and named chair of the American Academy of Child and Adolescent Psychiatry's research working group

HOWARD SHUMAN, M.D., Microbiology: received a visiting professorship from Hebrew University of Jerusalem

CRAIG R. SMITH, M.D., Surgery: appointed associate editor of the *Journal of Thoracic and Cardiovascular Surgery* and received the Heart of New York Award for achievement in cardiovascular science and medicine by the American Heart Association

ROMAN SNIHUROWYCH, M.D., Psychiatry: awarded a Fulbright scholarship for 2007-2008

JOSHUA R. SONETT, M.D., Surgery: received the 2007 Chesed Humanitarian Award for excellence in local medical and surgical care



David Strauss



Nancy Strauss



B. Timothy Walsh



Carolyn Westhoff



Gail Williams



Robert Winchester

MARGARET SPINELLI, M.D., Psychiatry: chaired the National Institute of Mental Health review committee for small business grants to develop educational Web sites for postpartum depression

MILAN STOJANOVIC, Ph.D., Medicine: received a 2007 New York Academy of Sciences' Blavatnik Award for Young Scientists

DAVID STRAUSS, M.D., Psychiatry: appointed to the Human Research Protections National Advisory Committee of the Department of HHS

NANCY STRAUSS, M.D., Rehabilitation Medicine: one of 10 individuals selected nationally for the rehabilitation management panel of the CDC's Muscular Dystrophy Care Considerations group

DAVID SULZER, Ph.D., Psychiatry: received a Columbia Integrated Science & Engineering award for exploratory research

WILL TURNER, M.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching

B. TIMOTHY WALSH, M.D., Psychiatry: named to the American Psychiatric Association's DSM-V task force as chair of the eating disorders working group

SHARON WARDLAW, M.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching

MYRNA WEISSMAN, Ph.D., Psychiatry: received the Society of Biological Psychiatry's Gold Medal Award for pioneering research in biological psychiatry

CAROLYN WESTHOFF, M.D., Obstetrics & Gynecology: elected to the Institute of Medicine and appointed to the Accreditation Committee on Graduate Medical Education

NANCY S. WEXLER, Ph.D., Neurology: received the Benjamin Franklin Medal in Life Science from the Franklin Institute

MICHAEL WIGLER, Ph.D., Genetics & Development: winner of a 2007 Double Helix Medal for Scientific Achievement

GAIL WILLIAMS, M.D., Medicine: received a Ewig Award grant, honoring faculty who have shown excellence in clinical teaching

ROBERT J. WINCHESTER, M.D., Pediatrics: appointed to a one-year term as a member of the Arthritis, Connective Tissue and Skin Study Section for the NIH Center for Scientific Review

SHIDU YAN, M.D., Pathology: named associate editor of the Journal of Alzheimer's Disease

JEFFREY ZITSMAN, M.D., Surgery: named to the Committee on Childhood Obesity of the American Pediatric Association

Additional faculty honors listings can be found at www.cumc.columbia.edu/celebrates.

DEVELOPMENT HIGHLIGHTS 2006–2007

The College of Physicians & Surgeons appreciates the generosity of our donors and the commitments they make to ensure continued excellence as we partner to define the future of healthcare. We are grateful for our donors' strong belief in the vision and mission of the medical college and for their gifts which, during fiscal year 2007, totaled more than \$167 million. Thanks to this outstanding generosity, Columbia continues to make great strides in the mission to provide the finest patient care; understand, treat, and prevent diseases; and educate the next generation of physicians and scientists. As chairman of our capital campaign, P. Roy Vagelos, M.D., P&S '54 has been instrumental in shepherding this tremendous progress as, together, we pave the way on the journey toward our destiny of top five status in the nation.

The following, listed alphabetically, are some of the many significant contributions that our family of supporters provided during the past year.

A **grateful patient**, who wishes to remain anonymous, made a first-time gift to establish an unrestricted endowment fund that can be used by the chair of the Department of Urology to support the priorities of the department.

Michele and Timothy R. Barakett provided funds to support research and/or teaching activities in men's health issues in the Division of Cardiology and the Department of Urology.

The Carmel Hill Fund continued its generous support of the Division of Child and Adolescent

Psychiatry with a gift to the Ruane Center for the Early Identification of Mood Disorders, which will support research on, and prevention of, teen suicide.

David F. and Harriet E. Dyer established a fund through the Dyer Family Foundation to support clinical and research activities of the Naomi Berrie Diabetes Center.

Recently inducted member of the CUMC Board of Visitors **John L. Eastman, together with Josephine (Jodie) M. Eastman and Louise Eastman Loening**, made a generous pledge to establish the J. Merrill Eastman Professorship Fund for the clinical co-director of the Naomi Berrie Diabetes Center.

The Charles Engelhard Foundation and Sally Engelhard Pingree, Trustee, made a gift to the Department of Psychiatry to support a young adult treatment program for at-risk students on college campuses.

The Boomer Esiason Foundation established the Gunnar Esiason Adult Cystic Fibrosis and Lung Program. The pledge complements prior support made by the foundation for the pediatric cystic fibrosis program.

Louis V. Gerstner Jr. made a gift through the Gerstner Family Foundation to establish the Louis V. Gerstner Jr. Scholars Fund, which will support physician-scientists who conduct translational research designed to bring new treatments to patients.



Louis V. Gerstner Jr.



Dawn Greene

A generous grant from the **Jerome L. Greene Foundation** has been used to launch the Cardiac Valve Program in the Department of Medicine. The new program will integrate noninvasive, interventional, and surgical management options for patients with valvular heart disease.

Columbia University Medical Center benefactors **Mr. and Mrs. Herbert Irving** continued their enduring support of cancer research and treatment programs with generous funding of the Herbert Irving Comprehensive Cancer Center and the Irving Center for Clinical Research, which has been reconfigured and renamed the Irving

Institute for Clinical and Translational Research. Their generosity will help Columbia to forge a better understanding of cancer and to develop new therapies in the search for a cure. Through the Irving Institute, Mr. and Mrs. Irving support young physician investigators, known as Irving Scholars, to launch interesting and potentially fruitful avenues of research in anticipation of future NIH support.

The Jesselson Foundation made a pledge in support of the research of Dr. Allan Schwartz and his team to help advance knowledge in cardiology.



Marianne and Allen Mebane IV



Russell and Angelica Berrie



Jerome and Ruth Siegel

Through **The Katz Foundation**, Lewis Katz established the Lewis Katz Visiting Professorship in Cardiovascular Research and the Lewis Katz Cardiovascular Research Prize for a Young Investigator. Both awards provide funding for the recipients to continue their world-class work in the study and treatment of heart disease.

The **Thomas L. Kempner Jr. Foundation Inc.** established a fund to support research in osteoporosis and metabolic bone diseases.

Columbia University Trustee **Gerry Lenfest** endowed the Lenfest Financial Aid Scholarship Fund, which will support need-based scholarships.

Mr. and Mrs. Stephen Lieber and the Essel Foundation made an extraordinary gift to expand the Lieber Center for Schizophrenia Research. The gift will be distributed among research initiatives, a translational therapeutics professorship, and the new Lieber Clinic for Comprehensive Care.

The Marriott Family and the Medical Illness Counseling Center have pledged continuing support of the Marriott Mitochondrial Disorders

Clinical Research Fund at Columbia University Medical Center. The fund focuses on genetic and clinical research on mitochondrial diseases.

Marianne and Allen Mebane IV made a generous pledge to the Division of Digestive and Liver Diseases to provide vital resources that will help the division recruit and retain the best and brightest faculty, compete successfully for federal research funding, and improve treatment for patients with a spectrum of diseases and disorders affecting the digestive system.

The Merrill Lynch Foundation is supporting research into the genetic influences involved in Alzheimer's disease and other neurodegenerative diseases of aging. The foundation's gift to the Taub Institute for Research on Alzheimer's Disease and the Aging Brain will be used to help identify those at risk for Alzheimer's disease and related disorders and to develop the means to prevent or delay the onset of these conditions.

Robert S. and Roberta L. Reitzes made a commitment to underwrite current initiatives at the Naomi Berrie Diabetes Center. The gift will foster improved understanding of diabetes and its complications.

Furthering its long-standing commitment to finding a cure for diabetes, the **Russell Berrie Foundation** made an extraordinary commitment of \$21 million to the Naomi Berrie Diabetes Center to support clinical care, research, community outreach, and faculty. The gift will provide current funds for collaborative research and clinical care and endowment for a professorship and for the Center. The foundation also made a contribution to the Center in support of the Naomi Berrie Award for Achievement in Diabetes Research and the Frontiers in Diabetes Research Symposium.

The May and Samuel Rudin Family Foundation and the **Louis and Rachel Rudin Foundation** continue to help P&S and School of Nursing students pursue careers in health care. The two philanthropic families, through the joint funding of the Rudin Scholars Program, provide important support for tomorrow's finest health care professionals.

Recently elected member of the Columbia University Medical Center Board of Visitors **Lynn Shostack** has provided a pledge to launch the David A. Gardner New Initiatives Fund, a current use and unrestricted fund. Ms. Shostack's support will also fund the establishment of a new genetics core that is being developed.

The Frank V. Sica & Colleen McMahon Foundation made a contribution in support of the Pancreas Center. The Pancreas Center fosters a multidisciplinary approach to the treatment of pancreatic cancer and sponsors basic and clinical research to investigate the biology of the disease.

To ensure that young scientists are equipped with requisite skills, **Ruth and Jerome A. Siegel** established an advanced training fund in the Department of Medicine's Division of Rheumatol-

ogy. The fund will help bridge the gap between postfellowship training and independent, laboratory-based investigations of physician-scientists who are committed to conducting immunology-related clinical or translational research.

The Simons Foundation continued support of the Department of Psychiatry with gifts to support autism research and the developmental neuropsychiatry program.

Donna and Harvey Sorkin have continued their steadfast support to the Division of Pediatric Surgery. Under the leadership of committed surgical scientists, the division continues to thrive in both basic and applied research.

Emily and Jerry Spiegel, long-time supporters of neuroscience research at P&S, have made a pledge to establish an endowed chair for a neuroscience researcher who holds a joint appointment in a clinical and basic science department. The Spiegel family is committed to furthering neurological stem cell research.

Judith P. Sulzberger, M.D., continues to play a critical role in the development of the Columbia Genome Center that bears her name. Most recently, she endowed the Isidore Edelman, M.D. Professorship in Biochemistry & Molecular Biophysics, named in memory of the genome center's former director. The goal of the center is to adapt novel genomics technologies to enable breakthroughs in biological and biomedical science.

Columbia University Medical Center partnered with **Time for Lyme Inc.** and the **Lyme Disease Association Inc.** to launch the Lyme and Tick-borne Diseases Research Center. The two major non-profit organizations made a joint

commitment to endow the center, which is the first university-based, multidepartmental Lyme disease research center in the world to focus on chronic Lyme and tick-borne disease.

Leonard Tow and his wife, Claire, have made a generous pledge through the Leonard and Claire Tow Charitable Trust to support recruitment, research, and management of the Center for Motor Neuron Biology and Disease to advance science that is relevant to ALS or motor neuron biology.

George Violin, M.D., made a series of gifts to establish the Violin Professorship for the benefit of the Wu Center for Molecular Cardiology in the Department of Physiology and Cellular Biophysics. Dr. Violin and his wife, Joan, have established a fund to provide ongoing support of Wu Center priorities.

Mrs. Dawn Greene, Lee Goldman, M.D., Roy Vagelos, M.D., and Mrs. Greene's daughter Christina McInerney



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In Memoriam

We mourn the loss of the following friends and faculty of the College of Physicians & Surgeons:

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M.D. program	585
M.D./M.P.H.	8
M.D./Ph.D. program	85
Other M.D. programs	43
Graduate programs	787
Full-time faculty	1,853
Living M.D. alumni	7,200
Budget (FY07)	\$1.187 billion
Endowment	\$1.463 billion
Endowed chairs	162
Research support (FY07)	\$401.4 million

Degrees granted, July 2006 to June 2007

M.D.	138
M.D./M.P.H.	4
M.D./ Ph.D.	4
M.D./ M.B.A.	4
M.D./D.D.S.	3
Ph.D.	74
Doctor of physical therapy	31
M.S. in occupational therapy	42
M.S. in nutrition	39
M.A. in biomedical informatics	4
Certificate in psychoanalysis	4

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Design: Columbia University Publications

Writing: Gina Shaw

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