

# Yale Medicine

Meet the new  
public health dean

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Building bridges  
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Education dean  
bids farewell

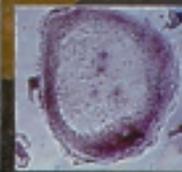
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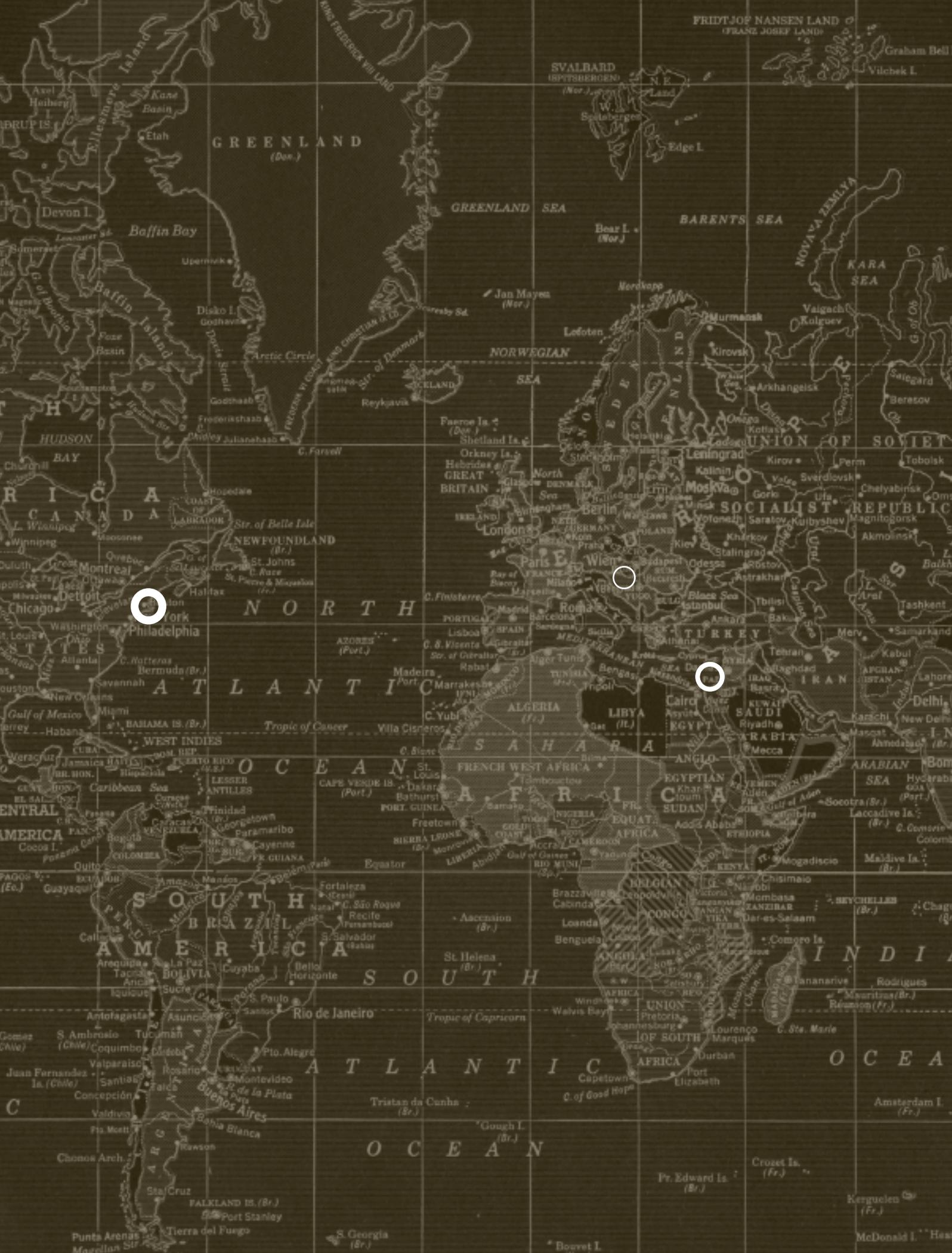
autumn 2006



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# AUTUMN 2006

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*Collage by Janis Melone*

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### On the Web

[yalemedicine.yale.edu](http://yalemedicine.yale.edu)

On our website, readers can submit class notes or a change of address, check the alumni events calendar, arrange for a lifelong Yale e-mail alias through the virtual Yale Station and search our electronic archive.

### Ecoepidemiology an important area of study

I found the article on EcoEpidemiology ["When Animals Sound a Warning," Spring 2006] very interesting. I am a D.V.M. and received an M.P.H. in the section of epidemiology of infectious diseases. My field study on arboviral zoonosis was submitted under the late Professor Robert Shope in 1976. I have since worked in the Cameroon civil service as a specialist in the eradication of tse-tse flies, the trypanosomiasis vector, and as the director of veterinary research. I wish you success in your undertakings in this field, which is of great importance: especially to the developing world, where there is very close habitation between man and animal.

*John Tanlaka Banser, D.V.M.,  
M.P.H. '76  
Yaounde, Cameroon*



#### HOW TO REACH US

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### Duran-Reynals and the viral etiology of cancer

Jennifer Kaylin's article, "The Virus Behind the Cancer" [Spring 2006], unfortunately omits mention of Francisco Duran-Reynals, whose pioneering work on viruses as a cause of cancer was undertaken for the most part in the Department of Microbiology at the School of Medicine for a period of 20 years until his untimely death in 1958. In those years there were very few scientists who worked on viruses as a cause of cancer—Oberling in France and Duran-Reynals, Shope, Bittner, Lucké, Burmeister and Nigrelli in the United States.

A classmate, David J. Nelligan, M.D. '55, and I had the great privilege of spending some time in Duran-Reynal's laboratory during our third and fourth years of medical school. We were witness to his many extraordinary personal qualities and his passionate efforts, despite material difficulties, to persuade a disbelieving scientific community of the importance of viruses in the genesis of some cancers. Unfortunately he did not live to see the general acceptance of many of his theories.

*Ion Gresser, M.D. '55  
Paris, France*

In the Spring 2006 issue there is a lovely article by Jennifer Kaylin called "The Virus Behind the Cancer." It is not the aim of the article to be complete, however, and for future endeavors it could be fine to refresh the Yale memory about cancer and viruses.

In fact the "virus theory of cancer" came to life at Yale with Francisco Duran-Reynals, (1899–1958), who wrote more than 50 original papers on the subject.

*C. Soler-Durall, M.D., M.P.H. '56,  
DR.P.H. '57  
Barcelona, Spain*

### New deans at the medical school

This spring Richard Belitsky, M.D., associate professor of psychiatry, was named deputy dean for education, effective July 1. Belitsky, the deputy chair for education in his department, has had a major impact on the teaching of both medical students and residents. He succeeds Herbert S. Chase Jr., M.D., who stepped down at the end of the academic year.

Belitsky has received three top teaching awards from Yale since 1998, as well as several from his colleagues in psychiatry at the national level. He was inducted into the School of Medicine's Society of Distinguished Teachers in 2002. He has a reputation for a high level of skill in resolving complex clinical problems and is one of the persons most frequently consulted by colleagues when making a referral. He is also a highly effective administrator, adept at framing and working through issues with colleagues in many departments, conceiving and launching new programs and sorting and extracting the data required for good decision making.

Also this spring, Laura R. Ment, M.D., professor of pediatrics and neurology, was appointed associate dean for admissions and chair of the admissions committee, effective July 1. Ment succeeds Thomas L. Lentz, M.D. '64, who retired on June 30 after 38 years in admissions at the School of Medicine. She has received numerous awards for excellence in teaching since 1979.

Ment is a leading authority on injury and recovery in the developing brain of preterm infants and on stroke in children. She is the author of more than 150 scholarly articles and a member of the National Advisory Neurological Disorders and Stroke Council, the major advisory panel of the National Institute of Neurological Disorders and Stroke.

### Yale medicine

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## Fertility, drug discovery and a good-bye

In our cover story for this issue, Contributing Editor Jennifer Kaylin examines new methods of preserving fertility in women undergoing cancer treatment. These new techniques are offering hope to women who might otherwise be unable to have children.

Also in this issue, Contributing Editor Marc Wortman reports on the time he spent with pharmacology Chair Joseph Schlessinger, offering a profile of the pioneer in drug development who was born under siege in the former Yugoslavia during World War II.

Finally in this issue we say farewell to Herbert S. Chase Jr., M.D., deputy dean for education. We first met Herb in 1999, between the announcement of his appointment and the date of his assuming his new job at Yale. Earlier this year he announced his return to Columbia University's College of Physicians and Surgeons. Over the years we've been struck by Herb's eloquence in advocating improvements in medical education. He's been a pleasure to work with and he will be missed.

This spring brought us good news in the form of accolades. First we learned that one of our contributors, David M. Oshinsky, Ph.D., the George Littlefield Professor of American History at the University of Texas at Austin,

had been awarded the 2006 Pulitzer Prize in History for "a distinguished book upon the history of the United States" on April 17. *Polio: An American Story* was featured by *Time* magazine in June as one of five recent books that readers should not miss. Oshinsky wrote "Breaking the Back of Polio" for the Autumn 2005 issue of *Yale Medicine* about the late Dorothy Millicent Horstmann, M.D., FRC '43. Horstmann, the first female professor of medicine at Yale, conducted research that led to a breakthrough in the development of polio vaccines. Oshinsky repeated his tribute to Horstmann in a talk that he gave to the New York Academy of Medicine in January.

Then we learned that *Yale Medicine* had received two Circle of Excellence Awards from the Council for Advancement and Support of Education (CASE). We won a silver medal in the category of Special Interest Magazines. And Contributing Editor Cathy Shufro won a bronze medal from CASE in the category of Best Articles of the Year for "The Unseen Wounds of War," which appeared in the Autumn 2005 issue of *Yale Medicine*. Shufro wrote about post-traumatic stress disorder in veterans returning from Iraq and the role of Vietnam veterans in providing an informal support network for the younger men.

Congratulations to all.

John Curtis  
*Managing Editor*  
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### SECOND OPINION BY SIDNEY HARRIS



"IN SIMPLE TERMS, IT'S YOUR HARD DRIVE."

## Meet the new dean of public health

Harvard professor Paul Cleary, a medical sociologist, has studied how patients relate to health systems.

At first glance, Paul D. Cleary, PH.D., might seem an unorthodox choice to be dean of public health. The one-time rock and blues pianist started out as a medical sociologist, but a look at his research projects and publications shows that he's spent his career exploring behaviors that affect health and how people interact with the systems that provide health care. His work has sought better ways to find out how patients view their care; he has also studied what determines variations in the quality of care. He's traveled the world to study HIV/AIDS, smoking, alcohol abuse and mental illness.

"The things I have focused on are health behavior, analytic methods, research that people refer to as social epidemiology, statistical modeling, health policy and behavioral science," Cleary, a member of the Institute of Medicine of the National Academy of Sciences, said in an interview in March, about two weeks after Yale President Richard C. Levin and School of Medicine Dean Robert J. Alpern, M.D., announced his appointment as dean of public health and chair of the Department of Epidemiology and Public Health.

Cleary, who enjoys bicycling, skiing and flying his private plane, began his work at Yale in July. He succeeds Michael H. Merson, M.D., the Anna M.R. Lauder Professor of Public Health, who stepped down as dean in

2005 after 10 years on the job. Brian P. Leaderer, M.P.H. '71, PH.D. '75, served as interim dean for 18 months.

"My philosophy of organization," Cleary said, "is that I should make it easier for the faculty to do their job better."

Cleary also believes in programmatic research. "Let's say you have two people, three people, four people who want to focus on cancer research. They may reinforce each other. You may be able to get more support for certain programs. You may be more likely to have an impact. Young assistant professors who want to work in that area will have mentors," Cleary said. "I feel very strongly about developing research programmatically, fostering multidisciplinary collaborations and developing excellence in focused areas."

Those areas of inquiry, he stressed, would be determined by the faculty. And his programmatic view would not preclude individual scholarship by faculty members, he said. "You rely on their vision and innovation to do things," he said.

Cleary's academic path, also a bit unorthodox, began with his graduation from the University of Wisconsin in 1970 with an undergraduate degree in physics, a field that still fascinates him. Advanced studies in physics seemed too abstract at a time when the real world of social ferment inspired by the Vietnam War and civil rights movement was beckoning. After taking time off from school to play in blues and rock bands, he chose to study medical sociology, also at Wisconsin.

In 1982 he joined the faculty at Harvard, where, at the time of his appointment at Yale, he was professor



JOHN CURTIS

Paul Cleary started as the new dean of public health in July. Cleary, who specializes in studies of interactions between patients and health care organizations, believes in programmatic research, as well as the innovations of individual scientists.

of health care policy in the departments of health care policy and social medicine at Harvard Medical School.

"I know that many of you, as I do, look forward to working with him in the years ahead," Levin told a gathering of public health faculty in the Winslow Auditorium. "You will find that he can be a sympathetic listener, someone who can pay attention to people and at the same time be capable of independent thinking and leadership."

Alpern, Ensign Professor of Medicine, said he shares Cleary's vision of programmatic research and multidisciplinary collaborations.

Cleary and his wife, Cynthia Barnett, J.D. '82, a corporate and environmental lawyer in Boston, have two children, Janet, 19, and Barnett, 14.

—John Curtis

## Cancer Center moves forward after vote by New Haven Board of Aldermen

In a unanimous vote in May, New Haven's Board of Aldermen cleared the way for the construction of a new cancer facility at Yale-New Haven Hospital (YNHH) for patient care and clinical research. With groundbreaking for the 14-story, \$450 million structure scheduled for this fall, the facility will open its doors to patients at the end of 2009.

The vote followed a marathon negotiating session in March in which the city, the hospital, a labor union and community groups resolved numerous issues surrounding the Yale Cancer Center (YCC). Under the agreement the city agreed to approve needed zoning changes; the hospital increased its offer of benefits to the community; and the hospital and the Service Employees International Union agreed to a nine-month organizing period for hospital workers, to be followed by a secret-ballot election. Mayor John DeStefano Jr. called the deal a "win-win-win" for all parties.

For the hospital and medical school, the deal means the chance to continue improvements in cancer treatment and research.

"The facility will allow us to meet our mission of providing exceptional care to the most acutely ill patients we serve," said Marna P. Borgstrom, M.P.H. '79, CEO and president of YNHH. Richard L. Edelson, M.D. '70, professor of dermatology and director of YCC, agreed. "This is a huge step forward for the Yale Cancer Center's capacity to provide truly state-of-the-art care," he said.

The hundreds of physicians, nurses, clinical researchers and laboratory technicians involved in cancer treatment at Yale are now dispersed throughout the hospital and medical school. The new building on Park Street will bring them together under one roof, with immediate benefits for patients, said José Costa, M.D.,

professor of pathology and deputy director of the YCC. "Our current facilities are the result of a cancer center that has been in existence for 30 years, and with the passage of time they have grown and have been remodeled to adapt to progress in clinical medicine, but in a less-than-ideal fashion," Costa said. "The new building benefits from a clean, forward-looking design."

One of the biggest advantages of the unified facility will be easier access to state-of-the-art care for patients and families facing a challenging illness, Borgstrom said.

"Cancer care is multidisciplinary, involving important input from several specialties," Edelson said. "Bringing collaborative physicians together for face-to-face discussions—to put their heads together to discuss a challenging case when it is fresh in their minds, rather than simply reading one another's notes in the chart—is simply the best way to do it."

Although it is still three years from its scheduled completion date,

Edelson said the project has already had an impact. Thanks in part to the plans for a new building, Edward Chu, M.D., the cancer center's chief of medical oncology and director of clinical research, was able to recruit 11 top clinical investigators to Yale in just two years. "We have to have the best doctors that we can possibly have, and we can do a much better job attracting them if we have the very best facilities," Edelson said.

With that new expertise and a new building on the way, Yale will be able to direct more clinical trials of treatments discovered at the School of Medicine, Edelson said. For Costa, the building's advancement of both care and research will mark a new era in the YCC's 30-year history. "We want to be practicing the medicine of tomorrow," said Costa. "Let's not remodel the house; let's build a new house that is ideally suited not just for today, but for where we think we will be in 10 years."

—Peter Farley



A vote by New Haven's aldermen and negotiations among the city, Yale-New Haven Hospital, community groups and a labor union have paved the way for construction of the Yale Cancer Center. Among the specialists who will work in the new clinical pavilion are (seated, from left) Lyndsay Harris (breast cancer), Gary Friedlaender (sarcoma),

Frank Detterbeck (thoracic), Wasif Saif (gastrointestinal), Dennis Cooper (lymphoma/bone marrow transplant), (standing, from left) Mario Sznol (melanoma), Stephan Ariyan (melanoma), Donald Lannin (breast cancer), Francine Foss (lymphoma/bone marrow transplant) and Jack van Hoff (pediatric oncology).

## Ugandan doctors visit Yale in first steps of collaboration on medical education

In 2002 Majid Sadigh, M.D., associate clinical professor of medicine, made the first of three trips to the Makerere University Medical School in Uganda. “I am stunned,” he said on his return, “by the level of scientific elegance in that institution.” On his second visit two years later, Sadigh taught Ugandan medical students and residents. On his third trip, in the fall of 2005, he was joined by Asghar Rastegar, M.D., associate chair of medicine. Their goal this time went beyond simply teaching. “Makerere was a gold mine for some sort of collaboration,” Sadigh said, noting the enthusiasm for a partnership on both sides.

In March three ranking members of Makerere’s medical faculty spent a week at Yale to pursue that collaboration. “The major areas of interest are medical education and the importance of clinical care,” said Samuel Luboga, M.D., deputy dean of the medical school at Makerere. “Under that umbrella there will be specific programs.”

The largest university in Uganda, Makerere is the alma mater of several presidents of African nations. The medical school was recently selected by the Academic Alliance for AIDS Care and Prevention in Africa, an international public-private partnership, as the site of the Infectious Diseases Institute, a regional center of excellence for HIV/AIDS care, training, research and prevention in East Africa. To be sure, HIV/AIDS is the country’s leading health problem, but not the only one. Infectious diseases, malaria



and maternal morbidity and mortality also rank high. Then there is the shortage of doctors.

In the best of circumstances, Luboga said, there is one physician per 18,000 people. In the countryside, though, only one doctor may be available for 35,000 to 50,000 people. “If I had my way,” Luboga said, “it would be one per thousand.”

While at Yale, Luboga, Harriet Mayanga, M.D., chair of medicine, and Samuel Kaggwa, M.D., chair of surgery, visited colleagues in surgery, infectious diseases and medical education.

As envisioned, the collaboration would see a year-round presence by Yale attendings, who would rotate through the 1,600-bed Mulaga Hospital in Uganda. Students and residents would also do rotations there. Ugandan faculty, residents and attendings would come to Yale for training.

The program fits into Yale’s vision of its mission as a global university and would offer Yale physicians, residents and students experience with diseases not usually seen in the United States. Funding is being sought in Uganda and the United States. Ideally,

the program would be sustainable for the long term.

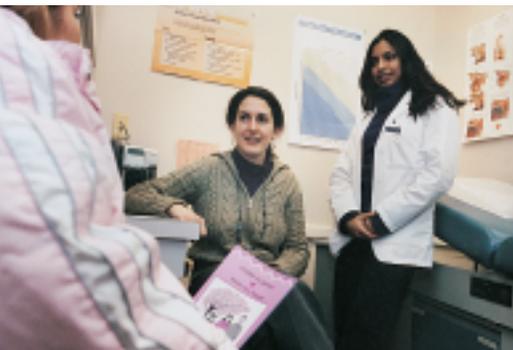
David L. Coleman, M.D. HS ’80, professor and interim chair of medicine, said the department is also seeking a partnership with a facility in an underserved community in Connecticut. “We have taken the responsibility to improve public health and health care in communities, particularly communities that are underserved or have resource constraints.” He hopes to have the Ugandan exchange in place by the end of the 2006-07 academic year. “We want to help improve the health of the citizens of Uganda by assisting the leadership of Makerere University to improve medical education. We hope to make an enduring contribution while also learning from our colleagues in Uganda.”

—John Curtis

## Students reach out to the uninsured at free medical clinic in Fair Haven

The first patient to arrive at the HAVEN Free Clinic when it opened its doors last November was in serious danger. The man had the highest level of thyroid-stimulating hormone that both the attending physician and medical director had ever seen. Although his condition could have been easily treated, he hadn't sought help before because he has no health insurance. Since his visit to HAVEN, however, he has had access to medications that keep his hyperthyroidism under control.

HAVEN, a new medical clinic in the Fair Haven neighborhood of New Haven, was founded with just such patients in mind, said Mallika Mendu, co-director of the clinic with Margaret Samuels-Kalow, a fellow member of the medical school's Class of 2008. Organized by students in public health, medicine and nursing and in the Physician Associate Program (PA), HAVEN (an acronym for Health Care, Advocacy, Volunteerism, Education and Neighborhood) provides an array of medical services to uninsured patients free of charge every Saturday morning. Each patient is seen by a team of students and a volunteer attending physician, as well as at least one of the clinic's medical directors.



Medical students, working under the tutelage of faculty preceptors, opened a free Saturday morning clinic in New Haven's Fair Haven neighborhood. Students Erica Mintzer (left) and Susan Mathai met with a patient at the clinic in January.

A physician or nurse practitioner from the Fair Haven Community Health Center, which houses HAVEN, acts as attending supervisor. In addition, faculty from the medical and nursing schools and the PA program serve as attendings.

HAVEN differs from the Fair Haven Clinic in several ways. The Fair Haven Clinic is not free—patients are seen on a sliding scale—and it is open only on weekdays. And HAVEN incorporates Yale faculty, who serve as attendings and provide pro bono specialty referrals. In this way HAVEN hopes to reach a population for which few medical services are available.

Most patients come in with multiple unmanaged chronic diseases such as diabetes and hypertension, said education coordinator and medical student Corinna Levine. The students run an education program that provides general information about diseases and their management, which supplements the instructions the patient receives from the attending physician.

Patients also receive a social work consultation about agencies that provide assistance with such nonmedical issues as housing. Cynthia Correll, the clinic's social work coordinator and a second-year medical student, said that most patients are unaware that they may be eligible for public health insurance programs. Applications are complicated and often not available in Spanish, the language spoken by most of the clinic's patients. To overcome the language barrier, the clinic staff includes student interpreters.

HAVEN receives funding from all the Yale health professions programs and is seeking grants from community sources. Yale-New Haven Hospital is donating laboratory services and clinic organizers have built up a stock of medicines to give to patients.

For the students, the clinic is a way to help others. "There's a real need in our own community," said first-year student Rachel Solomon.

—Colleen Shaddox

## et cetera ...

### YALE JOINS IN AIDS INITIATIVE

Public health faculty at Yale will work with the William J. Clinton Foundation HIV/AIDS Initiative and the Ethiopian Ministry of Health to launch the Ethiopian Hospital Management Initiative to improve management of the public hospital system in Ethiopia.

Under this initiative, mentors from the United States and other countries will work with directors of 10 to 12 public hospitals and health bureaus in Ethiopia to identify systemic changes that can improve provision of health care to the country's 76 million people.

"We want the Yale-Clinton Foundation mentors to think outside the box, tell us what they see and what they recommend, and then we will consider it," said Adhanom Ghebreyesus M.D., the Ethiopian minister of health, who proposed the collaboration.

Elizabeth H. Bradley, M.B.A., PH.D., associate professor of public health, directs the project at Yale. The Yale team has completed a needs assessment in Ethiopia and has recruited the 22 fellows to serve in this effort, which began on July 1.

—J.C.

### CDC FUNDS PREPAREDNESS CENTER

To ensure a swift, coordinated response to disasters, disease outbreaks and acts of terrorism, the Department of Epidemiology and Public Health received a \$4.5 million, five-year grant in February from the Centers for Disease Control and Prevention to establish the Yale Center for Public Health Preparedness.

Staff at the center, one of 52 nationwide, will assess the training needs of Connecticut's public health work force, develop curricula and ensure that training is provided. The center will also expand the public health preparedness curriculum available at Yale.

Brian P. Leaderer, M.P.H. '71, PH.D. '75, the Susan Dwight Bliss Professor of Public Health, is the principal investigator on the grant.

Linda C. Degutis, M.S.N. '82, DR.PH. '94, associate professor of surgery (emergency medicine) and of epidemiology and public health, is the director of the center.

—J.C.

## Beauty of Botox is more than skin deep

Yale scientists employ botulinum toxin, known for its cosmetic uses, to treat neurological disorders.

For centuries, botulinum toxin has been known as the cause of the paralytic and sometimes fatal illness known as botulism. Best known by the brand name Botox, the toxin's type A variant has a reputation as a cosmetic and is famous for smoothing furrowed brows.

Bahman Jabbari, M.D., professor of neurology, is among a small number of clinicians with expertise in the toxin's many therapeutic uses. He and his Yale neurology colleagues are using it to treat a constellation of neurological disorders, migraine headaches and other complaints in a growing practice that saw 300 patients last year.

"It is a remarkable drug," said Jabbari, the former chief of neurology at Walter Reed Army Medical Center in Washington, who was among the first

researchers to establish the drug's effectiveness in treating pain. "It is something that gives very few side effects, yet the patient sees results that are so dramatic, so sustained."

Botulinum A is used to treat muscular symptoms in head trauma, stroke, cerebral palsy and multiple sclerosis. In these conditions, the relief comes from the toxin's muscle-relaxing properties—the same properties that make it useful to combat wrinkles, said Jabbari. But, he added, the drug has a range of biochemical actions effective in many conditions, including excessive sweating and salivation. Botulinum A offers a palliative option in many cases where other medicines had been unable to offer much comfort.

"It is very satisfying to be able to give relief to patients with a chronic neurological disorder who previously had no hope," said Jonathan M. Goldstein, M.D., associate professor of neurology and director of clinical services in the department.

Jabbari's current investigations focus on pain relief, which he believes is the greatest area of potential for botulinum A. Patient H. Stuart Engar volunteered for one of Jabbari's studies, hoping for a reprieve from excruciating neck pain. An undiagnosed neurological disorder had left Engar unable to work or perform such simple tasks as bending to unload the dishwasher. Though the study is completed, Engar continues to get botulinum A injections every three to four months for pain and mobility. He called the treatments "life-changing."

On a recent visit, Jabbari administered a series of injections in carefully pinpointed muscles along Engar's

neck. In some cases, physicians use electromyographic guidance to make the injections. Jabbari asked Engar if he experienced side effects from the treatment. Like most patients, he did not. The most common side effects are flu-like symptoms and muscle weakness, the latter of which is often prevented by proper dosage, Jabbari said. There is no danger to patients who take botulinum A long-term, he added, because the toxin gets deactivated in the body after three months.

Patients do, nevertheless, express misgivings about Botox. When Huned S. Patwa, M.D., associate professor of neurology, picked up a syringe, the patient—a migraine sufferer—asked, "Do you know where it came from?"

She was referring to a Florida physician who injected patients with a counterfeit version of the drug. The unlicensed product contained much higher concentrations of the toxin, causing patients to contract botulism.

Ironically, botulinum's promise as a weapon helped to unlock its healing potential. Army officer Edward J. Schantz, PH.D., first purified botulinum toxin type A in a crystalline form in 1946 when the U.S. military was studying it as a weapon. Schantz later collaborated with Alan B. Scott, M.D., who used the toxin to relieve strabismus (crossed eyes) in monkeys. Over the course of 20 years they developed a version of the toxin that won FDA approval for testing on humans. They sold it to the pharmaceutical company Allergan, which branded the drug Botox. In 1989, the FDA approved it for the treatment of strabismus, blepharospasm and hemifacial spasm in patients over 12 years old.

Researchers like Jabbari see the drug's future applications as broad and promising. For patients like Engar, clinical botulinum has already made a dramatic difference. "I can hold my grandchild," he said. "That may seem like a small thing, but ... no, that's a big thing."

—Colleen Shaddox



TERRY DAGRADI

Botox, known for its cosmetic uses, is now being used for clinical purposes—to treat neurological disorders, migraine headaches and other complaints.

## Anesthesiologist finds a new way to manage blood loss in the operating room

The most common method for tracking blood volume during surgery—a catheter inserted into the heart that transmits information to a monitor—is not only invasive, but not very accurate.

This leads, according to Kirk H. Shelley, M.D., PH.D., associate professor of anesthesiology, to a delicate clinical balancing act with very high stakes. “Too little fluid can put a tremendous amount of stress on the kidneys, the cardiovascular system and the central nervous system,” Shelley said. “But if you give too much fluid for the heart to pump, it backs up, causing bloating and pulmonary edema.”

Now Shelley, who as chief of ambulatory surgery oversees about 8,000 surgeries a year at Yale-New Haven Hospital, has found a possible solution to this surgical dilemma. By combining a clinical insight from the 1870s with data provided by the modern pulse oximeter, a clothespin-like clip placed on a fingertip, ear or toe to measure the oxygen level in the blood, Shelley has discovered a noninvasive, precisely quantified method to monitor blood loss and guide difficult decisions in the operating room.



JON CANNELL

The pulse oximeter has become a common sight in hospital hallways since it was first introduced in the 1980s. The clips contain light-emitting diodes that shine both visible red and infrared light through the skin. Because deoxygenated hemoglobin allows infrared light to pass but absorbs red light, while oxygenated hemoglobin allows red light to pass and absorbs infrared, the oximeter can detect changes in the blood's oxygen saturation by calculating the relative absorption of red and infrared light.

In those early days of the pulse oximeter, Shelley discovered that oximetry clips generated exceedingly complex waveforms that were “cleaned up” by oximeter manufacturers in favor of clear, simple signals. But Shelley's curiosity about the wealth of information produced by early oximeters prompted him to devise software to sift through the raw oximetry signal for potentially valuable clinical information.

Shelley found that pulsus paradoxus—a drop in blood flow after a deep breath caused by the mechanical ventilation used in anesthesia—could be detected in the raw oximetry waveform.

“There's all sorts of wild, raw data that comes off the pulse oximeter that companies have worked hard to eliminate, because it has been seen as just noise,” said L. Alan Carr, PH.D., then a senior licensing associate in Yale's Office of Cooperative Research who shepherded the discovery through a patent application. “What's ironic is that the background data actually had useful information in it.”

Shelley plans to mine the pulse oximeter for even more clinical treasure, and he is adapting his method for use in nonventilated patients suffering from blood loss, such as trauma patients arriving at emergency departments.

—Peter Farley

## et cetera ...

### WORK, HABITS AND HEALTH

Researchers in Epidemiology and Public Health have received \$1.7 million from the National Institute on Aging to study the interplay of work-life, health habits and health over a lifetime. For the study, “Work-life, Health Habits and Health: Longitudinal Analysis of Aging,” researchers will build a life cycle model, covering adolescence to late life, that evaluates occupation, smoking and drinking and obesity.

The study began in March and will continue through February 2010. Jody L. Sindelar, PH.D., professor of public health, is the principal investigator. “Since much of life is spent working, characteristics of work are potentially important risk factors and can be viewed in the same vein as health habits,” she said.

—John Curtis

### YALE TO STUDY LEISHMANIASIS

Yale researchers have received a \$5.4 million grant from the National Institutes of Health for the study of cutaneous leishmaniasis (CL), a parasitic disease spread by the female sand fly.

The grant will support three projects in Colombia. The first will develop the infrastructure for clinical trials. The second will identify factors responsible for transmission as well as vector control measures. The third will study immunological responses to the parasite.

“With over 400 species of sand flies in the Americas alone and at least a dozen species of CL occurring all over the world, the epidemiology of leishmaniasis is complex,” said co-principal investigator Leonard E. Munstermann, PH.D., senior research scientist in epidemiology (microbial diseases). “However, we believe that the current study in Colombia can become a sound epidemiological model for other endemic regions.”

The program is a collaboration with the Centro Internacional de Entrenamiento e Investigaciones Medicas in Cali, Colombia. Diane M. McMahon-Pratt, PH.D., professor of epidemiology, is the co-principal investigator and the Yale program director on the grant.

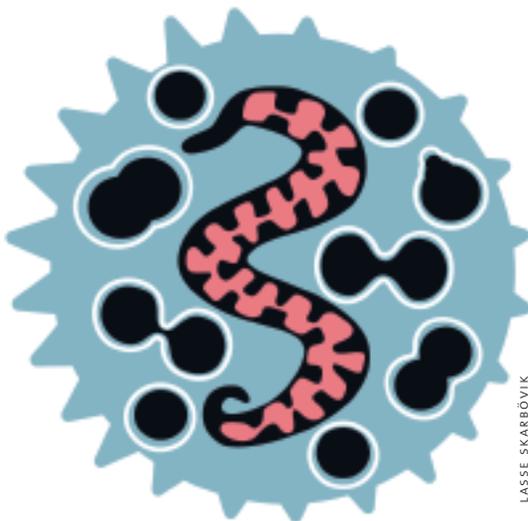
—J.C.

## Can microRNAs put the brakes on cancer?

Between 20 and 25 genetic letters long, microRNAs regulate the expression of genes involved in development.

One of the basic premises of biology is that our genetic code lies in our DNA, which, in turn, relies on RNA to transmit that code to build the proteins that carry out the chemical activities necessary for life.

In the early 1990s, however, scientists at Harvard Medical School discovered a genetic switch in the microscopic roundworm *C. elegans*



LASSE SKARBØVIK

that called into question long-held beliefs about the role of RNA. *Lin-4* was the first of what would become known as microRNAs.

Only 22 genetic letters long, *lin-4* is far shorter than a typical 1,000-letter RNA message, and rather than helping to build proteins, it sticks to messenger RNA and shuts down the expression of genes involved in early development.

It would be seven years before Frank Slack, PH.D., showed that *lin-4* was no fluke. In 2000, while a post-doctoral fellow at Harvard, Slack, now associate professor of molecular, cellular and developmental biology at Yale, identified a second microRNA, *let-7*, that also governs development in *C. elegans*.

Then the floodgates opened. In the past five years, hundreds of gene-silencing microRNAs have been found in plants and animals, including over 200 in humans that may regulate more than a third of our genes. Because half of the *C. elegans* genome matches our own, including the genes for *let-7*, Slack's research is having an impact on our understanding of human development, aging and illness, especially cancer.

According to Slack, one of the primary roles of microRNAs is to put a brake on cell proliferation during development. "Initially in the human embryo, you've got cells just dividing, dividing, dividing—to make as many cells as possible," he said. "But at some point you want to make an organ. MicroRNAs come on to tell cells to stop dividing and to start differentiating into organs. And they stay on all through life, to keep the cells from

dividing again." Slack believes that the uncontrolled cell division that is a hallmark of cancer might be caused when the check on cell growth imposed by microRNAs is somehow lifted. "In various cancers we've looked at, microRNAs have been shut off," he said. "We think that causes cells to re-enter their cell division program and behave like they're in the embryo."

In particular, Slack has found that *let-7* is tamped down in human tumors, unleashing *Ras*, a cell-proliferation gene that has long been implicated in cancers of the lung and pancreas.

Slack is collaborating with Joanne B. Weidhaas, M.D., PH.D., assistant professor of therapeutic radiology, to develop microRNA-based diagnostic tools and treatments. According to Weidhaas, genomic analyses of tumors and cancer therapies targeting single genes have been largely disappointing, because hundreds of genes are faulty in any given cancer and it has been difficult to discern which mutations are most important. The excitement surrounding microRNAs, she said, stems from their ability to regulate entire suites of genes that underlie biological pathways.

A 2005 study published in the journal *Nature* found that measuring the levels of just 217 microRNAs could generate clearer genetic signatures for tumors than 16,000 probes for messenger RNA. Encouraged by these results, Slack and Weidhaas hope within two years to perfect a microRNA-based screening device that could help tailor cancer treatments to patients' tumor types, and they are in the early stages of testing a *let-7* inhalant therapy to rein in uncontrolled cell growth in lung cancer. In addition, Weidhaas has shown that raising *let-7* levels in *C. elegans* makes the worm's cells more sensitive to radiation, leading her to conclude that a *let-7* treatment could be a powerful adjunct to standard radiotherapy.

—Peter Farley

## Tissue engineering takes a leap forward with new scaffold design

Tissue engineering began in the late 1980s to fill a gap in the treatment of certain diseases—those for which transplants could offer a cure. There isn't enough natural human restorative tissue to go around, however, and two recent studies at Yale show how clinical applications of tissue engineering are coming within reach.

In one study, researchers created a tiny water-soluble “scaffold” that provides a framework for the growth of new blood vessels; in the other, they demonstrated that the technique for creating new arteries—manipulating telomerase to extend cell life—doesn't necessarily cause cancer, as had been feared. Both papers appeared in the February 21 issue of the *Proceedings of the National Academy of Sciences*.

“A microvascular network is fundamentally important for tissue engineering,” said Erin Lavik, SC.D., an assistant professor of biomedical engineering and author of one of the studies. She added, however, that the “stability of microvascular networks has been a challenge.”

Lavik's team built scaffolds out of gelatin-like, porous hydrogels that can be chemically treated to form numerous interconnected internal pores. In collaboration with Joseph A. Madri, M.D., HS '76, PH.D., professor of pathology and of molecular, cellular and developmental biology, Lavik and her colleagues seeded the gels with blood vessel cells, implanted them under the skin of mice and found that functional and stable vessel networks had formed after six weeks.

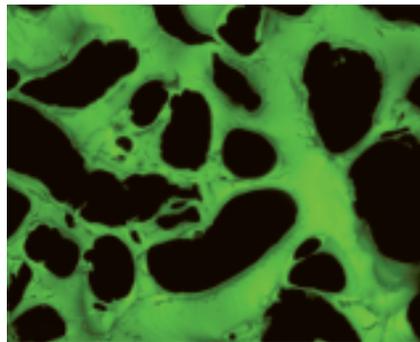
Scientists have been able to create new arteries in humans by using the patient's own cells, but one drawback has been that these replacements haven't been as effective in older people. A second Yale team found a way around that problem last year.

Researchers had previously used gene therapy to deliver telomerase, an enzyme that extends the cells' normal life span by lengthening their chromosomes following cell division. The technique worked, even in patients as old as 85, said Laura E. Niklason, M.D., PH.D., an associate professor of anesthesiology and biomedical engineering. Telomerase, however, is highly active in cancerous cells. “One of the outstanding questions is, ‘How safe is this?’,” she said.

In the latest study, which involved tissue samples from eight elderly patients and one young donor, Niklason's team took cells obtained during a coronary bypass procedure and increased telomerase expression. They discovered that they had not produced cancerous cells in so doing. “Just turning on telomerase by itself is not enough to create cancer,” she said.

Although Niklason said more work is needed, her findings may one day enable the development of techniques for making replacement tissue.

—John Dillon



Scaffolds such as these, made of macroporous hydrogels, serve as the foundations for creating new blood vessels.

## et cetera ...

### FIGHTING A LETHAL MICROBE

Scientists at Yale have discerned how the immune system fights the bacterium that causes Legionnaire's disease.

The bacterium, *Legionella pneumophila*, hides from immune defenses by living and multiplying in sealed vacuoles inside cells. Craig R. Roy, PH.D., associate professor of microbial pathogenesis and senior author of a study published in *Nature Immunology* in March, and colleagues found that a protein called Birc 1e is key to detecting *Legionella* infection.

Postdoc Dario S. Zamboni, PH.D., lead author of the study, showed that when bacterial products leave the infected cells, Birc 1e activates a signaling pathway that stimulates a protease called caspase-1. The protease degrades other proteins in the infected cell, starting a cascade of events that results in cell death.

“Identification of Birc 1e and the caspase cascade gives us information about the process of how the body fights off infection by a potentially lethal microbe, as well as possible targets for treatments,” said Roy.

—John Curtis

### GENE LINKED TO SOCIAL AVERSION

Knocking out a gene in the brains of mice can counteract an aversion to social interactions, according to researchers at Yale and the University of Texas Southwestern Medical Center at Dallas.

The scientists conditioned mice to avoid mice they didn't know by exposing them to more aggressive mice. Then, using viral technology developed by Ralph J. DiLeone, PH.D., assistant professor of psychiatry at Yale and a co-author of the report that appeared in the journal *Science* in February, the researchers inactivated a gene called brain-derived neurotrophic factor (BDNF).

Mice without BDNF did not develop defeated behavior, DiLeone said, suggesting that the gene is essential to developing social aversion as a response to aggressive behavior.

“The results have implications for a number of psychiatric conditions, including depression and post-traumatic stress disorder, where stressful events can have significant and long-lasting consequences for social behavior and interactions,” DiLeone said.

—J.C.

## Chemical warfare during the Cold War

In a work of fiction, a Yale psychiatrist describes how the Army tested agents for use in war.

Pfc. Don Wheatland sits on his bed babbling, pulse racing, occasionally swatting imaginary flies. Capt. Martin Baker, M.D., knows what has gone wrong. The soldier is a guinea pig in a test of VX; a single drop of this lethal neurotoxin can kill a man in 15 minutes by overstimulating the nervous system. The year is 1961, and the soldier is one of the “volunteers” undergoing tests of potential chemical warfare agents at Edgewood Arsenal in Maryland. Wheatland has been vomiting, and an Army medical officer has been treating the soldier by injecting him with atropine—too much, as it turns out. The private is delirious from atropine poisoning.

But the real problem will not emerge until later, when medical officer Baker gets a 10 p.m. phone call: “Wheatland has disappeared.”

This scene comes from *Men and Poisons: The Edgewood Volunteers and the Army Chemical Warfare Research Program*, a fictionalized account of life at Edgewood Arsenal in Maryland by Malcolm Baker Bowers Jr., M.D., HS '65 (Baker in the book). Bowers, now professor emeritus of psychiatry, spent three years as a medical officer at Edgewood beginning in 1959. Bowers said he was inspired to write and self-publish the book to provide an account of chemical warfare research of the era. About 650 men were exposed to these nerve agents as part of Army research at Edgewood, according to the U.S. Army Medical Research Institute of Chemical Defense.

In one scene that illustrates the vision of chemical warfare held at the time, a general tells the research staff: “Think of it: LSD-impregnated toilet paper gets delivered to the Kremlin.”

In an interview at his office at 300 George Street, where he still sees patients, Bowers described his commanding officer, who tested the poisons on himself first. “His approach to the feasibility of testing was to insist that he take at least twice the dose proposed for a volunteer.”

Looking back, Bowers was struck by the lack of informed consent in that era. The 30 soldiers recruited for monthlong rotations had no idea what they were getting into, said Bowers, who provided them with medical care.



JOHN CURTIS

Malcolm Bowers wrote a novel based on his experiences with chemical warfare agents at the Edgewood Arsenal.

“They came to get a break from their bases and to check out the infamous bars along the harbor in Baltimore.”

Before being exposed to nerve gases and hallucinogens, the soldiers got only brief verbal explanations of what was to happen. They did not really consent, either. They signed no forms and, Bowers noted, “There was no question that they would participate.”

Bowers recounted in his book how a seemingly healthy volunteer given LSD became psychotic and had to be sent to a psychiatric hospital. He was later diagnosed with paranoid schizophrenia. Bowers said that seeing such catastrophic drug reactions sparked his interest in how drugs can trigger psychiatric illness—the subject of another self-published book, *Abetting Madness: The Role of Illicit and Prescribed Drugs in Promoting Psychotic and Manic Disorders*.

Bowers’ account rings true to his colleague George K. Aghajanian, M.D. ’58, the Foundations Fund Professor of Psychiatry and Pharmacology, who served in the Army at Edgewood beginning a year after Bowers left. “It’s not fiction,” he said, “Just the names are fictional.”

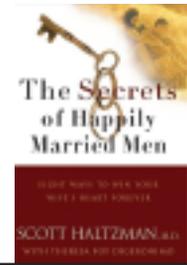
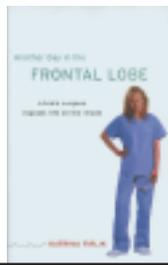
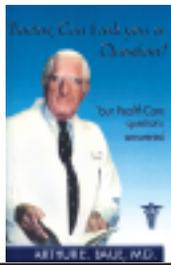
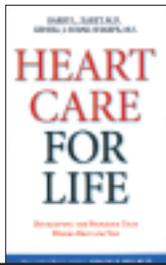
Before Bowers and Aghajanian arrived at Edgewood, the work there had led to a therapeutic breakthrough: the first cancer chemotherapy agent. Two Yale pharmacologists, Louis S. Goodman, M.D., and Alfred Gilman, Ph.D., showed that the World War I gas nitrogen mustard could shrink lymphatic tumors. Their study was published in *The Journal of the American Medical Association* in 1946.

As for the soldier on whom Wheatland was based, he was found in New York City two days after he disappeared, when he asked a police officer what city he was in. The resulting newspaper headlines embarrassed the Army, but the soldier recovered.

—Cathy Shufro

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*Bookshelf* is a column focusing on books and authors at the School of Medicine. Send ideas to Cathy Shufro at [cathy.shufro@yale.edu](mailto:cathy.shufro@yale.edu).



**Developmental Psychopathology: Volume 1, Theory and Method, 2nd ed.**

edited by Dante Cicchetti, Ph.D., and the late Donald J. Cohen, M.D. '66 (Wiley) The topics addressed in this volume derive from current research on developmental psychopathology and include cross-cultural perspectives, developmental epidemiology, self-determination theory and gender issues.

**Heart Care for Life: Developing the Program That Works Best for You**

by Barry L. Zaret, M.D., the Robert W. Berliner Professor of Medicine, and Genell J. Subak-Sharpe, M.S. (Yale University Press) This book outlines characteristics common to each form of heart disease, from angina and heart attacks to high blood pressure and cardiac arrhythmias. The authors include instructional case histories and guide the reader in assessing personal variables to develop an individual treatment and life style program. The authors also provide quizzes to assess risk factors and suggest questions that readers can ask their doctors.

**Doctor, Can I Ask You a Question? Your Health Care Questions Answered**

by Arthur E. Baue, M.D., former chair and Donald Guthrie Professor of Surgery (XLibris Corp.) This book provides information that patients need in order to be informed about their health care. Baue discusses finding a qualified doctor; patient-doctor relationships and patient rights; disease prevention; and senior health care.

**Another Day in the Frontal Lobe: A Brain Surgeon Exposes Life on the Inside**

by Katrina S. Firlik, M.D., assistant clinical professor of neurosurgery (Random House) Firlik provides an inside look at the work of a brain surgeon, from the basic tools used in brain surgery to the ethical dilemmas that neurosurgeons face. She describes some of her more bizarre cases—such as a man with a three-inch nail shot into his brain—and the process of speedy decision making after a patient has suffered a head injury or stroke, when time is critically important. She also predicts what she believes to be the future of brain surgery—“brainlift” procedures that promise cognitive enhancement.

**Life Is With Others: Selected Writings on Child Psychiatry**

by the late Donald J. Cohen, M.D. '66, edited by Andrés Martin, M.D., M.P.H., and Robert A. King, M.D. (Yale University Press) Cohen, former director of the Child Study Center, made groundbreaking contributions to the study of autism and developmental disabilities, Tourette syndrome, developmental psychopathology, child psychoanalysis and children's adaptation to trauma. This book addresses topics including childhood psychiatric disorders; research ethics; mentorship; and the role of play fantasy, aggression and violence in childhood. Selections also include autobiographical writings.

**Oasis in the Overwhelm: 60-Second Strategies for Balance in a Busy World**

by Millie Grenough, M.S.W., clinical instructor in psychiatry (social work) (Beaver Hill Press) The author shares strategies that she designed to balance her work and personal life. She has developed a process to reduce stress and improve productivity; manage distractions and sharpen focus; and create a way of life that increases both personal and professional satisfaction.

**Out of the Woods: Tales of Resilient Teens**

by Stuart T. Hauser, M.D. '66, Joseph P. Allen, Ph.D., and Eve Golden, M.D. (Harvard University Press) Through interviews with 70 people who had been institutionalized in a psychiatric facility during their adolescence, the authors investigate why some teens bounce back from a troubled adolescence while others don't. The authors observe that the subjects who fared best had an interest in and capacity for reflection, responsibility and relationships, as well as a positive attitude and the desire to change.

**Principles and Practice of Geriatric Psychiatry**

edited by Marc E. Agronin, M.D., and Gabe J. Maletta, M.D., Ph.D. (Lippincott Williams & Wilkins) This textbook combines the insights of psychiatry, medicine and neurology by using scientific principles of geriatric psychiatry and clinical practice to provide evidence-based guidelines for care of the elderly. Contributors use case studies to illustrate these principles.

**The Medical Interview: Mastering Skills for Clinical Practice, 5th ed.**

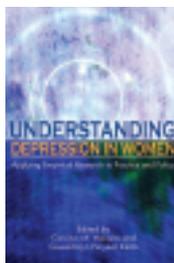
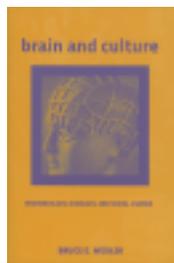
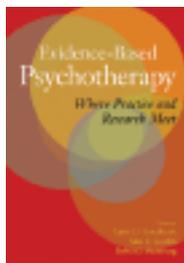
by John L. Coulehan and Marian R. Block, M.D. '71 (F.A. Davis) This updated text helps medical students and other health-professions students learn good communication skills, including basic history-taking, conveying bad news and communicating unanticipated adverse outcomes. The authors also address ethical and legal issues relating to medical interviews.

**The Secrets of Happily Married Men: Eight Ways to Win Your Wife's Heart Forever**

by Scott Haltzman, M.D., HS '89, and Theresa Foy DiGeronimo (Jossey-Bass) This book lists eight common sense strategies for men committed to building happy marriages. Among these suggestions are: learn to listen, make your marriage your job, know your wife and aim to please. The authors supply to-do lists and examples of successful interactions.

**Home Long-Term Oxygen Treatment in Italy: The Additional Value of Telemedicine**

by Allen I Goldberg, M.D., HS '70 (Springer) This book describes the evolution in the home management of severe chronic respiratory insufficiency over the last two decades in Italy. Goldberg covers epidemiological aspects, complicating events, current systems for oxygen delivery, changing approaches to the patient-caregiver relationship, the economic burden of home management and the potential of telemedicine.



### **Evidence-Based Psychotherapy: Where Practice and Research Meet**

edited by Carol D. Goodheart, Alan E. Kazdin, PH.D., professor of psychology and director of and professor in the Child Study Center, and Robert J. Sternberg, PH.D. (APA Books) The authors acknowledge differences between the fundamental purposes of research and clinical practice in psychology and present varying viewpoints on the contributions and limitations of evidence-based practice. The book provides perspectives on how to improve psychotherapy from leading figures in both clinical practice and research.

### **Brain and Culture: Neurobiology, Ideology, and Social Change**

by Bruce E. Wexler, M.D., professor of psychology (The MIT Press) Wexler explores the social implications of the close relationship between an individual's neural and psychological make-up and how the individual interacts with the social and cultural environment. He integrates recent neurobiological research with major experimental findings in cognitive and developmental psychology, making reference to psychoanalysis, literature, anthropology, history and politics.

### **Rethinking Substance Abuse: What the Science Shows, and What We Should Do About It**

edited by William R. Miller and Kathleen M. Carroll, PH.D., professor of psychiatry (The Guilford Press) Leading experts describe what substance-abuse treatment and prevention would look like if they were based on the best science available. The writers summarize current thinking about the nature and causes of alcohol abuse and other drug problems; what works at the individual, family and societal levels; and how to develop more effective, humane treatments and services. The book incorporates developmental, neurobiological, genetic, behavioral and social-environmental perspectives.

### **Understanding Depression in Women: Applying Empirical Research to Practice and Policy**

edited by Carolyn M. Mazure, PH.D., professor of psychiatry, and Gwendolyn Puryear Keita (American Psychological Association) Women are more likely to suffer from depression than are men, and depression is the leading cause of disability for women throughout the world. The editors survey the findings of over 40 experts on depression and explore the latest strategies for treatment, prevention and service delivery.

*The descriptions above are based on information from the publishers.*

SEND NOTICES OF NEW BOOKS TO Cheryl Violante, *Yale Medicine*, 300 George Street, Suite 775, New Haven, CT 06511, or via e-mail to [cheryl.violante@yale.edu](mailto:cheryl.violante@yale.edu)

## **New library software helps find the needle in the haystack**

Some researchers and clinicians may feel joy when they consider that the database PubMed contains 16 million citations for journal articles. But for others, the possibilities of the information superhighway are overwhelming. Fortunately, Charles J. Greenberg, M.L.S., M.Ed., can offer strategies for finding what's useful.

"You have to learn how to confront the large quantity of information and make it manageable," said Greenberg, head of Curriculum and Research Support at the Cushing/Whitney Medical Library.

One useful approach is to use automated systems to tailor the flow of information to one's interests.

PubCrawler (<http://pubcrawler.gen.tcd.ie/>), My NCBI (<http://www.ncbi.nlm.nih.gov/>) and BioMail (<http://biomail.sourceforge.net/biomail/>) all automatically search for newly indexed articles in PubMed. The user creates search parameters and then receives citation alerts about new articles via e-mail. Alternatively, PubCrawler and My NCBI can save articles in a user's account on the application website.

For best-practices, one-stop shopping, Greenberg recommends UpToDate ([www.uptodate.com](http://www.uptodate.com)), which, he says, "replaces a shelf of textbooks" and is more current. This online compendium supplies regularly revised information for 13 clinical specialties and can keep clinicians informed about new treatment recommendations. It can also remind or update clinicians about ways to treat a problem they rarely see—say, when a surgeon gets a question about an ear infection.

Greenberg believes that all computer sophisticates need to use RSS, or really simple syndication, an alternative to e-mail. Users can obtain grant announcements, FDA alerts and even check their Netflix DVD account queue using RSS. Users can sign up for an RSS "feed" by finding the orange XML or similar button on any Web page that offers RSS feeds. To view the content, one needs an RSS reader that automatically checks feeds. Examples of readers are available at [www.bloglines.com](http://www.bloglines.com) and [www.feedmaker.com](http://www.feedmaker.com). All Yale faculty, staff and students have an RSS-reading portal account at [www.yale.edu/yaleinfo](http://www.yale.edu/yaleinfo).

—Cathy Shufro

*In Circulation* is a column focusing on activities at the Cushing/Whitney Medical Library. Send ideas to Cathy Shufro at [cathy.shufro@yale.edu](mailto:cathy.shufro@yale.edu).

**NICOLE LURIE****Public health plans lacking, although stakes are high**

Despite the 9/11 attacks and the subsequent anthrax scare, the United States, said Nicole Lurie, M.D., M.S.P.H., has become complacent about public health. “Just when we were in danger of going back to sleep we had SARS and then the nightmare of Hurricane Katrina,” said Lurie, a former official in the U.S. Department of Health and Human Services, and now an analyst at the RAND Corp.

In the 9th annual Samuel O. Thier Lecture at medical grand rounds in January, Lurie said public health preparedness lacks consistent standards, often has insufficient emergency plans and has flawed communications between health departments and providers. To assess local responses, Lurie and her colleagues phoned in feigned emergencies, such as plague symptoms, only to be told to call back later. They also conducted more than 30 table top exercises around the country. While some responders were “absolutely terrific,” Lurie said, “you see things that are really terrifying.”

Local responses are critical, she said. “A weak link is going to have major consequences for the country and the world.” Lurie called on the faculty and students to make personal preparedness plans, and to become involved with their state and local health departments in preparing for public health emergencies.

—John Curtis

**STEPHEN KELLERT****Contact with nature can be therapeutic**

Bringing flowers to a sick friend does more than fulfill a social convention, according to Stephen R. Kellert, PH.D., the Tweedy/Ordway Professor of Social Ecology at the School of Forestry and Environmental Studies. The fact that nearly every hospitalized patient has a bedside bouquet reflects “a deep-held need” for contact with nature, said Kellert in a March talk sponsored by the Program for the Humanities in Medicine.

Studies have shown that proximity to nature, including contact with pets, can be therapeutic, said Kellert. Until humans established the first cities 5,000 years ago, survival depended solely on paying close attention to predators, weather and sources of food and water, Kellert noted, and so humans are evolutionarily programmed to feel drawn to “the organized complexity” of nature.

Kellert said the absence of nature and the sterility of most of the modern urban built environment, including hospitals, can be remedied by incorporating nature into the built environment. This, in turn, promotes both health and productivity. “It’s a design failure that we can remediate through good design.”

—C.S.

**RONALD ROZETT****A champion of health insurance for all**

During his lifetime, Isidore S. Falk, PH.D., professor emeritus of public health at Yale, was a towering figure in public health, championing universal health insurance as early as the 1930s. Now, 20 years after his death, although Falk’s work is largely forgotten, it remains relevant, Ronald T. Rozett, M.D., M.P.H., told his audience at the April meeting of the Beaumont Medical Club.

“Falk wanted minimum medical insurance for all Americans, not just the old and the sick,” said Rozett, director of the Master of Health Administration Program at Quinnipiac University in Hamden, Conn.

Among the staunchest opponents of publicly funded health insurance was the American Medical Association (AMA), whose members resented government intrusion in their medical practice. When Falk worked with President Franklin D. Roosevelt to include health insurance in the Social Security Act, the AMA undermined the proposal. Roosevelt ultimately focused on old age insurance alone, eliminating health insurance from the Social Security legislation.

Rozett said the Bush administration’s recent social security proposal would have horrified Falk. “The idea of allowing people to opt out of the social security system undermines the concept of social insurance, where people who are healthy subsidize those who are not,” said Rozett.

—Lori Ann Brass

**HARVEY FINEBERG****Lessons from a pandemic that never was**

In planning for a possible avian flu pandemic, said Harvey Fineberg, M.D., president of the Institute of Medicine, it is instructive to look at the recent past. Thirty years ago, Fineberg noted, the federal government began planning for a pandemic that never happened. Several people died of complications from a vaccine for swine flu, and that incident, coupled with a flawed outreach plan, bred mistrust of the program.

“That program was considered a fiasco,” Fineberg said, addressing the annual meeting in April of the Associates of the Cushing/Whitney Medical Library. The plan had an unrealistic goal of immunizing 95 percent of the American public, and the inability to attain this target obscured the unprecedented achievement of vaccinating 40 million people, twice as many as in any previous year.

Flu epidemics occur about three times a century, Fineberg said, denying scientists frequent chances to observe them. He called such events “low-likelihood, high-consequence” occurrences.

“They are seriously difficult for experts and for policy-makers,” he said. “If you are a naysayer and you scoff at the prospect of preparation, more often than not you are going to be proved correct. That doesn’t mean it is wise or prudent if you fail to prepare.”

—J.C.

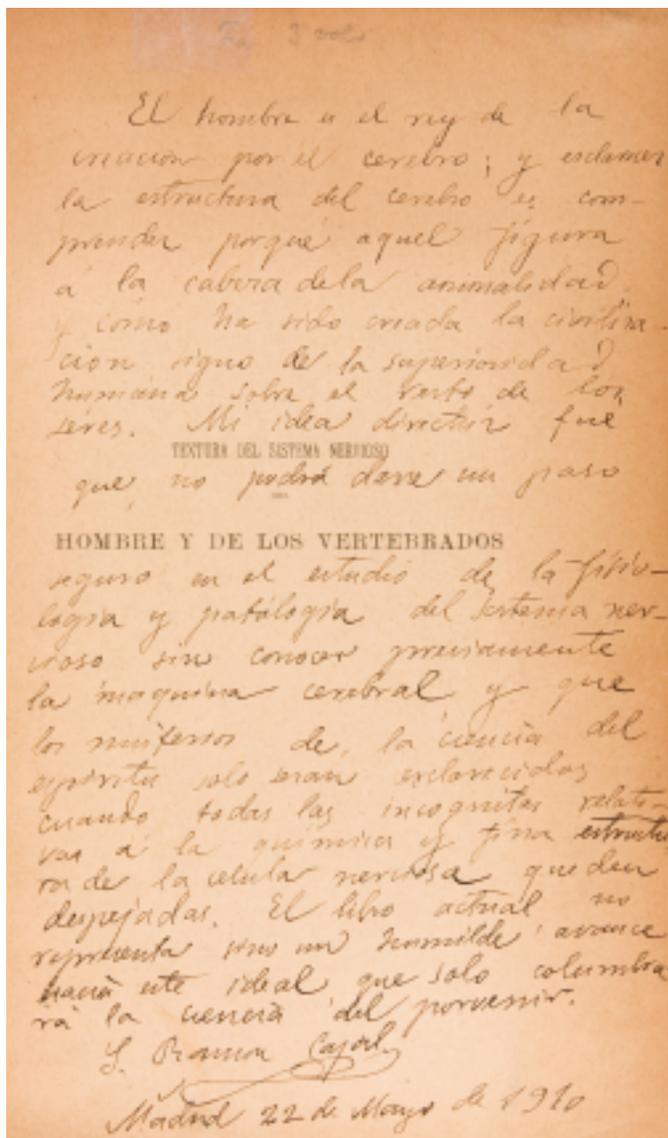
## Rare volumes and a refuge from the blacklist

Deemed a security risk and unable to find work, a psychologist in the McCarthy era found a home at Yale.

By Jill Max



SARAH FLYNN



John P. Flynn, PH.D., a professor emeritus of psychology (psychiatry) who died in 1980 after 26 years on the Yale faculty, liked to tell the story of how he acquired some neurology books at a used bookstore in New York in the early 1940s. The owner, unaware of their value, sold the rare volumes to Flynn for just \$10.

The three-volume set, *Textura del Sistema Nervioso del Hombre y de los Vertebrados*, was written between 1897 and 1899 by the Spanish histologist Santiago Ramón y Cajal, M.D., considered the founder of modern neuroscience (this year is the centennial of the Nobel Prize in physiology or medicine to Cajal and Camillo Golgi, M.D.). John Gach, president of John Gach Books



**FAR LEFT** The gift to the Medical Historical Library of neuroscience texts that belonged to John Flynn recalled a Cold War tale involving Flynn and his wife, Hulda Rees McGarvey Flynn.

**LEFT** Flynn found a three-volume set written by a Spanish physician in a used bookstore in New York City. A lengthy inscription by the author, Santiago Ramón y Cajal, added to its value.

**ABOVE** *Textura del Sistema Nervioso del Hombre y de los Vertebrados* is considered one of the two greatest books on neuroscience of the 20th century.

and an appraiser specializing in the neurosciences, described the set as “one of the two greatest neuroscience books of the 20th century,” along with *The Integrative Action of the Nervous System*, by another Nobel laureate, Sir Charles Scott Sherrington, M.D., published in 1906. (Sherrington’s book is a compilation of the Silliman Lectures he gave at Yale in 1904, which were originally published by Yale University Press in 1906.) Cajal was the first to describe the main types of neurons as separate cells, which became the basis of the neuron theory. He also hypothesized about how neurons interact through junctions to form the circuits for brain functions. The books, purchased by Flynn in the original Spanish edition, are especially prized because Cajal himself inscribed them, with a lengthy handwritten note explaining his reasons for writing them, in 1910. “They were my father’s most prized material possession,” said Flynn’s daughter, Sarah Flynn.

Flynn came to Yale during the McCarthy era, when he was deemed a risk to national security. During the 1930s and early 1940s, his wife, Hulda Rees McGarvey Flynn, PH.D., had been involved in an early teachers’ union and had supported the anti-fascist cause in the Spanish Civil War. After being called before the House Un-American Activities Committee in 1953, Flynn was told he could keep his job as head of the Psychology and Statistics Division at the Naval Medical Research Institute (NMRI) in Bethesda, Md., only if he divorced his wife. He chose to stay with her.

Thirteen offers of employment came from universities in the ensuing months; in all but one case the university backed out. The exception was Yale, where Flynn was hired in 1954 and worked with Paul D. MacLean, M.D. ’40, a professor of physiology and psychiatry who was studying the limbic system, and where he remained for the rest of his career. Yale’s president at the time, A. Whitney Griswold,

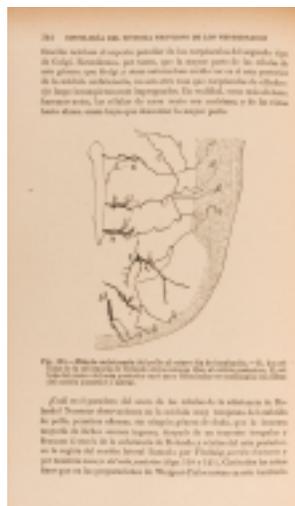
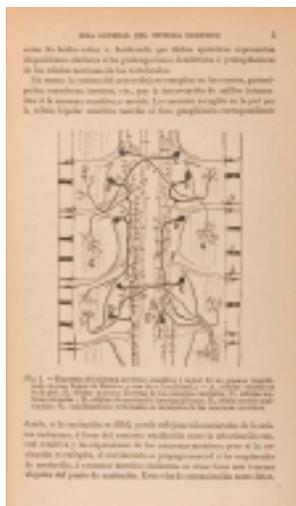
believed strongly in academic freedom and was known for standing up to Sen. Joseph McCarthy. In a recent letter to Yale President Richard C. Levin, Sarah Flynn wrote: “My father was always very proud of being a Yale faculty member, and many are proud of Yale for taking the stand it did during this black period in our nation’s history.”

The beginning of Flynn’s interest in psychology is almost as serendipitous a tale as that of his acquisition of the Cajal volumes. In the early 1940s, while a priest in Chicago, Flynn volunteered to study psychology in order to be able to teach it. He earned a PH.D. in experimental psychology at Columbia in 1943. A year later he left the priesthood. In 1945, while working at the Psycho-Acoustics Lab at Harvard, he married McGarvey, whom he had met at Columbia and who later became an assistant professor of psychology at Yale. One year later, he went to NMRI, where he began his work in physiological psychology.

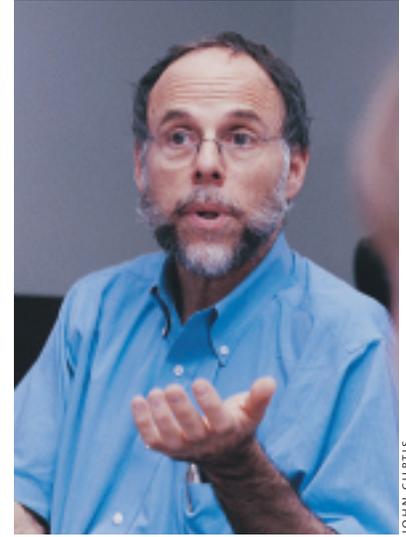
While at Yale, Flynn established the psychiatry basic science section at the Connecticut Mental Health Center and became internationally renowned for his studies on aggressive behavior and neural function. Each year the university holds a lecture in his honor.

Flynn’s legacy at Yale now also includes the Cajal volumes, which his daughter donated to the Medical Historical Library last year. In remarks read at the presentation of the set in April 2005, Gordon M. Shepherd, M.D., PH.D., professor of neuroscience and neurobiology, said: “It will not only be an ornament in the library’s collection, but also a reminder of John Flynn’s own distinguished contribution to neuroscience at Yale, and of the generosity and thoughtfulness of Sarah Flynn in giving it a home in his memory.”

Jill Max is a writer in Connecticut.



**The neuroscience texts, a gift to the Medical Historical Library, were John Flynn's most prized possession.**

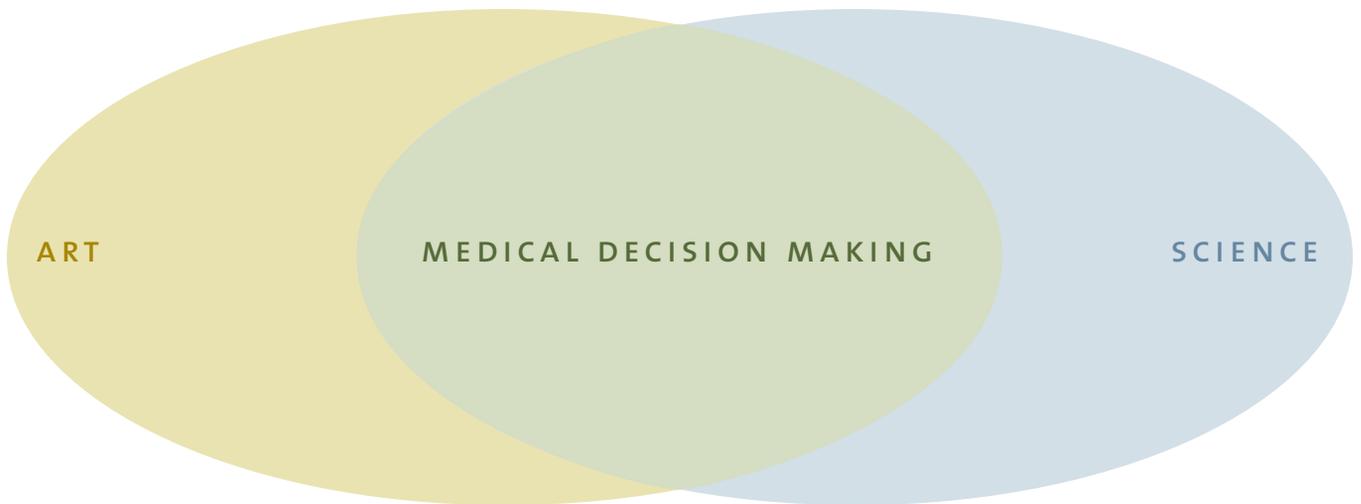


JOHN CURTIS

# The Chase years

By Jennifer Kaylin

Six years ago, Herb Chase came to Yale to improve medical education. As he leaves, he and others reflect on his legacy.



Herbert Chase believes that medical decisions lie at the intersection of art and science. And doctors must be able to understand and analyze the outer reaches of scientific knowledge—what he calls the edge.

# The edge

Herbert S. Chase Jr., M.D., was living a life in New York City that suited him well. He'd been a professor at the Columbia University College of Physicians and Surgeons for 22 years, where he'd been honored for his teaching skills. His wife and two sons were happily engaged in city life, and he enthusiastically attended the opera whenever his schedule allowed. But in 2000, David A. Kessler, M.D., then dean of the School of Medicine, asked him to come to Yale as deputy dean for education, and Chase felt as though he'd been offered the key to the Promised Land.

What appealed to him about the medical school was the Yale System of Medical Education, with its emphasis on critical thinking in a nongraded, noncompetitive environment. Although Yale in many ways adheres to the traditional approach to medical education—two years of basic science courses followed by two years of clinical training—Yale's educational philosophy encourages students to become independent and scientific thinkers and places the responsibility for learning and mastering critical thinking on them. That philosophy struck Chase as the ideal environment in which to teach future doctors. The mandatory thesis, with its focus on independent, original research, appealed to Chase's long-held belief that medical students need to learn to think like scientists. "The values of the faculty and administration were directly compatible with mine," Chase recalls.

But when Chase got to Yale, he soon realized that the Promised Land had suffered serious incursions; its inhabitants were restive and outside forces threatened the very qualities that had made it an academic paradise. An ever-expanding curriculum was consuming time that students once devoted to their theses and the unstructured exploration of medicine—posing a direct threat to the Yale System's commitment to

self-directed lifelong learning. Meanwhile, the Liaison Committee on Medical Education (LCME), the accrediting body for medical schools, said that students' clinical skills needed to be formally assessed. (The accreditation process is about to get under way again at Yale.) In other words, mandatory testing—another move at odds with the core values of the Yale System.

"I didn't realize how far the actual practice of the Yale System had deviated from its philosophy," Chase says. He spent the next six years trying to recast the School of Medicine into the place he'd found so enticing. To reduce classroom hours and create a more fluid curriculum, Chase merged courses in related disciplines and integrated basic and clinical sciences. He worked with the anatomy faculty, William B. Stewart, PH.D., and Lawrence J. Rizzolo, PH.D., to revamp the course for first-year students, turning it into a national model, and in a deviation from the traditional distinction between science and clinical years, he implemented the Clinical Skills Program that provides rigorous instruction and assessment during the first two years of medical school.

These changes generated both angst and accolades among faculty and students. The general view, however, is that Chase reaffirmed the central importance of teaching at the medical school and created a framework on which his successors could build.

Last December Chase announced his plans to resign at the end of the academic year in June. He has since returned to the Columbia campus to explore the role of scientific training in medical decision making and to test his long-held theory that doctors who are scientifically trained will be more cautious when prescribing drugs or utilizing new technologies. Had he stayed at Yale longer, Chase says he would have set his sights on creating an integrated

four-year pharmacology curriculum and expanding students' training in the analysis of medical literature.

### Easygoing, but with a clear vision

Chase, a trim man with bright eyes, has the comfortable charm of someone who wears his self-confidence like an old cardigan. He laces his remarks with self-deprecating humor, easily acknowledges what he doesn't know and is generous in his praise of others. At a recent talk, he graciously accepted a clarification from the audience, scribbling notes in the margin of his speech.

But underneath this easygoing façade, Chase had a clear-eyed view of what he wanted to accomplish. He took suggestions and entertained other views, but in the end he did what he thought was best, even if it ruffled some feathers.

"In a job like Herb's, you need to have a vision, and you need to go with it," says Dean Robert J. Alpern, M.D., Ensign Professor of Medicine. "You try to build consensus, and some people will agree with you and some people won't, but you need to decide where you're going to go."

"Herb had a difficult job," says Asghar Rastegar, M.D., associate chair and professor of medicine. "He attempted to bring a lot of people together."

Nancy R. Angoff, M.P.H. '81, M.D. '90, HS '93, associate dean for student affairs, says that before Chase came to Yale the academic program was more "laissez-faire." But the faculty was frustrated by students' poor attendance in classes and small discussion groups. "Herb was the first to say, 'If they're not coming to class, maybe it's because the teaching is bad. We need to make sure the teaching is good so they have a reason to come to class.' He was also the first person to say, 'We need learning goals and objectives, so students know what the point is they're supposed to be getting.' He brought an educator's eye to this, not just a doctor's. That was something that really had never been here before."

Chase recalls arriving at Yale to be told that people were "unhappy" and that he needed to "fix" the curriculum. "My diagnosis, which took me a while," he says, "was that the curriculum couldn't be improved upon, but we had to get back to the basics—good teaching, good lectures and more structured courses."

### Making sure education matters

A key part of Chase's response was the creation of a centralized leadership, through a system of committees that would empower the faculty to oversee the educational program and curriculum development process. His leadership structure is built around committees overseen by the Educational Policy and Curriculum Committee, composed of faculty and students.

Reporting to this committee are three subcommittees: a curriculum committee, which oversees *what is being taught*, and two assessment committees, preclinical and clinical, which

oversee *how it's being taught*. "What Herb did was to elevate the importance of education in the administration. He created an organizational infrastructure to support education," Alpern says. "Yale needed to make this transition, and Herb led it."

Historically, the academic departments at Yale and elsewhere have decided independently how best to teach their disciplines. They derive their autonomy and authority from their clinical and research contributions—and they pay the professors' salaries. But Chase determined that the educational enterprise required a centralized oversight to impose a structure of cooperation, standardization and quality control. He consolidated and streamlined lectures, cutting them down from an hour to 40 minutes so students would have more time to pursue independent studies. And he insisted on a lesson plan for every lecture in the first two years.

Some professors opposed these moves—they feared students were getting shortchanged on vital information. "There's a natural tendency to want to teach all the new things in your discipline," says Robert H. Gifford, M.D., HS '67, Chase's predecessor as deputy dean for education. "That's fine, but there aren't enough hours in the day or days in the week. Somewhere, somehow, you've got to cut."

During his tenure, Gifford also tried to reduce the number of hours students spent in class. "Integration" was what we called it then, but of course the departments resisted. It would be easier to move a graveyard than to change the curriculum at the medical school." Gifford says department chairs are highly protective of their turf. "The departments are very strong and take a lot of pride in what they do," he says. "They don't want to give up any of the accolades or attention by doing anything that would diminish their standing."

But if Chase's ideas received a cool reception from some faculty members, they were warmly embraced by students as a welcome return to the ethos of the Yale System. Aaron Remenschneider, president of the Medical Student Council last year, calls Chase "a dedicated advocate for the students." Referring to the deputy dean's efforts to reduce classroom time, Remenschneider says, "There is so much happening on campus, students love that time to go to the hospital and shadow a specialist, to take an elective, to research their thesis project or to study."

Marcus Coe, M.D. '06, co-president of the Class of 2006, says he used his free afternoons to take part in two research projects. The first looked at the mechanical properties of human cervical spinal ligaments. For the second project, he spent time with the community cardiothoracic surgery department studying what effect, if any, delayed surgery has on late presenters with a certain type of aortic dissection.

"I'm busy, but I also had time to get married, own a dog and do other things," Coe says. "Whether it was intended or not, it does free students up to lead a more balanced life, both inside and outside medicine."

These enthusiastic appraisals stand in sharp contrast to students' initial reaction to Chase's initiatives. An unintended consequence of his early efforts to build more free time into students' academic schedules was that many of the basic science courses were concentrated in the first year. That meant that more exams were also concentrated in the first year. And he and the faculty had instituted mandatory qualifying exams in the second-year modules.

Students balked. A group of nine banded together and, calling themselves the Yale System Preservation Initiative, wrote to alumni asking for their support of a petition that all self-assessment exams remain optional. Chase rescinded the mandatory module exams and began a dialogue to find ways to assess students without exams. By the time of Chase's farewell reception in

May, two members of the initiative joined other students in singing Chase's praises.

Since then, classroom time has been reduced by 25 percent, the ratio of small-group sessions to lectures has increased, and exams have been placed on the Web, so students can take them on their own schedule. Courses are now structured with the goal of finding ways for students to retain what they've learned in class so they can apply it to the treatment of patients.

The molecules-to-systems integrated curriculum, for example, coordinates material from the biochemistry, cell biology and histology, and physiology courses. The three course directors work together to decide which course should discuss which topics. A lecture on the biochemistry of membrane biology might be coordinated with a lecture on the cell biology



**“You want to leave having said that you made the school a better place. I think without a doubt there are many, many ways that you can say that Herb Chase has done this, from organizing the infrastructure of the curriculum at a time when many faculty were fighting and screaming and not wanting to be brought under one umbrella, to computerizing the curriculum... to the new grand rounds on education.”**

Margaret J. Bia, M.D., professor of medicine, speaking at a reception for Chase in May.

**ABOVE LEFT** Howard Levitin mentored a group of students at a cadaver table in the new anatomy lab in the Anlyan Center. With the new lab came a new curriculum and a new approach to teaching anatomy. Led by instructors Larry Rizzolo and Bill Stewart, the new approach fit in with Chase's philosophy of teaching.

**ABOVE RIGHT** In the fall of 2004 then-first-year students Danielle Guez and April Levin used a computer during a histology class, which has been incorporated into the new molecules-to-systems integrated curriculum.

“You taught us not only about sodium and water and the importance of the kidney, but about becoming physician-scientists by ‘living on the edge,’ about recognizing bias in medical decision making and about working in teams. . . . When students would come to you for advice, you always took the time to listen, be thoughtful and give us your honest opinion and advice.”

Ami Parekh, third-year medical student, at the reception in May.



**TOP LEFT** From left, first-year students Sundeep Bhat, Susan Mathai and Oliver Rothschild met regularly with Chase (center) as members of his journal club. Chase encouraged the formation of journal clubs to discuss clinical research papers.

**TOP RIGHT** Linus Sun, a third-year student, studies in the Medical Historical Library with his ever-present laptop computer that allows him access to the latest information.

**ABOVE** First-year student Elizabeth Kvach interviewed standardized patient Crystal Neuhauser as classmates Robert Leone and Youssra Marjoua and clinical instructor Auguste Fortin observed.



BEN STECHSCHULTE (3)

“You have been a constant proponent and protector of the Yale System. You have improved the quality and efficiency of teaching. You created journal clubs and made more time for research. You even helped some of us understand the flow of free water in the kidney. You showed us where the edge was and helped pave the path to it. You taught us high New York fashion, and let us know that beards and balding are “in.” You have been a tremendous teacher, mentor, administrator and master clinician. Best of all, you lead by example, which is truly the very most any of us can hope to do.”

Douglas Housman, M.D. '06, and Douglas Walled, M.D. '06, at the reception for Chase.

of membranes, which will then be linked to a lecture and workshop on the transport of ions and solutes across membranes.

“I like to think we cleaned the jewel that is the Yale System,” Chase says. “We dipped the diamond in ammonia solution.”

### Assessing clinical skills

Another major challenge came as a result of the LCME determination that the accrediting authority had no way of knowing whether Yale medical students were learning clinical skills. Margaret J. Bia, M.D., professor of medicine, who was appointed the new director of clinical training in 2001, agrees that the clinical skills program needed help. “It was kind of thin. You were assigned to a tutor and attended lectures on how to talk to patients, but there wasn’t much real practice,” she says.

Acting on the LCME mandate, Chase provided the resources and support to Bia to create a program that combines rigorous clinical skills building during the first two years with assessments at the end of the third year conducted at the University of Connecticut Health Center. At the UConn test site students see seven standardized patients and perform a focused history and physical on five “patients” and a focused history and counseling on two.

Students are given 20 minutes for each “patient,” then have five minutes to write down their top three diagnoses. Yale faculty members are on hand to review the cases with students and do remediation if needed. Chase took this assessment a step further with the preceptor program, which increased student contact with senior faculty for bedside teaching, case discussions and student presentations. It appears to have worked—in the most recent round of the national boards, Yale medical students had a 100 percent pass rate on the exam’s clinical skills component.

In addition to the assessment gap, the LCME found that Yale lacked a program for teaching communications skills and discussing end-of-life issues. As a result, students now participate in a workshop on delivering difficult news, offered during the internal medicine clerkship, and a behavior modification counseling workshop, offered during the psychiatry clerkship. A new end-of-life curriculum has been introduced for third-year students.

“The attitude used to be, ‘Just go into the wards and you’ll learn something,’” says Chase. “We’ve changed it so that it doesn’t take any more time, but it’s much more focused.”

### An emerging problem

Still looming, however, at Yale and medical schools across the country, is a challenge with no easy answers. For more than a century, clinical education has been based in the inpatient environment of teaching hospitals, but those learning experiences are far less relevant now that hospital stays have become shorter and more treatments are done on an outpatient basis. “The greatest challenge facing medical schools is learning to

treat patients with chronic diseases,” says Michael Whitcomb, M.D., senior vice president for medical education of the Association of American Medical Colleges (AAMC) and director of the AAMC’s Institute for Improved Medical Education. “They may go to hospitals for the management of complications, but the focus needs to be on preventive and post-care. We need to shift an awful lot of the educational experience out into other sites.”

According to Whitcomb, 100 million people in the United States have one or more chronic diseases, and that number grows every year. Moreover, 75 percent of all health care spending goes to care for that population. “It just makes sense that students get training in caring for those patients.”

Medical schools know they need to adapt their curricula, but one overriding obstacle stands in their way: money. “Education is the stepchild of academics,” Chase says. “It doesn’t bring money in, it only uses it up.”

“It’s very difficult to sustain this enterprise as a by-product of whatever else we do,” says Rastegar, who served on an education committee convened by former Dean Kessler to evaluate the curriculum. “Research money has gotten tighter, clinical can barely pay for itself, and there’s no way a clinician can make his or her salary and teach at the same time.”

“Yale has an army of fabulous clinical practitioners who basically teach gratis,” Chase says. “But the day of the freebie is gone. You get what you pay for, and if you don’t pay for it, you devalue the activity and you guarantee no innovation.”

To reward faculty for teaching, Chase has implemented such programs as the Society of Clinical Preceptors and the Society of Distinguished Teachers, which recognize and celebrate faculty whose level of commitment reaches beyond the ordinary. The Society of Distinguished Teachers has a modest endowment, but not enough to support teaching to a significant degree. Chase says the most direct solution is the creation of an endowed teaching academy. With respect to the curriculum, he recommends that his successor develop avenues for students to receive more patient-centered and longitudinal-care experience.

Despite the challenges, Chase has confidence in the Yale faculty’s deep-seated commitment to preparing students to be the best doctors they can possibly be.

In thinking about the future of medical education at Yale, Chase was reminded of the day his older son celebrated his bar mitzvah. That morning, when Chase popped his head into his son’s bedroom and saw a look of doubt, he began to wonder if his son was prepared to get through the ceremony. But at the synagogue Chase watched the cantor interact with his son and his worries evaporated. “I knew he would never let my son fail, and I’ve always held him up as a model for what we as teachers should strive for. Our job is to guarantee our students’ success.” **YM**

Jennifer Kaylin is a contributing editor of *Yale Medicine* and a freelance writer in New Haven.



## 1964

At the end of 1964 Joseph Schlessinger, on left, was commissioned as an officer in the Israeli army.

2006

Joseph Schlessinger



ROBERT LISAK

## The long war

**Born in a war-torn mountain village in the former Yugoslavia, Yossi Schlessinger went on to fight other battles, including one against disease.**

By Marc Wortman

On March 26, 1945, in the village of Topusko in the mountains near Zagreb in German-occupied Yugoslavia, Rifka Schlessinger went into labor. Gunfire crackled and artillery exploded outside the battered house where she delivered a baby boy who was given the name Joseph. His parents, Jewish partisans fighting the invaders and local fascists, swaddled the newborn in silk cut from a British soldier's parachute and grabbed their rifles. With Topusko about to fall to German forces, the family boarded a cart and retreated into the mountains. The parents of Yossi, as he was called, fought on for two more months until the end of the war in Europe.

Their struggles, though, were not over. After Schlessinger's father was jailed for several months for making a joke at work about Marshal Josip Tito, the Communist leader who had taken control of Yugoslavia, the Schlessingers fled to Israel, where Yossi's parents had family. But as soon as the Schlessingers disembarked from their ship, they stepped into the war between the new Jewish nation and



its Arab neighbors—battles that continue to this day. For their son, a lifetime of war had just begun.

Just surviving such inauspicious and violent beginnings would seem an achievement: Yossi Schlessinger, however, would go on to discern some of the most important mechanisms in the life cycle of the cell and make discoveries about the causes of cancer that have led to some of the most effective new treatments for the disease. Now the William H. Prusoff Professor of Pharmacology, and chair of the department, Schlessinger made one of his frequent trips back to Israel last May, where he maintains close scientific ties. This visit was an occasion for joy. Schlessinger took the stage in a Tel Aviv University auditorium alongside cellist Yo-Yo Ma and the Polish journalist and leader in the fight against Communist repression, Adam Michnik. The three were among the recipients who shared three \$1 million Dan David Prizes, established in 2001 by David, an inventor of photographic technologies, to honor cultural, scientific, social or technological achievements. Schlessinger's citation praised him "for his critical role in deciphering a new code for the flow of information from the cell surface into the cell. Dr. Schlessinger epitomizes the scientist that has paved the road from basic research in the laboratory, all the way to the patient."

Today Schlessinger, who has published almost 500 papers, is regarded as one of the world's leading cellular biologists and cancer investigators. His studies have helped to open a new understanding of the ways in which signals from growth factor proteins circulating in the blood reach the interior of cells and stimulate them to divide and grow. He has also shown how aberrant cellular signals can lead



## 1946

In 1946, after World War II, Schlessinger, his mother, Rifka, his father and grandmother settled in the town of Osjek, which is now part of Croatia.

Osjek was severely damaged during the war in the mid-1990s which led to the breakup of Yugoslavia.

to cancer and has suggested ways to block them. His discoveries have led to a new field of cancer therapy research that has already produced a new generation of targeted anti-cancer drugs.

Along the way, Schlessinger also cofounded two biotechnology companies and serves as an advisor to several others—work that has led to one drug that is extending cancer patients' lives and other agents that are at the testing stage.

Living at the forefront of the scientific world and financially secure beyond the dreams of most academic scientists, Schlessinger seems far removed from the wars that dogged his life from the very first moment. But although he may no longer fear bombs and bullets striking home, the impact of war never goes away.

### A scientist-soldier

A few months before Schlessinger left for Israel to accept the Dan David prize, he sat in his sunlight-filled corner office in the new extension of the B-wing of Sterling Hall of Medicine. Behind him the window offered a view of downtown New Haven. He faced out toward the department he leads and whose laboratories and offices fill the new building. He personally hired many of its junior members—including six new professors—as part of a wholesale effort to revamp one of Yale's flagship programs. In the five years since he arrived at Yale from New York University, he has built new facilities for his own laboratory and brought in 13 new graduate students and postdoctoral fellows.

Life, it seems, had prepared him for such disruptions and new starts. "Our life," he recalls of his childhood, "had a lot of dramatic events." The most tragic occurred even before he was born. Before the war his parents had been married to others and his father had had a daughter. Their spouses and children, however, as well as nearly all of their parents, grandparents, aunts, uncles, sisters, brothers and cousins—80 percent of Schlessinger's extended family—were shot by Germans and local fascists or herded into gas chambers.

The family's past with its unredeemable losses could never be pushed far away from the Schlessinger household. The war also left them impoverished. "We were in pretty bad shape," he says, recalling his family's arrival in Israel. Although his parents doted on him and his younger brother, their sadness about the past and fears for the future made home, he recalls, "not a very happy environ-

ment. It took me many years to figure out how their mood influenced me.”

Schlessinger, who is heavysset and speaks with a thick Israeli accent, can look doleful at times. He talks freely about his difficult childhood, but when discussing the destruction of his parents’ families, a deep sadness comes into his eyes. Perhaps that is why John Mendelsohn, M.D., president of The University of Texas M.D. Anderson Cancer Center in Houston and co-recipient of the David Prize with Schlessinger, says, “He’s not one to make small talk. He’s interested in serious issues.” Schlessinger, who knows the history of World War II intimately, has visited the towns in the former Yugoslavia where his family and many other Jews once lived, as well as the places where his parents battled the Nazis. He admits to a hair-trigger temper in response to what he perceives as statements that may harbor anti-Semitism. “I’m very sensitive about these things,” he says.

Growing up in Israel, he never lived far from a battlefield. Like most young Israelis in the new nation’s early years, he was raised to be “a macho fighter.” He entered the military, becoming a captain in the elite Golani Brigade. As part of that force, he preceded the regular infantry to lay or remove landmines, setting or demolishing thousands of explosives in the course of fighting in the 1967 Six-Day War, the 1973 Yom Kippur War and the 1982 invasion of Lebanon. He claims not to have been scared clearing minefields. “A mine is a task,” he says. “It plays into the scientific mind.” He feels differently about enemy fire. “A sniper shooting at you is not science.”

From these early experiences, Schlessinger learned that survival in a dangerous world depended upon intuition,

study and hard work. During World War II his father, captured by the Gestapo, jumped from a moving train to escape certain death in a prison camp. “My father,” Schlessinger recalls, “said the only reason he survived was because he fought. I knew I would also have to make it on my own. I didn’t have safety nets and had to depend on myself.”

Despite the disruptions of serving in Israel’s military reserve and call-ups for wars, he completed a doctorate in biophysics at Israel’s Weizmann Institute of Science in 1974. He had been fascinated with science since childhood. “I was always interested in addressing fundamental questions,” he said. At the institute he studied the dynamic nature of proteins by measuring the circular polarization of their fluorescence, a preparation seemingly far removed from his later work in cellular biology. After postdoctoral study in the United States, at Cornell and the National Institutes of Health, he focused on how signals were communicated into the interior of the cell.

In the late 1980s, Schlessinger took a sabbatical from his lab in Israel and, after directing a drug research team at a pharmaceutical company, returned to academic life at the medical school at New York University (NYU). He continued to elucidate signaling pathways while directing the Department of Pharmacology, and, for a time, the Skirball Institute of Biomolecular Medicine. His laboratory analyzed the mode of action of growth factor receptors on the cell surface and the intracellular signaling pathways that are activated in response to growth factor stimulation. He recognized the critical role played by the components in the signaling pathways in the control of many fundamental cellular processes, including cell proliferation, differentiation



## 1950s

Schlessinger as a young boy in Kiryat Amal, in northern Israel, in 1950 or 1951, two or three years after the Schlessinger family left Croatia.



## 1964

In 1964 Joseph Schlessinger (right), a second lieutenant in the Israeli army, planned a military exercise with his platoon. He finished his compulsory military service in 1965.

After participating in the Six-Day War in 1967 and in the Yom Kippur War in 1973 as a reserve officer, Schlessinger was promoted to the rank of captain.

and metabolism, as well as cell survival and cell migration—and their role in many diseases caused by dysfunctions in signaling pathways.

At the time, Mendelsohn was on the faculty at Memorial Sloan-Kettering Cancer Center. He and Schlessinger would regularly drop in on each other. “He’s fun to talk to,” Mendelsohn says. “He’s a very creative and rigorous scientist who’s willing to try out new ideas. He’s more likely to look at something in a new way.” Mendelsohn also points out that Schlessinger is “a driven person. He’s driven to use science productively. He brings a collaborative spirit and sustained intellectual power to a question and works at it until it’s solved.”

### Unlocking the signaling pathway

Irit Lax, PH.D., a faculty member in pharmacology, has been working for Schlessinger since she was a graduate student in Israel in the early 1980s. They are a couple now. Each has two children from a previous marriage. They spend, says Schlessinger, “99.8 percent” of their time together, which, he adds, “is amazing.” Although he goes to his office seven days a week, he rarely steps into the laboratory any longer. “He reads,” Lax says. “He has a unique capacity to integrate things that at first sight seem not connected. He has an instinct for which direction to go.”

While they were at NYU, Lax recalls Schlessinger saying that once all the signaling pathways have been elucidated, “finding the abnormal, disease-causing pathways will be a trivial matter.” In the early 1980s, Schlessinger and his colleagues showed how epidermal growth factor (EGF) protein binds and activates a receptor tyrosine kinase (RTK), an

enzyme located on the cell surface. Schlessinger’s laboratory revealed how this coupling launches a cascade of signals that eventually reach the cell nucleus and tell the cell either to divide and grow, or to ignore checkpoints that would normally cause it to die. He then demonstrated that genetically aberrant forms of EGF-receptors and other RTKs can set off the rampant cell growth seen in cancer, including malignant brain tumors and other human cancers.

He recognized that drugs that could inhibit EGF-receptors or other RTKs could also control cancers. And these discoveries did in fact lead to a new class of targeted anti-cancer drugs—tyrosine kinase inhibitors. The approval in 2001 of the first such inhibitor, Gleevec, a treatment for chronic myelogenous leukemia, was celebrated as the beginning of a new era in cancer treatment. Mendelsohn concurrently produced an antibody that could block the action of EGF-receptors in cancer cells. That antibody was eventually developed into Erbitux (cetuximab), a monoclonal antibody used for treating colorectal cancer. Other related treatments include Herceptin (trastuzumab), a monoclonal antibody previously approved for the treatment of breast cancers for its action against overexpression of the protein ErbB2; and the tyrosine kinase inhibitors Iressa (gefitinib) and Tarceva (erlotinib). Pharmaceutical companies are now discovering and developing scores of kinase inhibitors. Schlessinger also decided to pursue the possibilities for cancer therapy that his findings indicated. “I don’t know any basic scientist who, if he had the opportunity to develop drugs, would ignore it,” he says. “We all want to be Louis Pasteur.”

In 1991 Schlessinger formed the pharmaceutical company Sugen with Axel Ullrich, PH.D., his longtime



2006

Schlessinger and his wife, Irit Lax, have been working together since the 1980s.



Schlessinger confers with members of his lab team, Satoru Yuzawa and Valsan Mandiyan.

collaborator at the Max Planck Institute of Biochemistry in Germany. (The “S” and “U” in the company’s name stood for the two founders’ last names.) The company was acquired by Pharmacia in 1999 in a deal valued at \$750 million. Pharmacia was subsequently acquired by Pfizer. The head of Pharmacia at the time of the Sugen acquisition, Fred Hassan, is now chief executive officer and chair of the pharmaceutical giant Schering-Plough. He recalls Schlessinger as “the ‘big science’ presence at Sugen. ... He is one of the more insightful science innovators I have encountered.”

That characterization was borne out in January, when the U.S. Food and Drug Administration (FDA) approved SU11248, sold by Pfizer as Sutent, the first drug derived from work begun at Sugen. Clinical trials of the drug were moved quickly through the FDA approval process because of its obvious effectiveness in treating advanced kidney cancer as well as a stomach cancer known as gastrointestinal stromal tumor, or GIST. Pfizer is also testing Sutent and other drugs based on Sugen’s discoveries as treatments for more common renal cancers, as well as breast and other cancers.

When Schlessinger learned in January that the FDA had approved Sutent, Lax recalls that he shared a bottle of champagne with his lab members and then returned to work. He will receive royalties from a drug projected to bring Pfizer more than \$1 billion in annual revenues. “Money doesn’t speak to him,” says Lax, noting that life went on unchanged after Sutent was approved “He didn’t buy three more houses or a sports car. He didn’t slow down his working schedule.” According to Lax, the couple plans to give Yale and other organizations most of the money one day. Schlessinger also intends to give his department part of his half share of the \$1 million prize he received in Tel Aviv.

### Exploring the darkness

With many biotechnology companies pursuing kinase inhibitors, Schlessinger realized by the end of the 1990s that the same assays were leading to the same drugs with the same limitations. He took a counterintuitive approach and began to study chemical compounds that weakly inhibited RTK and other cell surface receptors. Those potential drugs would not work as cancer therapies themselves. By using structural biology methods, however, investigators could find the targets to which they linked and then “reverse engineer” the target to design drugs that would bind tightly enough to them to inhibit their signals. Schlessinger co-founded Plexxikon, a Berkeley, Calif., biotechnology company in late 2000 together with Peter Hirth, PH.D., the former president of Sugen, and Sung-Ho Kim, PH.D., a professor from Berkeley. Unusually for an academic scientist, he serves not only as a member of its scientific advisory board but also as chair of the board of directors. The company already has one drug in clinical testing. Its most advanced compound and its first to be tested in humans is a treatment for adult-

onset diabetes and other metabolic disorders. Plexxikon also developed a new drug for the treatment of melanomas and colon cancer.

Most successful drugs require 12 to 15 years for discovery, testing and FDA approval at a cost that can reach hundreds of millions of dollars. Sugen required 15 years for its first drug to gain approval. Schlessinger thinks his new company may bring its first drug to market by 2009. “Chances are not high we succeed,” he says, “but if we do, it’s a world record.”

While pursuing industrial ties, Schlessinger is also creating a drug discovery program at Yale. The Center for Drug Discovery, a pilot program with one scientist and two more soon to be hired, will develop agents based on departmental research for so-called “orphan” diseases—those with fewer than 200,000 patients in the United States and which are of little interest to drug companies. He hopes the center will grow to a staff of 20 specialists who will function as “an engineering arm of department scientists.” Their products will be licensed to industry or serve as the basis for new companies to be established by Yale’s Office of Cooperative Research.

Schlessinger has been offered numerous presidencies of drug companies but has rejected them all. “I need the freedom of academia,” he says. “It’s the freedom that makes me work. A true scientist will work harder that way than if you tell him how many hours he has to work.” He worries that the increasing pressure from various funding agencies to move academic research more directly into finding treatments for diseases will undermine the basic scientific research culture that led him to his own breakthrough discoveries. “You’ll never be creative if you know the answer ahead of time. That’s not science,” he says. “The key thing is to let creative people have intellectual fun. I sincerely believe you need to let good people think and do what they want if you want science to succeed. We are always in the darkness exploring a hypothesis. What you think is of no value may prove to be of great value. But science takes time. You need to be patient.”

The tide in support of academic science is moving the other way these days. But fighting for what he believes has never been a question for Schlessinger. “I have tremendous anxiety because of what happened to my parents,” he says. That anxiety has been transferred from the battlefield to the laboratory. “You’re only as good as your last work,” he says. “You have to prove yourself again.” That need drives him to return to work every day. “The anxiety I did not cure myself of is a good thing.” **YM**

Marc Wortman is a contributing editor of *Yale Medicine*.

# Preserving fertility

Where once physicians' only concern was saving lives, new techniques under study at Yale can also preserve fertility in women undergoing treatment for cancer.

by Jennifer Kaylin  
Photographs by Terry Dagradi



A new method for preserving oocytes requires bathing them in a protective solution, then slow-cooling them with liquid nitrogen. This procedure has more than doubled the success rate to between five and six babies per 100 eggs.



For more than two years Tracy Urbano endured menstrual periods that were alarmingly intense. She suffered heavy bleeding that might last as long as six months straight. Once she fainted and had to be taken to the hospital because she'd lost so much blood.

Her doctor tried to regulate her periods with birth control pills. When that approach failed, he ordered an ultrasound, which revealed that the lining of her uterus was unusually thick. Through a sonohysterogram, a procedure to check for abnormalities of the uterine cavity that could interfere with pregnancy, Urbano's doctor discovered numerous polyps—benign growths that are usually easily removed with dilation and curettage. But when he began the procedure, he made a distressing discovery: endometrial cancer had spread throughout her uterus.

Urbano needed to have a complete hysterectomy as quickly as possible. The diagnosis was devastating to the 27-year-old Northford, Conn., woman, but equally upsetting was the realization that the surgery would leave her unable to have children. "I grew up in a big Italian family," says Urbano. "Ever since I was a little girl, I'd always dreamed of being a mother, but they told me there was nothing they could do."

#### A conversation among colleagues brings hope

Shortly after Urbano's diagnosis, her doctor, Peter E. Schwartz, M.D., HS '70, the John Slade Ely Professor of Obstetrics, Gynecology and Reproductive Sciences, ran into a colleague in the department, Pasquale Patrizio, M.D., M.B.E., professor of obstetrics, gynecology and reproductive sciences, described his patient's predicament. Patrizio, the director of the Yale Fertility Center and the OncoFertility program, had recently begun using a new egg-freezing technique known as slow oocyte cryopreservation to enhance women's fertility options. He thought he might be able to help Urbano.

Patrizio is one of several doctors at Yale in a variety of specialties who are working on solutions for patients whose cancer treatments could compromise their fertility. From oocyte preservation to radical vaginal trachelectomies (excision of the cervix and surrounding parametria without removing the uterus) for some cervical cancers to progestin treatment in early-stage endometrial cancers, innovative methods for fertility preservation are being explored and refined at Yale in response to growing patient demand.

Patrizio has recently received a grant from the pharmaceutical company Serono to study with Dagan Wells, Ph.D., an assistant professor in the department, changes in gene expression of eggs during the freezing/thawing process in order to recognize—at the molecular level—and avoid potential cryotoxic events.

In the past two decades, the rate of cancer survival in the United States has improved dramatically. Earlier detection coupled with improved treatment options has increased survival rates for all cancers. According to the National Cancer Institute (NCI), for females under 45 (an age near the end of the childbearing years for most women) the survival rate rose from 72.8 percent in the late 1970s to 81 percent in the late 1990s. For men, the survival rate increased from 59.8 percent to 69.8 percent during the same period.

With many women deferring childbearing until their mid-30s and beyond, oncologists are treating a growing number of women for whom fertility remains a major priority. In the past these patients would have had to choose between survival and fertility, but new surgical techniques and hormonal treatments have made it possible for an increasing number of cancer survivors to have children.

"It's an elegant commentary on where we stand with respect to cancer treatment," says Charles J. Lockwood, M.D., the Anita O'Keefe Young Professor of Women's Health and chief of obstetrics and gynecology at Yale-New Haven Hospital. "The focus used to be on survival. ... We can now focus on quality of life."

"Ten years ago, the term *fertility preservation* didn't exist," says Kutluk Oktay, M.D., director of the Fertility Preservation Program at the Weill Medical College of Cornell University in New York City and president of the Fertility Preservation Special Interest Group of the American Society of Reproductive Medicine. "Now, we're slowly seeing these procedures becoming a standard part of care."

In Urbano's case, Patrizio recommended that she consider freezing both embryos and unfertilized eggs. During a four-hour consultation and evaluation with Patrizio's staff, Urbano learned how to inject herself with fertility drugs. These medications contain hormones that increase a woman's natural egg production from just one ovum per cycle to as many as 15. Every other day Urbano went to Patrizio's office for an ultrasound to track the growth of the egg follicles. The procedure took about three weeks, forcing Urbano to postpone her surgery by a week.

"My doctor was a little concerned (about the delay), but I really wanted this done," recalls Urbano, who is single. "I couldn't have dealt with the surgery aspect if I thought I couldn't have children."

Patrizio harvested 16 eggs. Six weren't mature enough to work with, but six others were fertilized with the sperm of an anonymous donor and frozen as embryos. The other four ova were frozen using the new method of oocyte

cryopreservation. “It was just the biggest blow, being told I wouldn’t be able to have my own children,” Urbano says. “Now that’s not a concern. It’s just made everything a little bit easier for me.”

### Understanding at the molecular level

Oocyte freezing is just one of many clinical innovations and research initiatives being explored and fine-tuned by medical school faculty.

“We can’t preserve fertility in every woman, but we now have things to offer them,” says Emre U. Seli, M.D., assistant professor of obstetrics, gynecology and reproductive sciences. Seli is a member of the gamete biology core, a group of six Yale researchers from different backgrounds who work together to develop innovative therapeutic options for women with reproductive problems. One team member, Joshua Johnson, Ph.D., an assistant professor in the department, recently reported the generation of eggs from bone marrow stem cells in a mouse model. This controversial discovery challenges the long-held belief that female mammals are born with a finite

number of eggs and opens up new possibilities for the development of treatments for infertility.

Seli says that reproductive therapies have traditionally been developed with very little understanding of what was occurring on the molecular level. “Our group’s main interest,” he says, “is using cutting-edge scientific techniques to understand the development of the egg and embryo and what can go wrong, so we can offer all available techniques in an evidence-based manner.”

About 120,000 people in the United States under the age of 45 are diagnosed with cancer annually, the NCI reports. It is often difficult for oncologists to guide patients who wish to preserve their fertility. According to Seli, oncologists are not always aware of the available options and there is no well-structured referral system between clinicians and researchers.

Sperm and embryo cryopreservation are the fertility preservation techniques most familiar to the public. They are now widely available and considered standard practice. Other methods show promise but are considered investigational. Oocyte cryopreservation is among the most promis-



**When Tracy Urbano was diagnosed with endometrial cancer, she chose to preserve her fertility before undergoing a hysterectomy. She took hormones to increase her egg production and Pasquale Patrizio, head of the Yale Fertility Center, harvested 16 eggs, four of which were frozen using oocyte cryopreservation.**

ing of the new methods. The American Society of Reproductive Medicine classifies it as an experimental procedure, but last December the School of Medicine's institutional review board approved use of the technique. Patrizio says that his office has already handled 10 cases, including three in which the patients had cancer.

"One of my goals is to put Yale on the map as a premier fertility preservation center. That's why we're putting together this program," says Patrizio.

Although variations of the cryopreservation technique have been tried for 15 years, damage to the eggs by freezing resulted in a disappointing track record of only about two babies for every 100 eggs frozen. The new method—bathing eggs in protective solutions, slow-cooling them with liquid nitrogen and thawing them—has doubled the success rate to five or six babies per 100 eggs. The procedure's success is also dependent on the age of the patient. Harvesting eggs when the woman is under 35 increases the odds of a future successful pregnancy.

#### A ban leads to a new technique

The latest freezing method was developed by Veronica Bianchi, Ph.D., and Andrea Borini, M.D., at Tecnobios Procreazione, a private fertility clinic in Bologna, Italy, in response to a 2004 Italian law that bans the freezing of human embryos. Egg preservation is allowed because the eggs are unfertilized. Bianchi is now working with Patrizio at Yale to further refine the methods and improve the success rate. This technique is appealing to women who don't have a partner and don't want to use sperm from an anonymous donor. Patients who have ethical objections to embryo freezing also find oocyte preservation an acceptable alternative. "You don't have frozen embryos—just eggs, so you have a lower ethical barrier to leap," says Lockwood.

Fertility preservation almost always centers on women, whose reproductive biology is far more complex than men's. "Sperm is easy. It can be readily stored in high volumes and frozen with minimal preparation. Men in their 80s produce perfectly good sperm," says Lockwood. "The big issue is the egg."

As the field of fertility preservation advances, oncologists and fertility experts agree that there needs to be more communication and cooperation between disciplines. The American Society of Clinical Psychologists reports that approximately half of oncologists do not initiate fertility discussions with patients at the time of diagnosis.

Dennis L. Cooper, M.D., HS '82, professor of medicine (medical oncology) and clinical director of the hematopoietic stem cell transplant program, says he understands doctors' reluctance to address fertility issues. "When we talk to patients, we always tell them there's a possibility this treatment will knock out their fertility, but I can't say that I've

had a single patient who has actually gone through with egg or embryo freezing," he says. The problem, Cooper says, is that often patients are too sick to delay treatment long enough to go through an egg retrieval cycle. "I'm not trying to be negative, but it places the patient in a very difficult position: Do you delay therapy for the possibility of having kids, when the odds of that procedure being successful are not very good? It puts additional stress on an already stressful situation."

To provide oncologists with better guidance, a panel convened by the American Society of Clinical Oncology in February 2005 developed the first guidelines to address fertility preservation options for people living with cancer. The guidelines were published in the June 20, 2006, issue of the *Journal of Clinical Oncology*. Patrizio, who served on the panel as both a bioethicist and a reproductive endocrinologist, says he's encouraged by the response he's received from oncologists. "It became obvious to me a few years ago, when I talked with colleagues who treat cancer patients, that we were completely apart."

"Until now," says Oktay, the senior author of the guidelines, "there's been no clear guidance for discussing and initiating fertility preservation with cancer patients."

Already there are signs that the lines of communication are opening. Jessica Dorey, R.N., coordinator of Yale's gestational carrier and egg donation program, says that patient referrals from oncologists have gone up in recent years. "Everyone seems to be much more aware of the options," she says. And now that more cancer patients are seeking Yale's reproductive services, Yale is trying to expedite the process so they can resume cancer treatment as quickly as possible. "It all happens very quickly, and it can be extremely overwhelming," Dorey says. "We try to make it as easy for them as possible."

Around the world, as many as 40,000 women a year who are diagnosed with cancer while they are pregnant choose to continue the pregnancy rather than submit to a treatment that might jeopardize the fetus or their future fertility.

This number doesn't surprise Lockwood at all. "The drive to reproduce is palpable and common to all animals. It's the primary drive," he says. "We see the faces of desperate couples all the time. If you told them they had to climb Mount Everest to have a baby, they'd gladly do it. Those of us who see that kind of longing just really want to help." **YM**

Jennifer Kaylin is a contributing editor of *Yale Medicine* and a freelance writer in New Haven.

## New methods to preserve fertility

Besides oocyte cryopreservation, researchers are exploring other methods to preserve female fertility. For women with early-stage cervical cancer, a more conservative, but technically challenging surgery called radical vaginal trachelectomy has been found to preserve fertility in some patients. A recent study found that of 319 women who had the surgery, 147 pregnancies were recorded, including 99 live births (67 percent). Charles J. Lockwood, M.D., the Anita O'Keefe Young Professor of Women's Health and chief of obstetrics and gynecology at Yale-New Haven Hospital, says this procedure still needs improvement. It is used only for the "absolutely desperate," because of the high rate of subsequent preterm deliveries associated with it.

Younger patients diagnosed with some borderline ovarian tumors can undergo a more conservative surgery, in which the surgeon removes only the affected ovary, leaving the unaffected ovary and uterus intact. So far, data show that the outcome after this surgery is comparable to that of the more radical approach of removing both ovaries and the uterus.

And patients with early-stage endometrial cancer can opt for progesterone therapy instead of an immediate hysterectomy. After the cancer has been diagnosed, the patient begins hormone therapy, which temporarily suppresses the cancer. The aim is to buy the patient enough time to conceive and carry the pregnancy to term. Once the baby is born, the patient stops taking the hormones and has a hysterectomy.

"This is a reasonable course of action for many early-stage endometrial cancers, but it requires careful monitoring," says Lockwood. "We've cared for three patients using this approach, and they've all done fabulously well."

A woman's fertility can be compromised by any treatment for cancer that interferes with the functioning of the ovaries, fallopian tubes, uterus or cervix, or that causes a hormonal imbalance. Surgery is the most obvious

way in which fertility can be lost, but other causes include the patient's response to the chemotherapy or radiation, the method of administration (oral or intravenous), the dose intensity and the size and location of the radiation field.

For patients who need pelvic radiation, a surgical technique called ovarian transposition is sometimes used to reposition the ovaries at a safe distance from the radiation field. This approach, which is relatively simple and minimally invasive, is most commonly used in patients with Hodgkin's disease, cervical and vaginal cancers and pelvic sarcomas.

Other therapies being explored include administration of gonadotropin-releasing hormone. This hormone temporarily puts the body in a menopausal state, which is believed to result in less damage to reproductive organs during chemotherapy. Another technique, still experimental, is ovarian tissue cryopreservation. Ovarian tissue is removed from the cancer patient prior to treatment, and frozen if it is found to be free of metastatic disease. Once the patient is cured and wants to get pregnant, the cryopreserved ovarian tissue is thawed and placed back in the ovary or another body part that is more easily accessible, such as the subcutaneous tissue of the abdomen, and that can accommodate the tissue and allow it to function. It has been shown that ovarian tissue removed prior to the initiation of cancer treatment is functional following the thawing process, but only for a short time. Worldwide, two babies, in Belgium and in Israel, have been born using this option when the ovarian tissue was placed back in the pelvis where the ovary is normally located. This fall Pasquale Patrizio, M.D., M.B.E., professor of obstetrics and gynecology, the director of the Yale Fertility Center and the oncofertility program, is starting a new project to perfect the method of ovarian preservation. Instead of freezing sliced tissue, he plans to freeze the entire ovary, which he believes will better survive the freezing and thawing process.

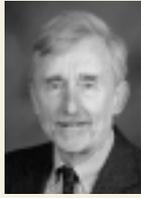
—J.K.



Veronica Bianchi, left, developed the slow cooling technique for oocyte preservation at a private fertility clinic in Bologna, Italy. She is now at Yale, working with Pasquale Patrizio, right, at the Yale Fertility Center to improve the procedure's success rate.



Joan Steitz



Thomas Pollard



Curtis Patton

## Two Yale biologists receive Gairdner International Award

Two Yale biologists were among five scientists to win 2006 Gairdner International Awards, among the most prestigious in science. The awards will be presented in October in Toronto.

**JOAN A. STEITZ, PH.D.**, Sterling Professor of Molecular Biophysics and Biochemistry and a Howard Hughes Medical Institute investigator, is being honored for her discovery of snRNPs (pronounced “snurps”), complexes of protein and RNA that edit and splice other RNA strands to form messenger RNA, the genetic recipe used by the cell’s protein-making machinery.

**THOMAS D. POLLARD, M.D.**, chair and Sterling Professor of Molecular, Cellular and Developmental Biology, is being recognized along with his colleague Alan Hall, PH.D., of Memorial Sloan-Kettering Cancer Center in New York, for discovering the molecular basis of cellular motility and the mechanism of its regulation. This fundamental knowledge is required to understand embryonic development, defense against infections and the spread of malignant tumors in the body.

Founded in 1959, the Gairdner International Awards recognize achievements in medical science.

In 2004, another Yale scientist received a Gairdner Award. Arthur L. Horwich, M.D., HS ’78, the Eugene Higgins Professor of Genetics and Pediatrics and a Howard Hughes Medical Institute investigator, was honored for his findings on protein folding and its relevance to neurodegenerative diseases.

## Prusoff is awarded Parker Medal for role in discovery of AIDS drug

**WILLIAM H. PRUSOFF, PH.D.**, professor emeritus and senior research scientist in pharmacology, received the Peter Parker Medal, which honors service to the university, on April 17. Prusoff and his colleague Tai-Shun Lin, PH.D., discovered the antiviral properties of d4T, or stavudine, in 1986. Marketed by Bristol-Myers Squibb as Zerit, it became one of the leading drugs used to treat HIV/AIDS. Dean Robert J. Alpern, M.D., presented the medal to Prusoff at the ceremony held at the Union League Cafe.



William Prusoff and Dean Robert Alpern

## Curtis Patton retires from research and international health

When **CURTIS L. PATTON, PH.D.**, professor of epidemiology (microbiology) and director of international medical studies at the School of Public Health, describes his career in public health, his memory goes back to his boyhood in Birmingham, Ala., when he contracted malaria. He can’t prove it after so many years, but he suspects he got the disease at a waterhole near his home, where he and his friends caught tadpoles and crawfish. The water was stagnant and dirty, but that didn’t seem to matter to the boys. “Pushing one another into the water was a wonderful game,” he

recalled in a recent interview. “I found out after I was in college that this was an open sewer.”

Patton has spent his career studying tropical diseases, specifically the trypanosomes that cause malaria. Among his most memorable experiences, both professional and personal, were trips to the Brazilian Amazon to protect indigenous tribes from the diseases that followed civilization, to Kenya to study trypanosomes and tsetse flies, and to Senegal to study the public health implications of damming the Senegal River.

Patton retired in July after 36 years at Yale. Along with his research he will also be remembered for steering the Downs International Health Student Travel Fellowship program that has sent more than 400 students in medicine, public health, nursing and the Physician Associate Program abroad since it began in 1966. Students are expected to travel to a region of the world that has not only an underserved

population, but is also one where they haven’t lived or worked before. “We decided it would be a better experience if students went to places that would stretch them culturally, underserved areas where there really was a need to find out what the problems were, not just in public health, but in medicine,” Patton said. One of his retirement projects is a study of the effects of the Downs program on participants. Anecdotally, he observes, “They come back more mature. They come back more committed.”

Patton believes this is an important program for students. “This is a formative period of their lives,” he said. “It’s not just about getting a Nobel Prize for studying malaria. It is about developing as an individual, as a student who is going to go ahead and make the kind of progress we want students to make.”



Alison Galvani



Nigel Grindley

Charles  
LockwoodAlexander  
Neumeister

Peter Novick



Jody Sindelar

**Kelly D. Brownell**, PH.D., professor and chair of psychology, professor of epidemiology and director of the Rudd Center for Food Policy and Obesity, has been named in *Time* magazine's list of 100 "People Who Shape Our World." Brownell, one of the list's scientists and thinkers, was cited for his efforts to reduce obesity in the United States. Also on the list are President Bush, actor George Clooney, model Tyra Banks, Iraqi Shiite leader Muqtada al-Sadr and rap artist Sean Combs.

**Elizabeth B. Claus**, M.D. '94, PH.D. '94, associate professor of public health (biostatistics), has been awarded a five-year, \$9.5 million grant from the National Institutes of Health, for the first large national effort to study risk factors associated with a diagnosis of meningioma, the most frequently reported of primary intracranial neoplasms. This study is important because of the lack of information about the disease, the large number of patients with this diagnosis and this tumor's frequent association with neurological complications and decreased quality of life.

**John A. Elefteriades**, M.D. '76, HS '81, FW '83, professor and chief of cardiothoracic surgery, received the prestigious Socrates Award for Excellence in Teaching and Mentoring of Residents at the 42nd annual meeting of the Society of Thoracic Surgeons in Chicago in January. Elefteriades also received the Program Director Award for the best resident paper, titled "What Is the Optimum Treatment for Late Presenters With Acute Type A Aortic Dissection?" The paper was presented by Ryan R. Davies,

M.D. '01, who carried out the research while he was the Winchester Fellow in Cardiothoracic Surgical Research at Yale-New Haven Hospital.

**Alison Galvani**, PH.D., assistant professor in the School of Public Health's Division of Epidemiology of Microbial Diseases, has been named a recipient of a Guggenheim Foundation Fellowship. Guggenheim Fellows are appointed on the basis of past achievements and on the promise of future achievements. Galvani was awarded the fellowship based on her research on the public perception of influenza vaccination policies.

**Nigel D.F. Grindley**, PH.D., professor of molecular biophysics and biochemistry, has been elected to the Royal Society of the United Kingdom. Fellows are chosen for their contributions to basic science and for advancing progress in research and industry. Grindley studies DNA transposition and site-specific recombination.

**Charles J. Lockwood**, M.D., the Anita O'Keefe Young Professor of Women's Health and chair of obstetrics, gynecology and reproductive sciences, and **Errol R. Norwitz**, M.D., PH.D., associate professor of obstetrics, gynecology and reproductive sciences, are among six scientists who will share \$2.4 million from the March of Dimes for research into premature births. The three-year prematurity research initiative grants will fund efforts to predict and prevent premature births.

**Alexander Neumeister**, M.D., associate professor of psychiatry, was awarded the CIMP 2006 Bristol-Myers Squibb Max Hamilton Memorial Prize in July. The CIMP, Collegium Internationale Neuropsychopharmacologicum, is an international group of scientists interested in neuropsychopharmacology, basic science and clinical issues such as treatment. The \$10,000 award is given to scientists under the age of 41 who have made important research contributions to the field in the area of depression.

**Peter J. Novick**, PH.D., professor of cell biology, has been elected to the American Academy of Arts and Sciences. Novick, an expert on vesicle trafficking and cell polarity in yeast, joins more than 130 other Yale faculty as a fellow of the Cambridge, Mass.-based academy.

**Jody L. Sindelar**, PH.D., professor of public health, has been named the inaugural president-elect and current vice president of the newly formed American Society of Health Economists (ASHE). Sindelar, who studies the economics of smoking, alcohol and illicit drugs, is a founding member of ASHE, a professional organization dedicated to promoting excellence in health economics research in the United States.

**Scott Strobel**, PH.D., was named chair of the Department of Molecular Biophysics and Biochemistry (MB&B) for a three-year term that began July 1. Strobel succeeds Nigel D. F. Grindley, PH.D., who has led the department since 2003. Also this spring, the Howard Hughes Medical Institute (HHMI) named

Strobel as one of its new HHMI professors chosen for the quality of their teaching, inspiration and mentoring. Strobel will receive \$1 million over four years to implement innovative science teaching ideas. HHMI will provide the resources for Strobel to take undergraduates "bio-prospecting" for promising natural products in the world's rain forests. The students will then purify and analyze the compounds they collect and test them for potentially beneficial activity.

**Richard Torres**, M.D. '99, M.P.H., assistant clinical professor of medicine and chief medical officer of Optimus Health Care, which includes Bridgeport, Stratford and Stamford Community Health centers, was selected to the National Health Leadership Fellowship Program by the Robert F. Wagner Graduate School of Public Service at New York University and the National Hispanic Medical Association. Torres was one of only 10 physicians selected in America, and the only physician from New England.

**Barry Wu**, M.D., HS '92, associate clinical professor of medicine, received the Herbert S. Waxman Award for Outstanding Medical Student Educator from the American College of Physicians on April 6 in Philadelphia.

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# The Class of 'o6



JOHN CURTIS

Ilse Larson awaits the procession to Old Campus on the morning of Commencement.

## Always put the patient first

Doing what's best for the patient will require courage, education dean says at Commencement.

The pressures of the real world will challenge their graduation-day idealism, Herbert S. Chase Jr., M.D., told the 101 members of the Class of 2006 in his Commencement address. Speaking on Harkness Lawn on a flawless spring day, the deputy dean for education offered a cautionary tale.

At another institution Chase reviewed a colleague's research proposal: the trial would replace a known diabetes medicine with an experimental drug. Half the elderly patients in the study would get the new medicine and half would get a placebo. Chase rejected the proposal, disturbed that a respected physician would propose a plan that could cause harm. Later, remorseful, the doctor called to explain. The pharmaceutical company behind the experimental drug was subsidizing his salary. "He had let it blind him to the obvious fact that taking elderly patients off their diabetes medicine was unambiguously unacceptable," Chase said. "He had opted to protect himself rather than his patient."

Chase urged the graduates to adopt "a mantra, a talisman in the face of the challenges you will inevitably encounter. 'Do what is best for the patient.'" That will require the courage to resist pressures to rush, to save money, to discharge patients quickly. "You will sometimes have to take some risk to do what is right for the patient."

Dean Robert J. Alpern, M.D., Ensign Professor of Medicine, honored Howard Levitin, M.D., professor emeritus and senior research scientist in medicine, for 50 years of service to the School of Medicine. Alpern also honored Thomas L. Lentz, M.D. '64, professor of cell biology and associate dean for admissions, noting that as a member of the admissions committee since 1968, Lentz had read more than 100,000 applications.

The Bohmfalk Teaching Prize went to Chase for basic science teaching, and to Andre N. Sofair, M.D., M.P.H. '97, assistant professor of internal medicine, for clinical teaching. Mark D. Siegel, M.D., FW '95, associate professor of internal medicine, won the Leonard Tow Humanism in Medicine Award.

Two people won the Leah M. Lowenstein Prize for promoting humane and egalitarian medical education: Nancy R. Angoff, M.P.H. '81, M.D. '90, HS '93, associate dean for student affairs; and, for the second year, Catherine Chiles, M.D., HS '86, associate clinical professor of psychiatry. The Francis Gilman Blake Award for outstanding teacher of the medical sciences went to Interim Chair of Internal Medicine David L. Coleman, M.D. '76, HS '79; and the Betsy Winters House Staff Award went to Robert W. Chang, M.D., chief surgical resident. Professor of Medicine Fred S. Gorelick, M.D., FW '79, received the Alvan R. Feinstein Award for outstanding teacher of clinical skills. The graduating class presented \$6,000 to the Society of Distinguished Teachers, which supports faculty in educational initiatives and development.

—Cathy Shufro



TERRY DAGRA DI



JOHN CURTIS



JOHN CURTIS

**TOP** In one of his last acts as deputy dean for education, Herbert Chase delivered the Commencement address to the Class of 2006.

**MIDDLE** Todd Ebbert, Natalie Guerrier and Calvin Barnes before the procession to Old Campus.

**BOTTOM** Khoonyen Tay, Sarah Doernberg, Eliza Meade and Travis Maak waited for the beginning of Commencement.

## Calls for morality, justice and passion at Epidemiology and Public Health ceremony

With a child under five dying somewhere in the world every 3 seconds and a child born into poverty in the United States every 35 seconds, “our global and our nation’s moral compass and our nation’s priorities need resetting,” said Marian Wright Edelman, J.D., founder and president of the Children’s Defense Fund and the speaker at the 2006 Department of Epidemiology and Public Health Commencement. “We are the wealthiest nation on earth. The fact that we still do not choose to ensure healthy children, a healthy start for all of our children, is simply wrong and foolish,” she said.

Addressing the 123 graduates, faculty and staff gathered in Battell Chapel on May 22, Edelman cited the German cleric Dietrich Bonhoeffer’s belief that the test of a society’s morality is its treatment of its children. “We flunk Bonhoeffer’s test every hour of every day,” Edelman said.

In this country, Edelman said, nearly 9 million children whose parents work and “follow the system” are without health coverage. “Wealth,” she said, “should not dictate good health. ... It is time for every child in this country and their parents—in fact, every American—to have national health and mental health coverage.”

Edelman concluded with an anecdote about Sojourner Truth, who once had a white man tell her that her anti-slavery efforts meant no more to him than a flea bite. She told the man that she would keep him “scratching.” In that spirit, Edelman said, “We need big

changes. Enough committed fleas biting strategically can make very big dogs uncomfortable. And I hope everyone in this audience is determined that you are going to be a flea for justice, for children, for health care for all Americans. Believe it. You can do it.”

Aliya Jiwani, M.P.H. ’06, who gave the student address, urged her fellow graduates to “question everything ... notions, ideas and even the most popular theories of the day.” Above all, she encouraged her peers to “follow your passion—whatever it may be.”

Brian P. Leaderer, M.P.H. ’71, PH.D. ’75, the Susan Dwight Bliss Professor of Epidemiology, who served as interim dean of public health and interim chair of the Department of Epidemiology and Public Health until July, urged this year’s graduates to be leaders “from the smallest neighborhood clinic to the largest of the NIH’s institutes. Your work will, directly or indirectly, improve people’s lives. ... No matter what path you take, hold on to the ideals that brought you here, and move forward with confidence and courage.”

Trace Kershaw, PH.D., assistant professor of epidemiology in the Division of Chronic Disease Epidemiology and in the Social and Behavioral Sciences Program, received the Award for Excellence in Teaching. Dean’s Prizes for Outstanding M.P.H. Theses were given to Heather Brown, Jessica Clague and Ann Liu. The Henry J. Chauncey Jr. Inspiration Award was given to Katrina Van Gerpen, and the Cortlandt Van Rensselaer Creed Award was presented to Erica Jackson. Christine Malino received the Wilbur G. Downs International Health Prize.

—Marcie Foley



JOHN CURTIS (3)



**TOP** Marion Wright Edelman, founder and president of the Children’s Defense Fund, called for national health coverage for all in her Commencement address.

**MIDDLE** Lisa Bono-Corredor, Nadia Abuzaineh and Roberta Horth at Cross Campus.

**BOTTOM** Lisa Houston, Anita Makkenchery and Laquesha Andrews leaving Battell Chapel after Commencement ceremonies.

## Obesity, AIDS and a shark's gland are among the topics of Student Research Day

In the 1990s, Jeffrey M. Friedman, M.D., P.H.D., director of the Starr Center for Human Genetics at Rockefeller University, wondered why humans tend to keep their weight stable over years. "There must be some biological system that counts our calories for us," said Friedman during his keynote speech at Student Research Day in May. His questioning led him to leptin, a hormone secreted in the blood that regulates food intake and energy expenditures. But food intake remains a complex process that is not completely understood. "We don't know how this information is processed. We don't know where it is processed."

In patients who are deficient in leptin, he said, there is no signal to the hypothalamus that the body has adequate stores of fat. "This is a major medical problem," Friedman said. "For reasons we don't understand, obesity increases the risk for a host of diseases."

Sixty-six students presented posters of their research and five students gave oral presentations of their award-winning theses: Jennifer Greenwold discussed doctors who wrote about the early days of the AIDS pandemic; Lauren Kernochan studied a gene linked to spinal muscular atrophy; Khoonyen Tay studied ways to reduce the overuse of antibiotics; Connor Telles investigated a potassium channel in the shark rectal gland; and Jaehyuk Choi described HIV replication in certain cells.

—John Curtis

## UnderRated skewers rankings and—as ever—the med school faculty

When the School of Medicine dropped to number 11 in the annual *U.S. News and World Report* rankings for best research medical schools last spring, the news may not have been welcome, but it was perfect fodder for the second-year show presented by the Class of 2008, and produced by Carolyn Avery, Chris Gibson, Lars Grimm, Mary Hatcher, David Merrick and Jen Voorhees. *UnderRated* was chock-full of vignettes, video pieces and song-and-dance numbers woven into a tongue-in-cheek plot about student protest over Yale's lowered ranking and the faculty's response to the "crisis."

The show did justice to the tradition of impersonations of faculty members, with Kristina Zdanys as Nancy R. Angoff, M.P.H. '81, M.D. '90, HS '93, associate dean for student affairs, who urged a baffled Dean Robert J. Alpern, M.D., played by Shane Lloyd, to take charge of the rebellious students.

In the end the students decided the ranking system itself is at fault and should mirror the Yale pass/fail system. In the finale, "Walk Like a Physician," sung to the tune of the Bangles' "Walk Like an Egyptian," the Class of 2008 came to the conclusion that a magazine's rankings don't matter—it's the quality of education that students get at Yale that really counts.

—Jill Max



TERRY DAGRA DI

Erin Kiehna described her thesis, *Changes in attentional performance in children and young adults with localized primary brain tumors requiring radiation therapy*, at Student Research Day in May.



JULIE BROWN

Mary Air with Danny Balkin portraying Herbert Chase, the deputy dean for education, in a scene from *UnderRated*, the second-year show offered by the Class of 2008.



JOHN CURTIS

## Match Day 2006

### 2006 residency placements for Yale medical students

The Office of Student Affairs has provided the following list, which outlines the results of the National Resident Matching Program for Yale's medical graduates. Some names appear twice because the graduate is entering a one-year program before beginning a specialty residency. The transitional designation is a one-year program with three-month rotations in different specialties.

#### California

##### Alameda County Medical Center, Oakland

Stacy UyBico, transitional

##### California Pacific Medical Center, San Francisco

Sunanda Pejavar, medicine-preliminary

##### Santa Clara Valley Medical Center, San Jose

Janet Kim, transitional

##### Scripps Mercy Hospital, San Diego

Kendra Klang, transitional

##### Stanford University Programs

Powell Jose, internal medicine

Kendra Klang, diagnostic radiology  
Gregory Magee, general surgery

##### UCLA Medical Center, Los Angeles

Ayonija Maheshwari, emergency medicine/internal medicine

Andrew Nerlinger, emergency medicine

Stacy UyBico, diagnostic radiology

##### University of California, Davis

Janet Kim, radiation oncology

##### University of California, San Diego

Jenli Waters, surgery-preliminary, neurosurgery

##### University of California, San Francisco

Thomas Dewland, internal medicine

Sarah Doernberg, internal medicine

Natalie Guerrier, pediatrics/primary

Ilse Larson, pediatrics

Meg Pearson, internal medicine/primary

Sunanda Pejavar, radiation oncology

Hyman Scott, internal medicine/primary

Dana Weiss, surgery-preliminary, urology

#### Colorado

##### University of Colorado School of Medicine, Denver

Lindsey Sukay, pediatrics

#### Connecticut

##### Greenwich Hospital

Calvin Barnes, medicine-preliminary

##### Griffin Hospital, Derby

Karina Lund, medicine-preliminary

##### Hospital of Saint Raphael, New Haven

Amichai Erdfarb, medicine-preliminary

Jane Gwira, medicine-preliminary

Andrew Nerlinger, medicine-preliminary

Robert Schonberger, transitional

Douglas Walled, transitional

##### St. Vincent's Medical Center, Bridgeport

Scott Degregorio, transitional

Margaret Rose, transitional

##### Yale-New Haven Hospital

Teeb Al-Samarrai, internal medicine  
Jaehyuk Choi, dermatology, medicine-preliminary

Brittany Epperson, medicine-preliminary

Jorge Galvez, anesthesiology, medicine/primary-preliminary

Brendon Graeber, pediatrics

Ryan Huffman, ophthalmology

Igor Latic, diagnostic radiology

Kirsten Menn, diagnostic radiology

Benjamin Noonan, orthopaedic surgery

Ali Ozturk, neurosurgery, surgery-preliminary

Michael Reel, obstetrics and gynecology

Amar Rewari, medicine-preliminary

Margaret Rose, anesthesiology

Robert Schonberger, anesthesiology

Jennifer Smith, medicine-preliminary

Connor Telles, orthopaedic surgery

Tamara Vanderwal, psychiatry-adult/child

#### Florida

##### Jackson Memorial Hospital, Miami

Joyce Kaufman, general surgery

##### University of Miami—Bascom Palmer Eye Institute

Anil Vedula, ophthalmology

#### Georgia

##### Emory University School of Medicine, Atlanta

Odicie Fielder, internal medicine/primary

#### Illinois

##### McGaw Medical Center of Northwestern University, Chicago

Eliza Meade, obstetrics and gynecology

##### Northwestern University, Chicago

Jane Gwira, ophthalmology

##### Rush University Medical Center, Chicago

A.J. Valenson, orthopaedic surgery

#### Iowa

##### University of Iowa Hospitals and Clinics, Iowa City

Todd Ebbert, diagnostic radiology

#### Maine

##### Maine Medical Center, Portland

Stephen Ward, internal medicine

#### Maryland

##### Johns Hopkins Hospital, Baltimore

Simon Best, otolaryngology

Michelle Zikusoka, internal medicine

##### National Naval Medical Center, Bethesda

Huy Phun, internal medicine

##### University of Maryland Medical Center, Baltimore

Samantha Wood, emergency medicine/internal medicine

#### Massachusetts

##### Beth Israel Deaconess Medical Center, Boston

Jason Knight, obstetrics and gynecology

##### Boston University Medical Center

Dara Arons, family medicine

Karina Lund, ophthalmology

##### Brigham and Women's Hospital, Boston

Marwah Abdalla, internal medicine/primary

David Enis, medicine-preliminary

Pavlos Kaimakliotis, internal medicine

Jessica Kattan, internal medicine/primary

Rahul Rajkumar, internal medicine

Shari Rogal, internal medicine

Eileen Scully, internal medicine

Mary Turell, medicine-preliminary

##### Cambridge Hospital/Cambridge Health Alliance

Jennifer Greenwold, psychiatry

##### Children's Hospital Boston

Kira Bona, pediatrics

##### Massachusetts General Hospital, Boston

Michele Buragas, pediatrics

Davender Khera, medicine-preliminary

Sadhna Vora, internal medicine/primary

##### Massachusetts General Hospital / Brigham and Women's Hospital, Boston

Davender Khera, neurology

##### Massachusetts General Hospital (Harvard Combined), Boston

Natasha Archer, medicine/pediatrics

Alyssa Letourneau, medicine/pediatrics

#### Missouri

##### Barnes-Jewish Hospital, St. Louis

Calvin Barnes, diagnostic radiology

Peter Juran, internal medicine

**New Hampshire**

Dartmouth-Hitchcock Medical Center, Lebanon

Marcus Coe, orthopaedic surgery

**New Jersey**

UMDNJ–Robert Wood Johnson Medical School, Piscataway

Nora Cheung, general surgery

**New York**

Albert Einstein College/Montefiore Medical Center, Bronx

Sadiqa Edmonds-Myles, pediatrics/primary

Amichai Erdfarb, diagnostic radiology

Lisa Millman, internal medicine/primary

Hospital for Special Surgery/Cornell Medical Center, New York City

Travis Maak, orthopaedic surgery

Memorial Sloan-Kettering Cancer Center, New York City

Douglas Housman, radiation oncology, transitional

Igor Latic, transitional

Akash Shah, transitional

Anil Vedula, transitional

Mount Sinai Hospital, New York City

Sarah Adams, research medicine

Richard Crockett, plastic surgery

Mount Sinai School of Medicine/Cabrini Medical Center, New York City

Trushar Patel, medicine-preliminary

New York Methodist Hospital, Brooklyn

Juliana Capatosto, emergency medicine

New York-Presbyterian Hospital–Columbia, New York City

Connie Chung, anesthesiology, medicine-preliminary

Ameya Kulkarni, internal medicine

Brenda Ritson, pediatrics

New York-Presbyterian

Hospital–Cornell, New York City

Joseph Cousin, psychiatry

Mariel Focseneanu, obstetrics and gynecology

David Liska, general surgery

Trushar Patel, diagnostic radiology

Akash Shah, diagnostic radiology

New York University School of

Medicine, New York City

Renu Chundru, ophthalmology

Scott Degregorio, diagnostic radiology

Anna Yusim, psychiatry

St. Vincent's Hospital–New York Medical College, New York City

Kirsten Menn, transitional

**Ohio**

Cleveland Clinic Foundation

Shlomo Koyfman, radiation oncology

Mary Turell, ophthalmology

**Pennsylvania**

Children's Hospital of Philadelphia

Khoonyen Tay, pediatrics

Hospital of the University of Pennsylvania, Philadelphia

David Enis, dermatology

Melissa Knauert, internal medicine

Meghan Lane, anesthesiology

Katya Rubinow, internal medicine

Pennsylvania Hospital,

University of Pennsylvania Health System, Philadelphia

Renu Chundru, medicine-preliminary

**Tennessee**

University of Tennessee College of Medicine Chattanooga

Ryan Huffman, transitional

Vanderbilt University Medical Center, Nashville

Heather McKee, medicine-

preliminary, neurology

**Texas**

University of Texas Southwestern Medical School, Dallas

Justin Heller, plastic surgery

**Virginia**

University of Virginia, Charlottesville

Erin Kiehna, surgery-preliminary, neurosurgery

**Washington**

University of Washington Affiliated Hospitals, Seattle

Lauren Kernochan, pathology

Tong Yang, surgery-preliminary, neurosurgery

**Wisconsin**

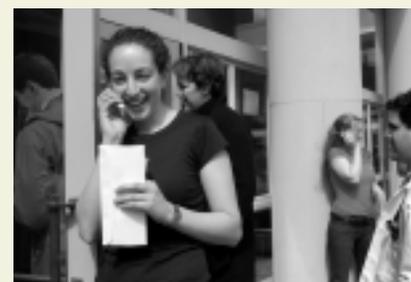
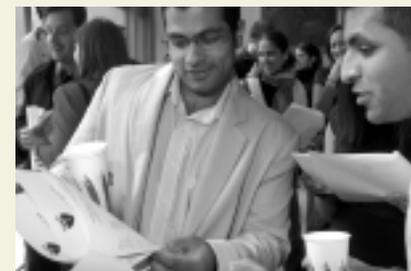
Gundersen Lutheran Medical Foundation, La Crosse

Todd Ebbert, transitional

Three students have chosen career options other than residency. Rachel Light will remain in New Haven as a freelance book writer and birth assistant to a home birth midwife. Sara Nayeem will be an investment banking associate at Merrill Lynch Global Healthcare Group in New York City. And Jeffrey Hoschander will be an associate at Simpson, Thacher & Bartlett, a law firm in New York City.

**OPPOSITE** Although happy with her match, a transitional residency at Scripps Mercy Hospital in San Diego before she begins a diagnostic radiology program at Stanford, Kendra Klang, at left, was overcome with emotion.

**LEFT** Renu Chundru, at left, celebrated her match in medicine at Pennsylvania Hospital with Rajeshvari Patel, a friend from the Class of 2008.



JOHN CURTIS (4)

**TOP** Anil Vedula is heading for Miami and a residency in ophthalmology, while Trushar Patel will pursue diagnostic radiology in New York City.

**MIDDLE** Eliza Meade shared the news of her match in obstetrics and gynecology at Northwestern with friend Jason Griffiths, an M.D./PH.D. student in the Class of 2008.

**BOTTOM** Sarah Doernberg will take up internal medicine at UCSF.



# Back on Cedar Street

Hundreds of alumni, spanning 60 years, returned to the medical school in June to reunite with classmates, learn about changes at the school and enjoy the Friday evening clambake.

Photographs by Terry Dagradi and John Curtis



**TOP** Dean Robert Alpern brought alumni up to date on the state of the school.

**BOTTOM** Frank Lobo, president of the Association of Yale Alumni in Medicine, opened the business meeting on Saturday morning.

This year's reunion kicked off on the evening of Friday, June 2, in the Medical Historical Library with welcoming remarks from Dean Robert J. Alpern, M.D., Ensign Professor of Medicine.

"This is a special time for me. I came here two years ago on June 1. Right after I arrived, the first special occasion was the alumni reunion weekend. As I came here and was absorbing the complexity of the medical school, it was very invigorating to see all the alumni and see how enthusiastic everyone was about their experience at Yale, how much they loved it and how much they love coming back here. It was really uplifting. I look forward to experiencing that again and seeing everyone come back and hearing nothing but compliments," he said, before concluding, to laughter from alumni, "The faculty is not that kind to me."

By the time of the reception in the library, reunion activities were well under way. Events began the day before, with a presentation from the Yale Surgical Society, and continued earlier on Friday with Alumni Day at Epidemiology and Public Health at the New Haven Lawn Club, and two presentations in the Jane Ellen Hope Building.

## The state of the school

The next morning, at the business meeting of the Association of Yale Alumni in Medicine (AYAM), Alpern brought alumni up to date on the state of the medical school. A new deputy dean of education, Richard Belitsky, M.D., associate professor of psychiatry, has been appointed, as has a new associate dean of admissions, Laura R. Ment, M.D., professor of pediatrics and neurology.

Sharon Bonney, second from left, and Frank Coughlin, right, received the Distinguished Alumni Service Award at this year's reunion from Dean Robert Alpern and AYAM President Frank Lobo.



“The educational program is outstanding,” Alpern reported, “but there are always ways to improve it, especially during the third and fourth years.”

The medical school ranks in seventh place in total funding from the National Institutes of Health, and about 30 biotech startups affiliated with the medical school have begun operations. “We have become a major engine of the local economy,” Alpern said.

He also cited the formation of a translational research center at the medical school, a new stem cell center with potential funding from the state of Connecticut, a center for clinical investigation and the start of construction of a new 14-story addition to YNHH for cancer care.

#### Honors for alumni

Francis R. Coughlin Jr., M.D. '52, and Sharon L. Bonney, M.D. '76, each received the Distinguished Alumni Service Award.

Coughlin was honored for his service to the medical school, including a term as president of the AYAM. His citation noted that Coughlin went to law school in 1985 and has since

served on medical and legal commissions in New York and Connecticut.

Bonney's citation traced her career path from clinical work to clinical research and development in the pharmaceutical industry. She served on the alumni executive committee twice and is currently the medical school representative to the Association of Yale Alumni (AYA).

At the business meeting, members elected a new secretary, new board members and a new representative to the AYA. Robert W. Lyons, M.D. '64, was elected to a three-year term as secretary, replacing Christine A. Walsh, M.D. '73, who was named AYAM representative to the AYA, along with Irving G. Raphael, M.D. '71. Carol J. Amick, M.D. '59, Arthur C. Crovatto, M.D. '54, HS '61, and Richard D. Kayne, M.D. '76, HS '79, were elected to the AYAM executive committee as members at large.

#### Working across disciplines

Alumni began the day with a symposium on a new model for interdisciplinary research.

In order to break barriers in medicine, Yale is knocking down intramural walls that tend to confine researchers within their own disciplines. Why keep some of the world's best scientists cooped up in their specialized fields, the thinking goes, when they can conquer diseases by sharing their expertise?

This synergistic model recently took the form of the Interdepartmental Program in Vascular Biology and Transplantation, whose work was outlined at a forum during the School of Medicine's Alumni Weekend in June. Bringing together experts from many fields is “bridging the taxonomies of

science and medicine,” said Francis M. Lobo, M.D. '92, president of the AYAM. “The walls are coming down.” Lobo spoke in a literal as well as metaphorical sense. The loosely knit vascular biology and transplantation team will work together in the Amistad Building under construction on Amistad Street. The interdepartmental program was established in 2000 and now has 36 faculty members from a range of disciplines, including surgery, medicine, dermatology, anesthesiology, cardiology, immunobiology, pharmacology, genetics, pathology and biomedical engineering.

Jordan S. Pober, M.D. '77, PH.D. '77, director of the program since its inception, said he “had a personal epiphany” in 1996 at a meeting of vascular biologists. Vascular biologists examine the cellular structure of the vessels that feed every organ in the body and whose failure lies at the root of many deadly diseases. Although vascular biology had been a specialty only since the 1980s, “the field had matured,” Pober said. “We understood the basic principles. What we didn't know was how we could use this stuff to treat patients.”

Pober convinced former Dean David A. Kessler, M.D., to launch the multidisciplinary program even though there was no blueprint for it. Team members acknowledged that the “translational” aspect of the program would involve more research than actual therapy in its early stages. If something works in mice, “most of the time it doesn't work” in humans, Pober said. “We decided that we couldn't cure everything.” The researchers focused on a few targets: arteriosclerosis, alleviating organ shortages through xenotransplantation or tis-

sue engineering, and regeneration—or, as Pober put it, “How do you get new blood vessels to grow?”

Pober, a professor of pathology, immunobiology and dermatology, specializes in the role of blood vessel cells in immunology. Working with his late colleague, Jeffrey S. Schechner, M.D. '91, Pober used his knowledge of blood vessel cells to grow vascularized synthetic skin. He studies the role of endothelial cells, which form the inside layer of blood vessels. William C. Sessa, Ph.D., deputy director of the program and professor of pharmacology, said that researchers want to solve the problem of endothelial dysfunction and the peripheral artery disease (PAD) that it causes. PAD appears in 20 percent of patients over age 55 and has a 25 to 30 percent mortality rate within five years. Sessa said that a key to PAD appears to be the inability of the cells to produce nitric oxide or use it efficiently, and that his lab is working on injections of an enzyme called endothelial nitric oxide synthase. This enzyme protects against disease by improving blood flow through the vessels by relaxing vascular tissue.

George Tellides, M.D., HS '93, Ph.D., associate professor of cardiothoracic surgery, said that the goal of his research is to find the immune mechanisms behind vascular injury and remodeling—specifically, the effects of interferon-gamma following injury. Interferon-gamma appears to stimulate an overgrowth of muscle cells in the wall of the arteries, which eventually causes narrowing of the arterial lumen.

And Laura E. Niklason, M.D., Ph.D., associate professor of anesthesiology and biomedical engineering, said her

role is to create new blood vessels through tissue engineering “so that we might one day have an endless supply.” The formation of these vessels comes through biodegradable scaffolds that contain enough space for the vascular cells to develop a new artery, she said.

#### Innovations in the classroom

The patient had missed her dialysis and was steadily deteriorating as a group of medical students debated treatment options. Thankfully, she was in no danger—the patient was a high-fidelity patient simulator, a mannequin capable of physiological responses that is used to train third-year medical students.

The simulation program presented by the Society of Distinguished Teachers to alumni at reunion on Friday, June 2, and one of six programs funded by the society during the last academic year, is part of the society's effort to develop innovative teaching methods. Leigh V. Evans, M.D., HS '02, assistant professor of surgery (emergency medicine), showed a video of the simulation program and explained that students use partial task trainers to practice such procedures as airway management, as well as more sophisticated mannequin simulators to unravel complex cases.

In another program funded by the society, AMISTAD (Advanced Methods of Interactive Simulations Through Academic Design), students work with standardized adolescent patients, a component often lacking in medical school programs, according to Karen Santucci, M.D., associate professor of pediatrics (emergency medicine).

This program trains 14- to 17-year-olds as standardized patients. The stu-

dents interview each patient to arrive at a diagnosis. This approach allows the students to develop a level of comfort interviewing members of an age group with whom they might otherwise come into contact only after graduation.

#### Bugs—they're not always bad

Later Friday afternoon alumni learned what happens when pathogens interact with the human body. Most of the time, nothing, according to Jorge E. Galán, D.V.M., Ph.D., professor and chair of microbial pathogenesis. But in a presentation to alumni at reunion in the Hope Building, “Bacterial Type II Secretion: Not Your Average Needle Stick,” Galán explained what happens when pathogens interact with human cells and how this interface can be used to fight disease.

Pathogens are designed not to cause disease but to replicate, and in so doing they have developed an elegant “machine” to enter cells. Galán described this mechanism as a nano-



At a reunion talk Jorge Galán described the interactions of pathogens and human cells.



Neurosurgeons honored their mentor, William Collins, second from left, at the annual meeting of the Yale Surgical Society. Joining

Collins were, from left, Chair of surgery Robert Udelsman, Chair of neurosurgery Dennis Spencer, Walter Longo and Richard Bucholz.

syringe that injects proteins into cells. It can theoretically be used as a delivery platform to transport vaccines or antigens that could provoke the immune system into destroying tumors. In the lab, Galán has shown that orally administered *Salmonella* engineered to express a tumor antigen can destroy tumors in mice. He hopes to conduct trials in human subjects next year.

#### **Surgical society honors a mentor**

On Thursday, June 1, the Yale Surgical Society paid tribute to William F. Collins, M.D. '47, the Harvey and Kate Cushing Professor Emeritus of Neurosurgery, who served as chief of neurosurgery at the medical school and as chair of surgery from 1984 to 1994. Retired and dividing his time between San Diego and Guilford,

Conn., Collins has been writing short stories, novels and murder mysteries during the past few years. He was in town for the reunion and listened as the surgeons he trained recalled what they learned from him.

"The things we learned on the rotation in neurosurgery were the importance of the accountability of being a physician, a passion for patients—many with devastating spinal injuries—and the fact that you embraced innovation," said Walter E. Longo, M.D., M.B.A., HS '87, chief of the section of gastrointestinal surgery at the medical school. "You were always available to listen to us. You always looked for ways to increase our clinical experience. You made sure that we were educated, that we were mentored and that we were inspired."

Dennis D. Spencer, M.D., HS '77, the Harvey and Kate Cushing Professor of Neurosurgery and chair of neurosurgery, recalled meeting Collins when he came to Yale in the 1970s. "It was palpable," Spencer said. "I felt this passion he had for training not just neurosurgeons, but all young surgeons."

Richard D. Bucholz, M.D. '77, HS '83, director of neurosurgery at the Saint Louis University School of Medicine, said Collins encouraged him on an unusual career path. Bucholz had a longstanding interest in computers and believed they could help to improve surgery and surgical outcomes. By coupling computers to new imaging technologies the surgeon can perform a "virtual" surgery to help reduce mistakes in the subsequent real procedure. "With these systems you can do the procedure . . . before you even get into the operating room," Bucholz said. Then, by using navigational computers that track instruments during the operation, surgery can be simplified and made safer. "Surgery takes on aspects of a video game—which may appeal to our younger surgeons," Bucholz said.

He envisioned a system in which all operating room devices are connected and provide real-time data about the patient. That information can be transmitted to consultants outside the operating room so that they can offer the benefits of their clinical experience. "In a very real way we can share and record experiences and use them to enhance outcomes," Bucholz said.

Also at the society's meeting was Charlotte Ariyan, M.D., PH.D., an oncology surgeon, who received the fifth annual Samuel Harvey Award as an outstanding chief resident.

### Public health—from disparity to equity

With 46 million people uninsured and an equal amount underinsured, our health care system is broken, Cynthia A. Gomez, PH.D., told the audience at Alumni Day at the Department of Epidemiology and Public Health, on June 2. “A weak and inequitable health system is going to create poor health in our nation. We have a nation and a world in which health is deteriorating to the degree that it is definitely going to affect the future of this country and the world,” said Gomez, director of Health Equity Initiatives at San Francisco State University.

Her keynote speech, “Separate and Unequal: Confronting Disparities in Health,” kicked off a discussion on one of the biggest challenges in health care today. Many of the diseases confronting society, such as obesity, diabetes and cardiovascular disease, can be prevented by changes in behavior, Gomez said. People of color suffer disproportionately from these chronic diseases, but the nation spends more money on treatment than on prevention, she said.

Gomez urged alumni to shift the conversation from disparities to health equities, which concerns justice. “When the water rises, all boats rise,” she said. “Do we as a society care if there’s a future? If we do, how do we make a society not so burdened by disease?”

Panelists at this year’s reunion symposium, moderated by Jeannette R. Ickovics, PH.D., associate professor of epidemiology and psychology, explored the complexities of health disparities and suggested new approaches. The Yale School of Nursing is working to achieve equity by creating a partnership with the Howard University Division

of Nursing, said Marjorie Funk, M.S.N. ’84, PH.D. ’92, professor of nursing and director of the Yale-Howard Partnership Center on Health Disparities. In 2000, Yale and Howard created a partnership to enhance the research capacity of minority nursing students and faculty. Since then, Yale has brought 34 undergraduate nursing students from Howard to New Haven for summer research internships. Today, more than half of those students have completed or are completing graduate work, increasing research in health disparities at both universities.

Beth A. Jones, M.P.H. ’86, PH.D. ’93, associate professor of epidemiology, studied disparities in the mammography process: do African-American women receive the same benefit from mammography? She found disparities in three areas: adherence to guidelines for frequency of mammography, differences in follow-up care for abnormal screenings, and communication and understanding of the results.

“We know that even at the same stage of diagnosis, the mortality rate among African-American women is greater,” said Jones. “We’ve made huge progress in terms of treatment and early detection, but it’s time to start thinking about strategies to ensure that all groups benefit from these advances, so that we can eliminate the disparities in outcomes.

When it comes to cardiovascular diseases, said Harlan M. Krumholz, M.D., the Harold H. Hines Jr. Professor of Medicine, professor of epidemiology and public health and co-director of the Robert Wood Johnson Clinical Scholars Program, studies have shown that African-Americans undergo dis-

In her keynote speech at Alumni Day at Epidemiology and Public Health, Cynthia Gomez said an inequitable health system will have serious effects on the future of the country.



proportionately fewer procedures—cardiac catheterization, angioplasty and bypass surgery—than whites. There is no evidence, however, that these procedures improve outcomes.

“When you find something like this disparity, you have to decide. Is it a difference without a consequence? Is it a difference with a consequence? Then we can call it a disparity. Is it a difference with a consequence that we cannot attribute to anything else but pure bias against a certain group?” he said.

The final panelist was Curtis L. Patton, PH.D., professor of epidemiology (microbiology) and director of international medical studies, who retired in July after 36 years. Patton, who is African-American, spoke about the ability of African-Americans to survive.

“We know that when we look at the medical literature published in the 19th century, experts predicted that nobody who looks like me is supposed to be here. We were supposed to have disappeared a long time ago, and at several points in history—from tuberculosis, syphilis, starvation—you name it,” he said. “In some ways, people who look like us are monuments, not just

to slavery, but to survival and exceptional competency.”

### **Race, ethnicity and genetics**

As work on the human genome shifts from sequencing to understanding how DNA affects health, the roles of race and ethnicity also come into play, said Vence Bonham Jr., J.D., the National Human Genome Research Institute’s senior advisor to the director on the societal implications of genomics.

“This conversation is not ending,” Bonham said in his special address to public health alumni. “It is only beginning and that is why it is so important to public health professionals.”

Acknowledging that race and ethnicity are social and political constructs, he discussed the complexities of race-based medicine. And he cited BiDil, a drug that was approved by the FDA in 2005 to treat congestive heart failure. A retrospective study found that the drug, which was first tested in the 1980s and 1990s, seemed to benefit blacks more than whites. In 2005 the fine print on the label noted that the drug was indicated for use by “self-identified blacks.”

“It is the first drug in the history of the United States to be approved for only one racial group,” Bonham said. “Who is a self-identified black? What does that mean?”

The implications of race and ethnicity for public health and health care practitioners center on how research studies are designed, as well as how the results of such research are interpreted, according to Bonham. “Race and ethnicity are important components of health in our society, but we have to be careful about how we use them.”

### **Awards and the state of EPH**

This year’s Distinguished Alumni Award went to Irene Trowell-Harris, ED.D., M.P.H. ’73, director of the Northeast Regional Office of Healthcare Inspections, Office of the Inspector General, Department of Veterans Affairs.

The Eric W. Mood Award was given to Elisabeth Schauer, M.P.H. ’96, director of vivo international, a foundation that deals with mental health issues in communities affected by violence and conflict.

Katrina Clark, M.P.H. ’71, executive director of the Fair Haven Community Health Center in New Haven, received the Emerging Majority Affairs Committee’s (EMAC) Health Equity Award for her leadership in promoting community health in New Haven. EMAC, a committee of the Association of Yale Alumni in Public Health, strives to increase the representation of African-Americans, Latinos and other under-represented groups in the student body.

Curtis L. Patton, PH.D., received the 2006 Award for Excellence for his service to the department and to the university (see related article p. 36).

Matthew Lopes, M.P.H. ’77, director of AIDS Care for New Haven’s health department, and Judith Stavisky, M.Ed., M.P.H. ’80, who developed public health programs for low-income populations in Pennsylvania, were inducted into the 2006 Alumni Public Service Honor Roll.

Brian P. Leaderer, M.P.H. ’71, PH.D. ’75, the Susan Dwight Bliss Professor of Epidemiology, who served for 18 months as interim dean, gave a brief report on the state of the school. Recent accomplishments included the implementation of a five-

year joint program with Yale College that will allow undergraduates to take public health courses during and after their undergraduate education and earn an M.P.H. one year following receipt of their undergraduate degree. Five new faculty members will start in September, Leaderer said, in biostatistics, environmental health, health policy and social and behavioral science. The school is also undergoing a self-study as part of the accreditation process, he said.

Leaderer introduced the new dean of public health, Paul D. Cleary, PH.D., whom he called “the best of all applicants.”

Cleary said he hopes to create “the best possible educational experience” in the department. “I am hoping I can rely on your advice and counsel as I try to do that over the next several years,” he told alumni.

## 1946

## 60th reunion

Short of a conference call to the entire class, let this synopsis serve to update our svHO (sometimes vigorously healthy octogenarians). We stand in awe of the returnees, who included the following: **Molly Albrink**, still the scholarly professor enlightening students and the universe as a true pioneer in all things regarding triglycerides and serum fatty acids. **Bill Banfield**—watch the litigation dramas of raising sheep, researching unknowns and remaining an NIH alumnus. **Tim [Aaron] Beck**, receiving more monetary awards than Tiger Woods while continuing to reap accolades from colleagues around the planet. To think he hated Psychiatry 101! **Sandy [Sanford] Bluestein**—the # 1-seeded U.S. senior tennis player, who spends more time on the clay courts than on Wall Street. He has been most generous in supporting (anonymously) many Yale projects and scholarships for students and radiology residents. **Sandy** continues to serve as a board member of the New York City Opera. Tickets anyone? **Tom Doe**—his kiddie patients are now all grandparents and call him at midnight about their own grandchildren. Ho hum. He and **Bert [Lambert] Filer** learned the virtue of “tincture of time” from the Daniel Darrow/Grover Powers dynasty and are now both “coasting.” **Bert** was recently honored for his ongoing work in St. Raphael’s Pediatric Clinic. **Marty Gordon** and partner-for-life Evelyn are now living in a North Branford, Conn., retirement community where the swimming pool dip in the a.m. is 88 degrees Fahrenheit, unlike the fridity of Linsley Lake. The Cushing/Whitney Medical Library continues to be **Marty’s** home away from home. The Peabody Museum contributed all the avian specimens for his current exhibit, “The Flu and

You—Old and New Threats,” posted on the Medical Library website. **Jack Neville** and **Laura White** are the most unchanged, youthful couple, even registering early for our reunion. They bask in and on the Cape, where they are active in the community and with their kids.

**Jim Kleeman** is still seeing patients in between his appointments for renal dialysis. The class graduation plaudits now are continuing for staunch fortitude. **Linus Cave** lost our Dusty to renal failure and the aberrant cerebral beta protein. Six daughters watch over him in New Jersey now. **Eli Wing** continues to be a civic leader and fulfills the role of internist to the Rhode Island masses. He also finds time to treat the sugar cane workers in the Caribbean islands.

There are many who wanted to come but were thwarted by unavoidable reasons. **Bill** and **Midori Wedemeyer** send their very best. They joined the **Gordons** during the International Medical Film Awards in Los Angeles. A hilarious mini-class reunion per **Bill’s** wit and **Midori’s** docent guidance were typical and valued. **Bob Cooper** and Linda now live in Florida, enjoying the perks of retirement from the Air Force. Subdural decompressions for injured flight deck pilots were done per Harvey Cushing’s mentoring. The **Coopers** may move from their usual Delaware homestead. **Vinny** and Rosina **Longo** were unable to attend due to illness. **Vinny** was a Pfizer consultant during the early Viagra era and can describe the pathophysiology of erectile dysfunction in the classic manner for those whose current focus requires his fund of knowledge. **Vinny** and June **Pepe** continue to enjoy the benefits of their gynecology dynasty while joined by son—guess who signs out to

whom when not in Florida? They send their regrets to the class.

**Dick** and **Mitzi Sisson** had to cancel their reunion plans due to sudden illness. Her recovery from surgery has been greatly successful. **Dick** has recently retired from an outstanding surgical career, teaching students and house officers at Washington University Medical Center and running his own private practice. The **Sissons** are closely united with their children and hope to visit on the way to Boston. **Don Shedd** has been the constant caregiver for wife Charlotte; both have just been honored as founders of Hospice Buffalo by a special endowment of half a million dollars in their honor. Kudos to them both!

**Hal King** and Betty have yearned for this reunion. Retired as cardiovascular surgeon and professor emeritus of the Indiana University Medical Center, **Hal’s** impact on that institution continues. **Tom Coleman**, always warm and generous to others, and **Babette** send their best for “this historic reunion event.” **Ruth S. Kempe** and her late husband Henry pioneered the profession’s long-needed attention to child abuse. **Ruth** continues to lecture as associate professor emerita at the University of Colorado. Sixteen grandchildren require her to manage an Excel birthday flow sheet and tons of balloons. **Julie Sack’s** vision and other impairments precluded his coming to New Haven. **Greg Flynn’s** fabulous ophthalmology practice has been closed for several years while Peggy and he enjoy the benefits of a retirement community. We’re too late to ask for cataract treatment with professional courtesy. **Greg’s** recent illness precluded the long-awaited trip to New Haven. Elaine **Yudkin** managed to join us, since the class has always been so treasured by **Jerry** during his long neurological illness. She freely discussed her coping with the family Huntington’s gene, helped by Dean Alpern’s characteristic attentive empathy.

Mary Wagner and Norma Whelan, along with our other endearing class widows, have each expressed their warmest wishes to all. Mary Judd called from Hawaii, “thinking of us fondly on this day.” Susan **Owens** emphasized how important the Class of ’46 has always been to **Bob’s** life. The extended ’46M camaraderie continues, and all await our next reunion in 2011!

**Marty Gordon, svHO**

## 1951

## 55th reunion

Although only four of us made it to the reunion, our meeting was marvelous, exciting, thrilling, nostalgic and touching. Our small group, which had little contact with one another during our years at Yale, spoke warmly and intimately during the two days. We parted sadly but hoping that we will meet again at our 60th. All of us had been back to New Haven in recent years and were familiar with the changes in the buildings. Old St. John’s Church is gone, and several skywalks join the major buildings. Entering the main wing of the School of Medicine, one passes the reception desk as before. I spent many a lunch hour there covering for the regular attendant, thus earning enough for a quick supper at Dudow’s on Congress Avenue. Walking down the hall to the library, one passes the familiar antique medical photos and etchings. The Historical Library was exactly as it was half a century ago, except that the comfortable chairs have been replaced with newer ones. In memory of days long gone, I snatched a brief nap.

Upstairs on the long corridor leading past the anatomy labs, I found the tables all gone and their place taken by many small labs for researchers. The anatomy labs had moved across the street to the new Anlyan Center, which was erected at the site of the former nurses' dorm. The new anatomy wing is a palace, a whited sepulcher where the departed give all their help to the living. Exhaust fans assure fresh air for the weary, and video screens above each table help the lost find missing parts.

Everything everywhere was spic and span, and the staff was wonderfully accommodating. No question or request was too much—ask a question and you were taken by the hand (almost!) to where you could find the answer to your problem. The meals were superb, and at several locations were containers of iced soft drinks including (surprise!) “Yale Water”—nectar of the gods, and a delightful relief from the heat on a muggy New England day.

My three companions had each lost their spouse in recent years. I am still blessed with mine, *Deo gratias*. **Jocelyn Malkin** is still practicing psychiatry; she makes several trips to Yale each year to attend meetings of the Association of Yale Alumni in Medicine. **Lowell Goodman**, **Al Mowlem** and I are all retired. I learned for the first time that **Al** had served in Korea in a M.A.S.H. unit, where his life was much like that of the physician portrayed by Alan Alda on the television show—except that quite often **Al** was the only doctor on hand to take care of dozens of casualties.

I received nearly a dozen letters from classmates, far too long to repeat here (from **Straatsma**, **Adams**, **Pava**, **Anderson**, **Merritt**, **Sterling**, **Nik Nevin**, **Small**, **Katz**, **Groel** and **Hamburger**). Send me a business-size *self-addressed* envelope; a stamp is not needed. I will forward any letter (one or more) to anyone who wishes.

Sad to say, there is no news from **Jane Swartz**. Never have I met a classmate without asking “Any news from Jane?” and then, “Remember *l'affaire du rideau*?” **Al Mowlem** told me that he heard of the display, surreptitiously walked by her table and took a peek—which Jane noticed—and asked (probably the first and only words spoken to any class member), “What did you expect, jelly beans!”

Write! I shall respond—but I don't expect any jelly beans!

**Paul Bruch**

## 1956

### 50th reunion

For those returning to New Haven, it was a weekend of reminiscence, rekindled friendships, and now, with the perspective of time, an even greater appreciation of the Yale System. Seeing the growth of the campus and learning of Yale's pre-eminent role in the advancement of science left us feeling proud.

Our 50th reunion was spread over three days. The opening event was an elegant private party hosted by **John Gardner** on Thursday. On Friday night there was an equally elegant party hosted by the **Downings** (the fifth in 25 years). As a measure of the spirit and good feeling toward Yale, more than 50 percent of the class came back. Those coming back included **Cal** and **Phyllis Bigler**, **Gloria** and **Leo [Levon] Boyajian**, **Tom** and **Joyce Brown**, **Rosalie Burns** and husband **Herb Goldberg**, **Georgiann** and **John Carroll**, **Barbara** and **Ed Child**, **Tina** and **Jim Collias**, **Paula** and **Chandler Dawson**, **Helen** and **Steve Downing**, **Janet** and **Mitch Edson**, **Rona** and **Gil Eisner**, **John Gardner**, **Shayna** and **Sumner Gochberg**, **Charmian** and **Alan Gurwitt**, **Susan** and **Bill Hindle**, **Joan** and **Chuck Hopper**, **Marie-Louise** and **Ken Johnson**, **Linda** and **Jerome Klein**, **Gloria** and **Bill**

**Lewit**, **Pres [Preston] Manning**, **Carol** and **Dwight Miller**, **Don Nalebuff**, **Jane** and **Fred North**, **Beverly** and **Jim Patrick**, **Ruth** and **George Paulson**, **Denise** and **Bob Scheig**, **Ruth** and **Jim Scheuer**, and **Bruce Trembly**. **Suzanne (Supplee) Becker**, **Joe Cerny**, **Jack Love** and **Bill Narva** sent regrets but could attend only in spirit.

Thanks to the efforts of **Mitch Edson**, reunion gift chair, and those generous classmates, especially the **Hindles**, for their remarkable gift, a scholarship was established. Also, thanks to **Mary Meehan** and her alumni office staff, who made the whole event run so smoothly.

**John Gardner**

**Dwight Miller**

## 1961

### 45th reunion

Our class reunion dinner at the Graduate Club went on well into the night. Attendees included **David Brook** and wife **Judith**, **Christopher Durham** and wife **Susan**, **Joseph Jasaitis**, **Marguerite Lederberg**, **George** and **Christa Lordi**, **James Lurie**, **Vincent Marchesi**, **Anoush Miridjanian**, **Roland** and **Grazina Paegle**, **Roy Ronke**, **Warren** and **Myra Widmann**, and **Donald** and **Alice Young**.

We exchanged e-mail addresses, anecdotes about former professors, family stories and continued appreciation of the Yale School of Medicine (YSM) experience. **Joe's** first impression of YSM was the welcoming address by Dean **Vernon Lippard**: “When I came here this morning, a young man asked, ‘Hey, Mac, where is the medical school?’ We at Yale do not address anyone as Mac.”

In an attempt to tap the wisdom accumulated during our long and active careers, a mini-survey circulated among the members of the class asked for definitions of happiness. Our Declaration of Independence lists “the Pursuit of Happiness” as one of our inalienable rights. **Jim** noted that “accomplishment and public recognition are



evanescent. Happiness is playing chamber music regularly; seeing children for psychiatric treatment and having them improve and be successful; watching my own children grow up and become interesting and creative." For **Roy**, happiness is "loving those around you and the work you do." For **Marguerite**, it's "learning to let go of fixed expectations and taking satisfaction in the present moment." **Anoush's** definitions changed: "When younger I viewed happiness as caught up with lots of accomplishments and being a useful person. Happiness now is peace with yourself and what you are, time and enough means to do what you want to do." "It used to be beer and pizza," but now **George** finds happiness "wrestling with grandchildren and having your children develop into mature adults with secure careers." **David's** definition also changed to becoming "more flexible and accepting, reviewing more of the possibilities, fewer of the limitations." **Roland** defined it as "dating adorable women and finding and keeping the one. The right spouse will create a wonderful family." **Don Young** liked "remembering the good stories we experienced as medical students. There is a bond that develops that you retain for a lifetime. Great teachers like Averill Liebow and Harry Greene leave memories that never leave."

**Warren** found happiness to be "a moving target. In youth happiness assumed a safe home; in medical school it was success in preparation for life as a doctor. 'Life' assumed a supportive marriage, healthy children and then a successful career. Retirement did not equal happiness to me. I felt that my career was too much a part of what defined me for me to just walk away from it—and I lucked into a full-time academic position with summers off. Happiness is seeing our children happy; but now, what was not even really on the radar screen

before, are the issues of health and impending inevitable decline, and the hope that contentment can prevail without undue decline of function until death. Happiness is seeing grandchildren grow up healthy, achieving well, making the right choices and hoping that we can live long enough to see them well on their way in life."

I agree with **Jim** that "this reunion was fun." Hope to see more of you at our 50th.

**Roland Paegle**

## 1966

### 40th reunion

Classmates present were in good spirits and looked well. Not a single tattoo or male earring was seen. 1966 was the year Medicare was enacted, and we were gun fodder for that program.

**Stuart Kotler** is active in radiology in New Jersey. His future looks rosy—he owns a gas station. Investors take note: through convoluted boilerplate, **Stuart** personally guarantees the solvency of British Petroleum. I introduced my wife of 40 years to **Mary Alice Bernet Houghton**. For some reason **M.A.** was surprised, and said she thought I had Invisible Wife Syndrome. I hope she sends more information about it. Are invisible wives silent? Can they see each other? **M.A.** is active in general psychiatry practice in Milwaukee with husband Bill, M.D. '64. Of all the people my wife met that weekend ("They're all wonderful"), her favorite was **Mary Alice**.

I inadvertently sat at the bad boys' table at the class dinner. There were reflections on long-ago mischief. Joe Baron's bar and beer were mentioned. Kindly campus police used to herd revelers to Harkness beds and were less judgmental than Mom. Back then there were some half-assed fraternities. They threw an occasional half-assed dance. At one

such soirée, a classmate brought a hooker in signature street dress. This made for social anaphylaxis with the wives and dates who were present. One innominate classmate claims he doesn't remember the occasion but admits he might have been the culprit.

**Ed O'Keefe** is retired from academic dermatology in North Carolina. He now does wood-working there in the winter and in Maine in the summer. **Bob Gunn** is semiretired after 30 years at the CDC—something about condoms; he is now in San Diego and has taken up golf.

The class dinner was held in the library of the Graduate Club. As the room heated up, **Arne Youngberg**, retired radiologist from Cheshire, Conn., and class secretary, turned on a window air conditioner. It was white with pigeon droppings. We may all be gone by the time you read this. **Dick Bockman** professes medicine at Weill Medical College of Cornell University in New York City. He arranged a memorial gathering for **Donald Cohen**.

**John Howard** does internal medicine on the elbow of Cape Cod. He sails. He also has a company for staffing nursing homes and jails, and serves as the local medical examiner. By Massachusetts tradition this office confers immunity from prosecution for misdemeanors. I mentioned to him that in my bailiwick, although they try to hang this office on a pathologist, I do not care for forensics and was delighted to have a psychiatrist fill the role.

**Wilbur Kukes**, native of Montana, was also in town for the reunion. Contrary to class legend, he rode into New Haven by *iron* horse. He arrived at Harkness Hall clutching one small suitcase. Sharpie upperclassmen spotted equine product on his boots and immediately hustled him for used textbooks. They promised Hamm's *Histology* would read like a Louis L'Amour novel. **Wilbur** no longer



mends the bones of cowpersons in Big Sky country but walks an Old English sheepdog on a beach in the state of Washington.

**Larry Toder** and wife Susan came from Missoula, Mont., where **Larry** is a retired orthopaedic surgeon.

**Jon** and **Joan Wayland** joined us from Klamath Falls, Ore., where she has retired from child psychiatry and he is a retired urologist.

Looking back at our class, formed 44 years ago, we decided diversity is nothing new. **Wilbur** was two standard deviations from the mean, and the Southerners one SD.

**Lynne Lipton Levitsky** is head of pediatric endocrinology at Mass General. She was at the class dinner with her husband Sidney, a cardiac surgeon. During the dinner Sid confessed they started dating when he was a resident and she was still a student. The assembly groaned in horror but decided it was too late to give our chief resident emeritus the hot water treatment. The bad boys wanted to know what the problem was.

**Stuart Hauser** and I met at the new Child Study Center, the legacy of our classmate, the late **Donald Cohen**. The center and several other buildings proved that **Donald** had a powerful edifice complex and was a master fundraiser, a skill much cherished in academe. **Stuart** said that fundraising is one of his duties as head of a Boston child psychiatry clinic, but romancing donors is not his favorite thing. He runs a long-term program in adolescent development.

**Jimmy Brown** is working part-time in oncology in Middletown, Conn. He also knows all the verses of "Amazing Grace," useful in that specialty. **Phil Bernstein** is pounding out orthopaedics in the San Francisco area. When I mentioned my imperfect knees, he said 90 percent of his patients are happy with his joint replacements. I asked if he were flying back on the 90 percent airline.

**Mac Griffiss** came in from San Francisco, where he toils in microbiology pathogenesis. He is also a retired bird-colonel in the Army Reserves. For all your military needs, give **Mac** a call. Why fight with lawyers when you can get the infantry cheaper?

**David Fox** is working in Fresno as a child psychiatrist. A beloved avocation is playing the cello in a string quartet. When I mentioned that I had recently bought the six-disc complete Shostakovich series by the Emerson Quartet, he was a fount of information on the topic but, alas, I could have done better. Incidentally, if you are fed up with hip-hop noise at your gym, lob one back and stick some string quartets in the CD player. But be prepared to out-run vulgarians a third our age.

Me? Pathologist emeritus in Marshalltown, Iowa. I read a lot, take solo road trips and follow my wife around giving helpful housekeeping tips.

Spouses of our classmates should consider themselves assimilated into the class. [Caveat: The bad boys, in denial re: Club Prostate, still have lots of life, so certain conditions and restrictions may apply.]

Other classmates spotted but not engaged: **Clarence Sasaki** and **Robert McRoberts**.

There were reports of bad breaks and sorrows for some classmates, but this report is like that garden ornament that heralds only sunny hours.

**Eugene P. Cassidy**

## 1971 35th reunion

How different the conversation was when 23 members of the Class of '71 gathered at the Quinpiack Club for their class dinner than it had been 30 years ago, when they met for their fifth reunion. At that time the talk was of residencies and fel-

lowships being completed and careers and families being started. At this reunion the talk was of careers winding down, children's accomplishments, grandchildren and plans for retirement, as well as of three members who died over the past five years. **Irv Raphael**, who served as master of ceremonies, remembered **Robert Mackey**, **Jerry Haber** and **Richard Helgerson** with a moment of shared silence before moving into a round of self-deprecatory humor and remarks. **David Lippman** did a wonderful job arranging the dinner and bringing Yale Med '71 treats.

Privately, **Irv** mentioned how proud he was that his son is following him into orthopaedics. Expected, not attending and missed was retired **Barbara Kinder**, whose daughter Caitlin was part of the 2006 United States women's Olympic ice hockey team. **Steve Moffic**, who has been honored by the American Psychiatric Association for his work in ethics, has a son close to ordination as a rabbi. While **John Foster Jr.** was the first of the attendees to retire, he'd been preceded by **Barbara** and **Doug Schmidt**. **Al Wehl** spoke eagerly of splitting his time between Hawaii and Colorado once he retires. **Richard Moggio** has left cardiac surgery and now does corporate health care work. He also takes off for Ireland to golf when he can.

Others continue to balance work, family and avocation. **Stuart Kleeman** practices pediatrics, enjoys Zachery, his new grandson, and builds miniatures. **Fred Cohn** practices ob/gyn and enjoys his family, with kids ranging in age from 9 to 27. **Sherry Loo** and **Wally Matthews Jr.** traveled from Hawaii for the reunion and a family Harvard graduation. **William Krinsky**, our class entomologist, attended with his new wife, Suzanne. **Sten Lofgren** came with his partner, Sally Lopez. **Lenny Eisenfeld** described the painful years after the loss of his son and noted that now, following the birth of



two grandsons, “our family numbers are again going in the right direction.” **Barry Perlman**, coerced into writing this report, has recently completed 25 years as director of psychiatry at Saint Joseph’s Medical Center in Yonkers. He has served as president of the New York State Psychiatric Association and as chair of the New York State Mental Health Services Council. He delights in having his children living nearby on the Upper West Side of NYC.

**Barry B. Perlman**

## 1976

### 30th reunion

The weekend was a little wet (!), but that did not prevent us from having a great time greeting old friends and sharing our news. Present at the class dinner on Saturday night at Chow, the Friday night clambake in Harkness courtyard, or both, were the following:

**Sarah Auchincloss**: She is busy practicing psychiatry in New York City and raising her children. **Alfredo Axtmayer** and wife Pat: **Alfredo** is practicing orthopaedic surgery in Wallingford, Conn., and is also heavily into golf. **Sharon Bonney** (referred to below as me/I) and husband James A. Beattie Jr.: **Sharon** retired in 2005 after 20-plus years of designing and running investigational drug clinical trials for first Wyeth, then Miles (now called Bayer) and then Pfizer (10 years). She received a Distinguished Alumni Service Award from the AYAM (Association of Yale Alumni in Medicine) on June 3. **Roger Boshes** and wife Meredith: They brought Dr. and Mrs. William Konigsberg as guests to the class dinner. Bill is still teaching molecular biology to the Yale medical students as he did to us 35 years ago. Bill looks exactly the same, except he now has silver hair instead of pepper-and-salt. **Roger** is a psychiatry professor at Harvard. He no longer looks like John Lennon. **Charles Swenson**: He is

practicing psychiatry and teaching trainees in Northampton, Mass. He now looks like Stephen Spielberg. **Frank Watkins**: He is an orthopaedic surgeon in New Rochelle, N.Y. He and I are huge fans of Hillary Clinton. He reminded me that she audited the Class of 1975’s first-year psychiatry lecture course at CMHC in 1971-72 with **Frank, Todd Estroff, George Knowles** and me. **Todd Estroff**: He is practicing adult and child psychiatry in Atlanta. He has written a book—the *Manual of Adolescent Substance Abuse Treatment*, published by American Psychiatric Publishing in August 2001. It is available on Amazon.com.

**Candace Corson**: She is a consultant and national marketing director for USA Integrative Med/Juice Plus in Granger, Ind. She is enthusiastically spreading the word about the benefits of nutraceuticals. Her husband is **George Knowles**, M.D. ‘75.

**Florence Comite**: She is practicing in New Haven and teaching at Yale. Her son Jon just finished his first year of medical school at Yale. **Vin Dicola**: He is a cardiologist in private practice in New Haven. His son John is attending Stanford University; his daughter Laura just graduated from Choate and will be attending Harvard University in the fall. **Vin** is subspecializing in golf and in winning contests.

**Ken Dobuler** and wife Susan: **Ken** is the chief of medicine at Griffin Hospital in Derby, Conn. He and Susan live in Branford, Conn., not too far from the Sound. **Ken** is building a sailboat (seriously!). **Chris Jolles** and Katie Reeder: **Chris** is in private practice in special gynecology and oncology in Salt Lake City, Utah. **Richard Kayne** and wife Maria: **Rich** is in solo practice (endocrinology and internal medicine) in Cheshire, Conn. He is on the board of directors for Paul Newman’s Hole in the Wall Gang Camp in Ashford, Conn., for children with cancer and

serious blood diseases. Maria is on the board of the Creative Arts Workshop in New Haven. *Many, many thanks* to **Rich** and Maria for once again serving as the social chairpersons for this 30th reunion, as they did for our 25th!!!

**Norman Kohn**: He is practicing psychiatry and neurology in Chicago. **Bill Levy** and wife **Karen Kelly**, M.D. ‘77: **Bill** and **Karen** recently relocated from Abington, Pa., to Williamstown, Mass., where they are employed (**Bill** as the hospital cardiologist, **Karen** in internal medicine/geriatrics) at the local hospital. They are enjoying their seven-acre mountaintop spread and getting to know their neighbors. Eventual retirement to that gorgeous region was the motivation for their move from Philly, but they are having so much fun that retirement looks a long way off! **Cindy Mann**: She is practicing pediatric and adolescent medicine in Hamden, Conn., and is a major supporter of women’s health research at Yale. **Doug Mann**: He recently moved to Cape Cod (Falmouth), where he is in solo practice in otolaryngology and loving it. He recently joined an a cappella singing group called Notescape.cod. **Rick Morin**: He is a professor and pediatrician/neonatologist at the University of Buffalo School of Medicine and is serving as its interim dean. **Peter Swanson**: He is associated with Family Health Care Associates in Shelton, Conn. **John Wiles**: He is practicing dermatology in New London, Conn.

News from those unable to attend the reunion but who send greetings to all:

**Randy Cebul** is professor of medicine at Case Western Reserve Medical School in Cleveland, Ohio. He and wife Mary Scott Cebul live in Hunting Valley, Ohio. **Avi Hettena** and his wife live in San Francisco. He is practicing medicine and they are raising their five children. **Jon Lederer** (M.D./PH.D.) is a professor doing basic research and teaching at the University of

Maryland Biotechnology Institute. **Richard Neubauer** is practicing internal medicine in Anchorage, Alaska. He has been appointed to the Board of Regents of the American College of Physicians.

Many, many thanks to all for coming and for contributions to this newsletter! See you all, we hope, for our 35th in 2011.

**Sharon L. Bonney**

## 1981

### 25th reunion

Our reunion had strong competition from parental duties and academic obligations. Appropriately, high school and college graduations, final exams, and a national oncology meeting took precedence for most of us. Nevertheless, more than a dozen of our intrepid classmates and their guests journeyed to rainy New Haven for a most enjoyable reunion weekend. We settled down to a wonderful get-together on Saturday night at the Quinnipiack Club. It was a great opportunity to share our memories of Yale, renew friendships and recount our experiences over the past two and a half decades.

**David Lebwahl** drove from Madison, N.J., where he is involved in clinical development of new cancer drugs for Novartis. When not traveling overseas, **David** is in his garden, at concerts, near the ocean or on the tennis court. **Jonah (Kalu) Odum** was accompanied by wife Tracy and adorable young sons—Jonathan, 5, and Emmanuel, 2. Now with an M.B.A. to complement his M.D./PH.D., **Jonah** is crossing the continent and relocating his cardiac surgery practice at UCLA to the NIH, where his duties will combine his clinical and business skills. It was a treat to see **Bernie Lewin** and wife Terri Haberman, who is an optometrist. With their oldest

son Craig at Penn State, **Bernie's** "harem" includes 13-, 14-, and 16-year-old daughters. **Bernie** is in private practice in radiology near Philadelphia. We enjoyed hearing about his exploits on his motorcycle and other adventures. **Dovelet Shashou**, accompanied by husband Jonathan Trambert with camera in hand, snapped plenty of pictures and spoke about her most recent avocation: tango lessons!! **Dovelet** continues to practice pediatric ophthalmology in New York City.

Class agent **Anthony Urbano** and wife Camille M.C. Qualtere are living in Bethlehem, Pa., where **Tony** is doing interventional cardiology as part of a nine-person cardiology group. They have three teenagers at home who keep them quite busy. **Tony** has been involved in successful thoroughbred breeding and racing. He enjoys gardening, which affords him the time to relax and solve problems. **Mike Nerenberg** was accompanied by wife Lynne, who is an internationally renowned Arabic dancer! **Mike** is a biotech executive in La Jolla, Calif. His hobbies include riding his Harley, welding, archery and puffing on Cuban cigars.

It was great to see **Mark Kasper** and wife Donna. **Mark** is in private practice in internal medicine in East Haven, Conn. Together they share their passion for antiques, such as collecting Murano glass, as well as exploring ethnic restaurants locally and in Manhattan. Worldwide traveler, radio celebrity and wine connoisseur **Christine Duranceau** was accompanied by husband Richard Zakrzewski. **Christine** has moved from California to the resort area of Galena, Ill. When not practicing emergency medicine in Platteville, Wis., she is politically active, both as president of the Wisconsin chapter of the American College of Emergency Physicians and the Northern Illinois chapter of the American Cancer Society. She travels to Washington periodically to con-

sult and testify on health care issues. A Congressional run has not been ruled out!

Fresh from high school and college graduation parties, **Lisa Babitz**, geriatrician, and husband **Stewart Greisman**, rheumatologist, live on the West Side of Manhattan, where they share an office. We offer their daughter Laura, 22, a Cornell graduate, our best wishes as she travels to Melbourne on a Fulbright scholarship to spend a year on venom research! Daughter Jill, 18, is heading to Cornell, while son Jack, 14, will be attending Stuyvesant High School. **Neil Gross**, formerly in Atlanta, is now living in Boston. Charged with enthusiasm, Neil is enjoying "the single life" while practicing ophthalmoplasty. He continues to play guitar. **Steve Konstadt**, accompanied by wife Jody, a dermatologist, entertained with his tales of extreme snowboarding, windsurfing, sailing and eclectic gourmet cooking. In between enjoying life with Jody and his two daughters, **Steve** has squeezed in the time to be a professor and chair of anesthesiology at Maimonides Hospital in Brooklyn, edit several textbooks, and train hundreds of residents and fellows during his 20-year academic career. Marilyn Merker, PH.D. '83, and our classmate **Rob Goldman** shared pictures and stories of their life near Milwaukee, Wis. They have a son and daughter. **Rob** is in private practice in neurology, and Marilyn is a professor of pharmacology at the Medical College of Wisconsin.

Speaking of Wisconsin, reunion social chair **Steven Brown** and wife Amy are also living near Milwaukee, where he has been in private practice in pulmonary critical care and sleep medicine since 1988. **Steve's** two sons are in college, while his daughter, a nationally ranked junior tennis player, is in high school. Steve is in demand nationally as a lecturer on COPD,

asthma, respiratory infections and insomnia. Cosmetic and hand surgeon **Ines Carrasquillo** has moved from Brooklyn to a private group practice in Rochester, N.Y. She has stayed in touch with a number of our classmates. **Barb Roach** traveled all the way from Hamden, Conn., with her husband, who is a local attorney. Their son and daughter are teenagers. **Barb** remains in private practice in rheumatology.

Although not able to attend the reunion, I've had wonderful communications with many who send their best wishes and fond regards. They include:

**Lesley Levine, Louann Brizendine, Mark Shoag, Nancy Ross-Ascuitto and Bob Ascuitto, Mark Koruda, Pat Burke, Paula Fracasso, Peter Arvan, Donald Ingber, David Goldfarb, David Paly, Ramona Fung, Richard Kravitz, Stephen Harrison, Alicia Barela, Steve Fugaro, Victor Vaisbort, David Weiss, Francis Chui, Erik Fisher, Annette Guido, Chris Attinger, Dave Gendelman, Brian Kobilka, Elliot Lach and Aziz Laurent.**

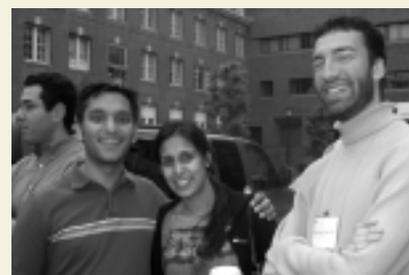
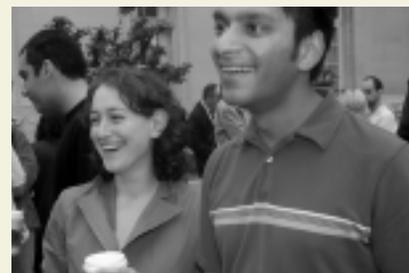
A PowerPoint presentation of our class is being prepared and will be distributed to our classmates. Please send biographical information as well as any jpeg, bmp, mp3, wav, gif, tif, mim, mov, mpeg or zip files to Steve Brown at [WiLUNGDOC@aol.com](mailto:WiLUNGDOC@aol.com).

**Steven Brown**

## 1986

### 20th reunion

The wet weather failed to dampen our spirits at the 20th reunion of the Class of 1986. On Friday evening we gathered under the tents to eat clams and lobster with **Roberto Lewis-Fernandez**, who continues his research in the department of psychiatry at Columbia University. We also saw **Ben Li**, chief of the division of surgical oncology at Louisiana State University Health Sciences. **Dan Fierer** showed up looking dashing in a suit. He continues his work on the faculty of Mount Sinai in



infectious disease and plays oboe with the Musica Bella Orchestra of New York. **Dae Song** joined us from his private ophthalmology practice in Birmingham, Ala.

**Samir Bhatt** and his wife came to the clambake. He has a private practice in otolaryngology in Boston; she is an ophthalmologist. **Mike Miller** is repairing our health care system from Cambridge, Mass., where he is a consultant. **John Detre** is on the faculty of the University of Pennsylvania department of neurology and directs the Center for Functional Imaging. **Lee Bailey** flew out from California, where he specializes in interventional and consultative cardiology. **Paul Wang** is working in developmental and behavioral pediatrics for Pfizer Global Research in New London, Conn. **Paul Chang** is chief medical officer for Tengion, a biotech company in King of Prussia, Pa., involved in tissue regeneration.

The dinner on Saturday was at my house in Ridgefield, Conn., with entertainment provided by Catfish, a local band. We saw **Dave Atkins**, who coordinates the Clinical Preventive Services Agency for Healthcare Policy and Research, and chairs the Subcommittee on Health Promotion and Maintenance in Washington. **Amanda Dill** flew out from her new home in California. She recently moved from Connecticut and is putting down new roots, both personal and professional. **Tim McGowen** joined us from Winston-Salem, N.C., where he specializes in spinal surgery and scoliosis and builds things in his spare time. **Brad Reich** is at McLean Hospital in Belmont, Mass., the largest psychiatric hospital in the Harvard system. He does research in post-traumatic stress disorder, dissociative disorders and personality disorders. **Barbara Harvey** joined us from her solo internal medicine practice in Pennsylvania. We also had the pleasure of seeing **Gail Mizner** and her son Matt. She is practicing internal medicine and

HIV care in Prescott, Ariz., and he just finished middle school. I continue to practice retinal and vitreous surgery in Danbury, Conn. I can't help noticing that everyone seems to grow more accomplished, attractive, charming and articulate with each reunion. We hope to see you at the 25th.

**Betty Klein**

## 1991

### 15th reunion

The Class of 1991 marked its 15th reunion on June 2 and 3. It was an occasion to reflect on the joys of our accomplishments and on the unspeakable sorrow of our losses. Arriving on Friday evening for the Dean's reception and clambake were **Colleen Foy**, **Funda Meric** and **James Stanislaw** with guest Brandy Settlemyre, and our class's dear friend Cynthia Carver-Smith. Later Friday arrivals included **Carl Henningson**, **Liz Holt**, **Jane Minturn** and **Dan Saal** (**Carl** and **Dan** graciously accepted hospitality from Château Leaubeau). After the clambake, the party rolled on into New Haven's old reliable, Viva Zapata's, where nachos and sangria fueled a few more hours of revelry.

On Saturday morning the crowd swelled with the arrivals of **David Frankfurter** with wife Lisa Tillman and children, and **Bob Spillane** with wife Annette and new bundle of joy, just in time for the class photo.

Saturday afternoon saw a log phase, prompted by the transporting reading of **Doris Iarovici**. **Doris** had been invited by her publisher to read at the Yale Bookstore from her most recent collection of short stories, *American Dreaming and Other Stories*. Arriving at the reading were **Marc Butler** and companion Chris Yulo, **Eleanor Pollak**, **Kathy Ryder** and **Marc Potenza**. A little afternoon diversion and then dinner—more log phase growth.

**Gaetane Francis** and **Larry Hirsch**, **Peter Bernstein** and wife Cathleen Barnhart, were there. We were also treated to a whirlwind visit from **Robin Smith** and special guest Dr. Morris Dillard. **Colleen Foy** opened wines she brought from her husband's family vineyard—Esterlina 2003 Zinfandel (14.7% alcohol!), 2003 Pinot Noir, and 2004 Chardonnay—sublime—hurry and buy. I must say that everyone with the exception of yours truly looked great.

After dinner the fireplace lit up, while I tried to find music to keep the party a-rockin'. Frankly, I failed in that endeavor, which prompted **Doris** to move the party to Bar, one of New Haven's hip night spots, where the ageless wonders of '91 showed the kids how it's done. At some point, I and the Saturday night Château guests, **Colleen Foy** and **Dan Saal**, got home. Late the next morning I awoke to the fetching aroma of baking (huh?!?) in the Château's kitchen. It was **Dan**, back at the bench with a new experiment—scones. A true eureka moment—there's nothing better than a good scone. As the first scones were being broken, **Liz Holt** and **Jane Minturn** careened around the corner in **Liz's** garnet-red Lotus Elise (which later shuttled **Jane** and **Dan** to the train, one at a time—two-seater, you know). After a few hours of scones, coffee, bubbly and mimosas, '91 adjourned for now—see everyone in 2011!

**Frank Lobo**

## 1996

### 10th reunion

The rain did not dampen the spirits of the members of the Class of 1996 who returned for their 10th reunion. Attempting to bring a little sunshine to New Haven were the Californians, including **Owen Garrick**, who is COO of HOV, a clinical research company in Oakland. **Owen** attended with wife Jocelyn, an ER physician, and their children—Owen Jr., 3, and Evan,



13 months. **Peter Ferren** is a child psychiatrist at UCSF and was accompanied by partner John Prigeon, a successful Silicon Valley type. **Susan Wolf**, a dermatologist in San Mateo, came with husband Bill Greene, a recovering radiologist and venture capitalist, and 8-year-old daughter Corynn. Representing SoCal were neuro-ophthalmologist **Peter Quiros**, a member of the USC faculty and resident of Venice Beach and Palm Springs, and plastic surgeon **Jane Kim** and husband Paul Maggio, a surgeon.

Traveling just a little less distance to the Elm City were **Monica Escarzaga** and husband Cyrus Cramer of Albuquerque, N.M. **Monica** is a cardiologist and Cyrus is a high school English teacher. Newlyweds **Kathleen Figaro** and businessman Alan Rice journeyed from Nashville, Tenn., where **Kathleen** is on the Vanderbilt faculty. Double Yale **Chris Muntzel** is a pediatrician in greater Atlanta.

From our nation's capital came **Matt Poggi**, a radiation oncologist at the National Naval Medical Center in Bethesda, Md., and **Sarah Hougen Poggi**, a perinatologist in Alexandria, Va. They were accompanied by daughters Eliza, a veteran of the fifth-year reunion, 5, and Julia, 3.

Closer to our Eli home, Pfizer executive **Yin Ho** and plastic surgeon **Henry Hsia**, M.D. '95, traveled from New York City with daughters Thalia and Viola. **Anil Panackel** and fiancée Jennifer Gribbskor made time for the reunion with their wedding only two weeks away. **Anil** is an infectious disease specialist in Boston and Jennifer is graduating from business school. Best wishes to them! **Simon Cornelissen** and **Rebecca Crichton** are living in Providence, R.I., with **Simon** commuting to his private orthopaedics practice near Boston and **Rebecca** working locally as a gynecologic endoscopist. They have two children—Ross, 5, and

Anneke, 3. Also visiting from Providence were child psychiatrist **Karyn Horowitz** and husband Michael Robbins, a psychologist. They also have two children, Simon and Asher. From the shade of the Charter Oak were **Helena Nolasco**, a rheumatologist, and Dr. Victor Chang of Hartford, Conn.

Representing New Haven were Yale-New Haven infectious disease attending **Krystn Wagner** and infant daughter, as well as **Lisa Sanders**, who continues to work as an internist at Waterbury Hospital and as a journalist and mother to daughters Tarpley and Yancey.

We enjoyed the clambake and the chance to add to our collection of Yale Medical School beer mugs. For those of you who did not make it back, Harkness Hall kind of looks like a Starbucks and is much improved from our days. The elegant dinner at the Quinnipiack Club on Saturday was appreciated by all who attended. We heard second-hand that the CME was very informative, but it was not structured around our nap times so we were unable to attend.

One excused absence was perinatologist **Eleanor Rhee**, enjoying bed rest in Durham, N.C. Her twins may be delivered by press time! We are grateful to all our classmates who attended our 10th reunion and hope to see even more of you at our 15th.

**Sarah and Matthew Poggi**

## 2001 5th reunion

On Friday afternoon, the graduates of the Class of 2001 met at the reception in the Historical Library, where we mingled with current faculty, including former Special Assistant to the Dean Larry Cohen and Director of Admissions Richard Silverman, as well as with many of our reuniting classmates. Afterward we came together for seafood delights and musical fun at the New England clam-bake held at Harkness dormi-

tory. We were happy to hear that "Club Med," the weekly social event started by our class almost eight years ago, is still a popular gathering point for students and faculty colleagues.

For most of the crew, Saturday began with a tour of the Anlyan Center for Medical Research and Education. The construction of this building during our latter days at Yale certainly seems to be worth the investment. For many, the highlight of the tour was a visit to the anatomy laboratory, hosted by none other than Bill Stewart, PH.D. The new anatomy teaching format is truly an interactive experience, featuring computer stations alongside each cadaver. The stations are equipped to guide students through clinical vignettes, radiographic correlative images and the anatomical dissection from a surgical perspective. We really have come a long way from our days of using just a Grant's dissector!

The fun continued that evening at the alumni gathering held at the Graduate Club, where we mingled and recalled our Yale experiences and memories alongside graduates of decades ago. Having our own room in the back, we turned it into a makeshift Mory's night and celebrated with great food, stories of past and present and jokes about a guy named Pedro.

**Hany Bedair** is currently entering his penultimate year in orthopaedic surgery in Pittsburgh. **Carmit** and George **Archibald** traveled from New York City, where **Carmit** is an attending physician in obstetrics and gynecology. **Fred Aslan** just graduated from Harvard Business School and is moving to New York City to work for a medical venture capital firm. The Boston group included **Dan Hoit**, who is in his fifth year of a six-year neurosurgery residency; **Brian Lester**, who just joined a busy dermatology practice; and **Andrea Ciaranello**, who is doing

a fellowship in infectious diseases. Also representing Boston was **Jessica Mega** and her husband, Nick Walsch, J.D., and **Sandeep Bansal** and wife Ruby. **Jessica** is doing a cardiology fellowship, and **Sandeep** is performing research prior to starting fellowship training in cardiology. **Sharon Chekijian** and **Aaron Covey** made the short trip to the reunion Friday night. Both are residents in New Haven, in emergency medicine and orthopaedics, respectively.

Those coming from far, far away included **José J. Miranda**, who is entering his chief residency year in orthopaedic surgery with the U.S. Army in Augusta, Ga., and **M. Vaughn Emerson**, who is about to enter his second year of a two-year fellowship in retinal care in Portland, Ore.

**José J. Miranda**

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## PA Program

About two dozen alumni of the Physician Associate Program attended a reunion reception on June 1 at the Graduate Club. Mary L. Warner, M.M.Sc., PA-C., assistant dean and director of the program, told the gathering that the program is expanding from 25 to 27 months. The longer schedule is designed to accommodate accreditation requirements and to give students more time for work on thesis projects. There will be a site visit for the program's accreditation in the spring of 2007.

Warner said she and her staff have been working with medical schools in Uganda and England, and may help to start physician associate programs there. Also on the international front, four students have gone abroad for clinical rotations in England, Costa Rica, Belize and Nicaragua, while two students received funding from the Wilbur Downs International Health Travel Fellowship Program to travel to Brazil and South Africa to complete HIV research.

## Crossing the country to promote global health

A 1997 alumna bicycles through 13 states to raise awareness of the links between poverty and disease.

**Karen Kiang**, M.D. '97, approached the podium at the public library in Telluride, Colo., with an enthusiasm and none of the weariness you might expect from someone who had pedaled her bike 77 miles over a 10,000-foot mountain pass the previous day. Slim, with a luminous smile that dominates her round face, Kiang came to Telluride with a single goal—to awaken others to the urgency of world health issues she has seen firsthand.

Kiang has no desire to lecture—she designed her presentation, dubbed Global Health 101, as a conversation starter. “What do you know about malaria?” she asked a high school student in the audience. When he replied that it’s a blood disease, she nodded her head. Like so many other diseases facing the developing world, malaria is largely preventable with low-cost interventions, she told the audience. Kiang has seen malaria’s damage with her own eyes, and it’s the senselessness of it that bothers her most. “These are treatable diseases, but it takes money to get things done,” she said.

Just 18 days earlier, she had left San Francisco with 20 other bicyclists to begin the Ride for World Health, a 3,700-mile journey across the United States to raise awareness and money for global health issues. Along the way, Kiang and the other riders, most of them medical students, slept in school gyms, in churches and in the homes of

gracious local hosts. In the evenings the riders led lectures and discussions about issues like malaria, HIV, tuberculosis and the poverty that drives these diseases in the developing world. Kiang and her companions sought to raise \$250,000 for Partners in Health, a nonprofit global health program aimed at providing basic health care to underserved people in Haiti, Rwanda, Guatemala, Mexico, Russia, the United States and other parts of the world. “Just \$50 can provide testing and treatment for seven tuberculosis patients,” said Kiang. “You also prevent each patient from spreading it to 10 to 15 other people.”

Kiang signed up for the ride after receiving a notice about it via e-mail. “I couldn’t resist,” she said. Already an avid bicyclist, she owns no car and bikes about 10 miles each day to her job at The Northern Hospital in Melbourne, Australia. “I loved the idea that such a humble vehicle could carry such an important message,” she said. The ride also appealed to her sense of adventure.

But Kiang is not just on a ride—she’s on a mission. “I grew up in a safe, well-to-do suburb of Minneapolis. I never worried about whether I could eat or not,” she said. Her parents, both physicians, fled China to escape Communism and never allowed her to take prosperity for granted. “My father lived for years on rice porridge,” said Kiang. “I understood from an early age how fortunate I was, and I felt I should pay something back.”

During medical school she teamed up with renowned medical parasitologist Peter J. Hotez, M.D., PH.D., to study chronic hookworm in China and Thailand. She noticed that one village had fewer cases of parasitic disease than the others. “It was the richest village, and that realization was part of my public health awakening,” said Kiang. “Poverty is the root of disease.” She saw it on American Indian reservations and in the villages of China and Thailand—poverty leads to malnutrition, which boosts the probability of



**Karen Kiang bicycled across the country to raise awareness of global health issues. She pedaled 77 miles the day she arrived in Telluride, Colo. The San Juan Mountains are in the background.**

infection, in turn increasing the risk of early death.

Kiang has spent her career trying to stop the cycle. As a resident at Duke, she traveled to Tanzania to work with HIV patients. While there, she met her partner, Tim Fricke, M.Sc., a pediatric optometrist. After two years as an Epidemic Intelligence Service Officer at the Centers for Disease Control and Prevention in Atlanta, Kiang moved to Australia, where she is now the equivalent of a fellow in the emergency room at The Northern Hospital.

In November, she will embark on her next project, a stint with Doctors Without Borders, which will likely take her back to Africa. But in April she still had a ride to finish. By the time she reached Washington, on May 21, Kiang had crossed 11 states and given her Global Health 101 presentation to hundreds of people. “Once people realize these problems exist, they open themselves to doing something about it,” she said.

—Christie Aschwanden

## When numbers matter: an epidemiologist improves health care for the homeless

Can statistics help the health of New York City's homeless? **Bonnie Kerker**, PH.D. '01, is convinced that they can. Over the last two years, Kerker, the city's assistant commissioner for epidemiology services, and her colleagues have analyzed data from more than 100,000 clients of the city's vast shelter system.

Her research—based on data from everyone who spent a night in the shelter system from 2001 through 2003 that were matched to Health Department registries—has created a picture of the health of this population. Now this information underpins a plan to augment health care resources available to shelter residents.

Among her findings—single adults who use New York's shelter system are diagnosed with HIV infection 16 times more often than the city's general population. And the death rate among the homeless is twice as high. These facts helped influence the new plan, scheduled to be fully operational by December 2006.

The new plan enhances both medical screenings and treatment options. Expanded services will range from shelter-based ambulatory detox services to greater assistance for pregnant women. Progress will be monitored against new performance indicators that will track the implementation of each step. Deaths due to exposure to natural elements or extreme weather will also be analyzed.

Lead author of a report, "The Health of Homeless Adults in New York City," which was released in January 2006, Kerker is particularly pleased that the plan will "expand rapid HIV testing and increase the identification and treatment of alcohol and drug abuse at shelters—all of which the city said it would do in response to the findings. It's the bright side of some dark data."

Participation in the new health programs is voluntary, and eligible candidates will receive information to explain what's being offered and how they can benefit. The city's ultimate goal is to find homes for as many shelter users as possible. "We think that improving people's health can improve their chances to acquire and maintain adequate housing," Kerker said. "But the big elephant in the room is really homelessness."

Kerker's concern for underserved populations began at age 10, when she imagined herself as a Peace Corps volunteer helping malnourished African kids. She and her two sisters grew up in New City, a suburb north of New York City, where their father was a lawyer and their mother a former teacher. Kerker, now 37, did join the Peace Corps after graduating from Tufts in 1990 with a degree in American studies. During two years in the Dominican Republic, she developed community health and education programs in Sabana Alta, a small town of 8,000 people.

Hired as an epidemiologist and data analyst for the New York City Department of Health and Mental Hygiene in 1995, Kerker left in 1997 to pursue a doctorate at Yale. "I was always interested in the translation of data into action. My two amazing advisors—Mark Schlesinger and Sally Horwitz—gave me much hands-on opportunity to see how data can actually be used in real life. Dr. Horwitz was evaluating the health effects of Connecticut's new Welfare to Work program. Being involved in that process helped me understand how to analyze and present data in a way that makes them useful to policy-makers."

Her doctoral program yielded an unexpected professional reward. After 18 months at a child welfare agency in Connecticut, Kerker heard through a classmate about a new Department of Health bureau in New York established by another Yale alumnus, Farzad Mostashari, M.D. '96. He hired her in



**Bonnie Kerker**, assistant commissioner for epidemiology services at the New York City Department of Health, recently completed a study of the health of the 100,000 people who use the city's homeless shelters.

late 2003. When Mostashari left in 2005 to head another project, Kerker was promoted to his former position.

Today, she runs a department with 25 employees and clearly loves her work. "Everybody really relies on data in the Bloomberg administration. So you feel like you're needed, and that the work you do is actually being used in policy decisions," Kerker reflected. "That's why I went into this field in the first place."

—Carol Milano

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### Familiar Faces

**Do you have a colleague who is making a difference in medicine or public health or has followed an unusual path since leaving Yale? We'd like to hear about alumni of the School of Medicine, School of Public Health, Physician Associate Program and the medical school's doctoral, fellowship and residency programs. Drop us a line at [ymm@yale.edu](mailto:ymm@yale.edu) or write to Faces, Yale Medicine, P.O. Box 7612, New Haven, CT 06519-0612.**



Aaron Beck



Milton Hamilt

Augustus  
White III

Allen Goldberg



Peter Diffley



Lee Goldman

## 1940s

**Aaron T. Beck**, M.D. '46, received a 2006 Distinguished Investigator Award this spring from NARSAD: the Mental Health Research Association. The one-year \$100,000 award supports experienced investigators conducting neurobiological research. Beck also received the Adolf Meyer Award from the American Psychiatric Association in April.

## 1950s

**Leonard Cook**, PH.D. '51, who directed central nervous system research at DuPont Merck Pharmaceutical Co. starting in 1983, was the winner of the 2006 P.B. Dews Lifetime Achievement Award in Behavioral Pharmacology. The award was presented in April in San Francisco. Cook is recognized as a pioneer in behavioral pharmacology who has contributed substantially to the discovery and evaluation of psychotherapeutics.

**Milton W. Hamilt**, M.P.H. '54, writes to say that he has been retired since 1989 and that he and his wife live in a retirement community in Pennsylvania. After his graduation from Yale he spent two years as an administrative resident at Grace-New Haven Community Hospital, spending his last year as the first administrator of the Yale Psychiatric Institute. In 1969 he became a professor at Temple University, where he taught hospital administration.

## 1960s

**John A. Parrish**, M.D. '65, professor, chair and chief of the Department of Dermatology

and director of the Center for Integration of Medicine and Innovative Technology at Harvard Medical School, has been elected to the board of directors for the National Space Biomedical Research Institute (NSBRI). NSBRI, funded by NASA, is a consortium of institutions, including Harvard, that study the health risks related to long-duration space flight.

**Dennis J. Rudzinski**, M.D. '69, assumed a part-time position at Commonwealth Anesthesia Associates in January. A former partner in the Richmond, Va., group, he works every other week. During his weeks off, he enjoys gardening and cruising the Chesapeake Bay.

**Augustus A. White III**, M.D., PH.D., HS '66, received the 2006 Diversity Award in March at the 73rd annual meeting of the American Academy of Orthopaedic Surgeons in Chicago. The award recognizes fellows of the academy who have significantly contributed to advancing diversity in orthopaedics through recruiting, mentoring, leadership and treating diverse populations.

## 1970s

**Richard D'Aquila**, M.P.H. '79, has been appointed executive vice president and chief operating officer (COO) at Yale-New Haven Hospital and executive vice president of Yale New Haven Health System. D'Aquila previously served as senior vice president and COO of New York-Presbyterian Hospital/Weill Cornell Medical Center and executive vice president and COO of St. Vincent's Medical Center in Bridgeport, Conn.

**Allen I. Goldberg**, M.D., HS '70, has spent his career focused on home health, mobile health and telemedicine/eHealth. In the 1990s, as president of the American College of Chest Physicians, Goldberg invited former U.S. Surgeon General C. Everett Koop, M.D., to help begin a series of dialogues about improving health care.

**Lee Goldman**, M.D. '73, M.P.H. '73, chair of the Department of Internal Medicine at the University of California San Francisco, was named in May as Columbia University's new executive vice president for Health and Biomedical Sciences and dean of the Faculties of Health Sciences and Medicine. Goldman, who assumed his post at Columbia in late June, also has appointments as the Harold and Margaret Hatch Professor of the University, professor of medicine in the College of Physicians & Surgeons and professor of epidemiology in Columbia's Mailman School of Public Health.

**David H. Lippman**, M.D. '71, writes to say that his 15-year-old son Daniel appeared in the *Talk of the Town* section of *The New Yorker* last October. Daniel visits Ask the White House, a forum on the White House website, to ask questions of Bush Administration bureaucrats. The exchanges are posted on the site. Daniel's father is medical director of River Valley Counseling Center in Holyoke, Mass.

**Robert J. Schechter**, M.D. '74, received in May the Department of Ophthalmology Senior Honor Award of the Jules Stein Eye Institute of the UCLA School of

Medicine for "distinguished service" and "contributions extending over many years." Schechter is a clinical professor of ophthalmology at UCLA.

## 1980s

**Peter Diffley**, PH.D., FW '80, an associate dean of the graduate school at the University of Notre Dame, became the first full-time dean of graduate studies at the University of Hartford on July 1. Diffley is an executive committee member, past chair and current treasurer of the Association of Graduate Schools in Catholic Colleges and Universities. He is also an executive committee member and past chair of the Midwest Association of Graduate Schools. He received his PH.D. in zoology from the University of Massachusetts and was a postdoctoral fellow at the School of Medicine before joining the faculty at the University of Notre Dame in 1984.

**William N. Hait**, M.D., PH.D., HS '82, FW '83, director of The Cancer Institute of New Jersey, became president-elect of the American Association for Cancer Research, effective April 3, at the group's 97th annual meeting in Washington in April. The president, president-elect and past president serve terms of one year. Hait's research interests include breast cancer, drug development, calcium-mediated signal transduction, multidrug resistance, translational research and clinical pharmacology.

## 1990s

**Michael J. Davidson**, M.D. '96, a cardiac surgeon at Brigham and Women's Hospital in Boston, will



**Jonathan Erulkar,  
Deirdre Carroll and  
Samuel**

be among the first CIMIT-Johnson & Johnson Young Clinician Research Recipients. The funding, made possible through Johnson & Johnson's Corporate Office of Science and Technology, will allow Davidson to mentor other cardiac surgical trainees and continue his work developing techniques for heart valve repair. CIMIT is a Boston-based research consortium of major teaching hospitals and engineering schools dedicated to advancing the standard of patient care.

**Jordan (Sink) Greenbaum**, M.D. '89, and **Laurence A. Greenbaum**, M.D. '90, PH.D. '94, recently joined Children's Healthcare of Atlanta. Jordan joined the Children's Healthcare of Atlanta Child Protection Center as its first full-time medical director. Laurence joined the Kidney Transplant, Dialysis and CR1 Clinic team and will serve as chief of pediatric nephrology and associate professor of pediatrics at Emory University School of Medicine.

**Bruce K. Lin**, M.P.H. '97, was married to Kathryn Anne O'Brien, M.P.H., M.B.A. '05, in January. Lin is an epidemiologist for the March of Dimes, and O'Brien is an associate with Roche Pharmaceuticals. They live in New York City.

**John P. Sanchez**, M.P.H. '98, graduated from the Albert Einstein College of Medicine this spring and started a residency in emergency medicine at Jacobi Medical Center in the Bronx in June. He was recently featured on the PBS program *In the Life* for his work addressing the health care needs of minorities and gay and lesbian individuals.

**Noah S. Scheinfeld**, M.D. '97, J.D., was married to Jacqueline M. Didier in New York City in December. Scheinfeld is a dermatologist on the staff of St. Luke's-Roosevelt Hospital Center and Beth Israel Medical Center, both in New York. Didier is a vice president and lawyer at Lehman Brothers, the New York investment bank.

**Elizabeth R. Roth**, M.D. '92, was married in November 2005 to Albert Lafarge in Vineyard Haven, Mass. Roth, a 1984 graduate of Yale College, practices internal medicine in Boston. Lafarge runs an independent literary agency in Boston, where the couple lives.

## 2000S

**Jonathan Erulkar**, M.D. '01, and **Deirdre Carroll**, RN '00, welcomed a healthy baby boy named Samuel Jonathan on October 11, 2005. Samuel was 22 inches long and 8 lbs, 13 oz! After nearly 10 years at Yale, Dede, Jonathan and their new little one are moving to Boston.

**Barbara (Latunik) Esders**, M.M.Sc. '03, and her husband, Theodore Esders Jr., write to announce the birth of their first child, Ella Victoria, on November 8, 2005. Barbara is a physician assistant in the emergency department at Rochester General Hospital, N.Y.

**Gretchen Fredericks**, PA '05, and Michael Myre were married in March in La Crosse, Wis. She is employed at Independent Medical Associates in Bangor, Maine. He is employed by AstraZeneca/PDI in Saddle River, N.J.

**Devesh S. Gandhi**, M.D. '02, was married in May to Rinaa S. Punglia, M.D., M.P.H., in San Jose, Calif. Gandhi is the senior health analyst at Sonar Capital, a hedge fund in Boston. Punglia is an assistant professor of radiation oncology at Harvard Medical School and a radiation oncologist at the Dana-Farber Cancer Institute.

**Joseph M. Harburger**, M.D. '04, and **Lauren J. Levy**, M.S. '04, were married in March in Old Greenwich, Conn. Harburger is a resident in internal medicine at Yale-New Haven Hospital. Levy is a doctoral candidate in behavioral neuroscience at Yale.

**Marion C.W. Henry**, M.D., M.P.H. '05, was married in April to Andrew Joseph Colyer, a portfolio manager and research analyst at Sands Capital Management. Henry is a fifth-year resident in general surgery at Yale-New Haven Hospital.

**Katherine M. Marshall**, M.P.H. '02, and David Purviance, D.M.D., were married in September in New Hampshire. Marshall is an epidemiologist with the Connecticut Department of Public Health. Purviance is a dental resident in periodontics at the University of Connecticut.

**Hilary F. Ryder**, M.D. '04, was married in December 2005 to Matthew J. Henken, J.D. '04, in New Hampshire. Ryder is a resident in internal medicine at Dartmouth-Hitchcock Medical Center in Hanover, N.H. Henken is an associate at Boies, Schiller and Flexner in Hanover.

## 2006-2007 Association of Yale Alumni in Medicine

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### SEND ALUMNI NEWS TO

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New Haven, CT 06511, or via  
e-mail to [claire.bessinger@yale.edu](mailto:claire.bessinger@yale.edu)

### VISIT US ON THE WEB

[yalemedicine.yale.edu](http://yalemedicine.yale.edu)

**Thomas T. Amatruda Jr., M.D.** '78, former chief of medicine at the VA Connecticut Health Care System in West Haven and director of clinical services at Waterbury Hospital, died on April 22 at his home in Woodbridge, Conn., after a short illness. He was 79. Amatruda developed an interest in medicine during his service in the U.S. Army during World War II. He started his career at the School of Medicine and became Waterbury Hospital's director of clinical services in 1971, a post he held for 17 years. Many of his publications are considered classics in the field of endocrinology and metabolism. In 1989 he received the Laureate Award from the American College of Physicians, Connecticut Chapter. The Thomas T. Amatruda Visiting Lecture Series in Endocrinology was established in his honor at Waterbury Hospital in 1990.

**John E. Borowy, M.D.** '50, died in Stamford, Conn., on February 13 after a brief illness. He was 84. Borowy came to the medical school after serving in North Africa in the U.S. Air Force during World War II. After residencies at Kings County Hospital Center in New York and the Veterans Administration hospitals in West Haven and Newington, Borowy opened a private practice in internal medicine and diseases of the heart in Stamford. He retired in 1999.

**Lawrence M. Brass, M.D.**, professor of neurology and of epidemiology and public health, died of cancer on March 8. Brass, a nationally recognized expert who devoted his professional life to improving care and outcomes for patients with stroke, was 49. He received his medical

degree from Tufts Medical School. He completed an internship at Newton-Wellesley Hospital in Massachusetts and a residency and chief residency in neurology, as well as a stroke fellowship, at the Neurological Institute of New York at Columbia University. In 1987 he was recruited by Yale to establish a stroke program. He was also chief of neurology at the VA Connecticut Healthcare System in West Haven and co-director of the Yale Cerebro-vascular Center. He was an active lecturer, and authored more than 100 articles and 20 books and book chapters. One of his legacies is the first complete database of stroke among the elderly in the United States; another is the Women's Estrogen for Stroke Trial.

**William B. Bucher, M.D.** '50, died on March 19 in Ventura, Calif. He was 83. While serving in the Air Force in World War II, Bucher received shots infected with encephalitis and spent 20 months recovering from paralysis. After the war he went to medical school on the GI Bill. He was a pediatric resident in the University of Southern California's program at Childrens Hospital Los Angeles.

**Walter J. Burdette, Ph.D., M.D.** '42, HS '46, died on April 18 in Houston, Texas. He was 91. Prior to coming to Yale, Burdette earned a Ph.D. from the University of Texas at Austin in 1938. While at Yale he was a member of Alpha Omega Alpha and the Nathan Smith Club and served on the editorial board of the *Yale Journal of Biology and Medicine*. During his career he was on the surgical faculty at Louisiana State University, the University of Mis-

souri, Saint Louis University School of Medicine, the University of Utah, the University of Texas M.D. Anderson Cancer Center and the University of Texas School of Medicine at Houston. His research interests included genetics and cancer treatment; his most recent book, *The Basis for Gene Therapy*, was published in 2001. He was honored by the Yale Club of Houston with a special Tercentennial Award in 2001.

**Thomas B. Caldwell III, M.D.** '65, died on April 20 in Nashville, Tenn. He was 66. Caldwell taught anesthesiology at the University of Miami and Vanderbilt University and published journal articles and textbook chapters on anesthesiology.

**Frank W. Countryman, M.D.** '44, died on February 14 in Indianapolis. He was 85. Countryman was a superintendent of Kentucky State Hospital and was on the staff of Winter Veterans Hospital and the Menninger Foundation in Topeka, Kan. He also served as assistant professor of psychiatry at Indiana University School of Medicine and consultant to the Social Security Administration's hearing and appeals committee.

**Thomas W. Ferguson, M.D.** '77, died on April 14 in Little Rock, Ark., where he was undergoing treatment for multiple myeloma. He was 62. A writer, physician and researcher, Ferguson studied and wrote about the empowered medical consumer and online health resources. In 1993 he organized the world's first conference devoted to computer systems designed for medical con-

sumers. Born in Ross, Calif., Ferguson attended Reed College and earned a master's degree in creative writing from San Francisco State University before coming to Yale. He then launched a career in consumer-focused medical writing as founder of *Medical Self-Care* magazine. From 1980 to 1996 he authored or co-authored over a dozen books and was section editor for health, medicine and self-care for the *Whole Earth Catalog*.

**Lucian S. Lapinski, M.D.** '50, died on January 15 in Los Angeles, Calif. He was 85. A native of Bridgeport, Conn., Lapinski practiced medicine there before moving to California 23 years ago.

**Preston L. Leslie, M.D.** '53, died on November 10, 2005, at his home in Fremont, Calif. He was 81. Leslie enrolled at the School of Medicine following service in the U.S. Air Force during World War II. He practiced radiology and was an associate professor at Stanford University Medical Center for several years.

**Leo Lutwak, M.D.** '56, Ph.D., died on February 23 in Bethesda, Md., from complications of lung disease. He was 77. Born in the Bronx, N.Y., Lutwak received a Ph.D. from the University of Michigan in Ann Arbor in 1951 before beginning his medical studies at Yale. Lutwak was a biochemist and endocrinologist specializing in obesity who, while a medical officer for the Food and Drug Administration, raised warnings about health risks from the use of fenfluramine and dexfenfluramine (Fen-Phen) as dietary aids in treating obesity. Despite his warnings the drugs were

approved in 1996. Two formulations, Redux (dexfenfluramine) and Pondimin (fenfluramine), were taken off the market a year later when they were linked to hypertension and heart valve problems. Lutwak's 50-year career included research, teaching and patient care.

**Benjamin E. Lyons, M.D.** '38, died on March 18 at his home in Meadow Ridge, Conn. Lyons practiced ophthalmology in Norwalk, Conn., and at the New York Eye and Ear Infirmary until he retired in 1989. He collected art from local artists and during his travels with his wife. He also played the violin in local symphony orchestras.

**George F. Mahl, Ph.D.** '48, professor emeritus of psychiatry and psychology, died on March 11 at his home in North Haven, Conn. He was 88. Mahl's graduate work in psychology at Yale was interrupted by four years of military service during World War II. He was a member of the Yale faculty from 1947 until his retirement in 1988, with joint appointments in psychiatry and psychology. He received the Distinguished Service Award in 1995 from the Yale Psychiatric Alumni Association. His major research contribution dealt with the expression of emotions and thought in speech and body movements during psychotherapeutic and psychoanalytic interviews. The author or co-author of over 50 major papers, Mahl also served on the faculty of the Western New England Institute for Psychoanalysis for 25 years and was its president from 1972 to 1974. The Western New England Psychoanalytic Society awarded him its Founder Teaching Prize in 2002.

**Sally L. Marchesi, M.D.** '63, died on February 13 in Essex, Conn., after a long struggle with Alzheimer's disease. She was 69. A faculty member in the Department of Internal Medicine since 1972, and later in the Department of Laboratory Medicine, Marchesi retired in 1997. She met her husband, Vincent T. Marchesi, M.D. '63, at Yale. After graduation, Sally Marchesi spent several years at the National Institutes of Health, where she was one of the first researchers to isolate and study the blood factor responsible for hemophilia. An avid outdoorswoman and athlete, she ran races, coached soccer teams, hiked, biked, swam and windsurfed.

**Jean M. Maynard, M.D., M.P.H.** '63, died on January 16 in Warwick, R.I. He was 91. Maynard received his medical degree from Université Laval in Quebec City, Quebec. After an internship in Maine and work as night superintendent at Rhode Island Hospital, he enlisted in the U.S. Army as a medical corps captain. He served in Europe during World War II, including the Battle of the Bulge, where he earned five battle stars. He practiced medicine with his wife in West Warwick, R.I., for 20 years.

**Harry L. McClelland, M.D.** '50, died on April 17 in Tracy, Calif. He was 80. A native of Madras, India, where his parents were missionaries, McClelland also lived in Calcutta and attended Kodaikanal International School. He served in the U.S. Army as a physician and as a U.S. Air Force flight surgeon. Until illness forced him to end his medical practice in March, McClelland was an active internist for 50 years. He was

also a volunteer physician in Honduras following an earthquake, and in Nepal and India.

**F. Patrick McKegney, M.D.** '58, died on February 3 in the Bronx, N.Y., after a brief illness. He was 73. McKegney worked at the Public Health Service in Washington, D.C., and taught psychiatry at Yale and at the University of Vermont College of Medicine, where he was department chair for four years. In 1983 he moved to Albert Einstein College of Medicine in New York. He was regarded as a leader in the field of psychosomatic medicine and consultation-liaison psychiatry.

**Richard K. Root, M.D.**, who in the 1970s headed the medical school's department of infectious diseases and briefly served as acting chair of internal medicine, died on March 19 during a trip to Botswana when a crocodile attacked him. He was 68 and lived in Seattle. Root, a professor emeritus at the University of Washington medical school and an expert in infectious diseases, had gone to Botswana in March to train hospital staff at Princess Marina Hospital in Gaborone in the management of HIV/AIDS. He and his wife, Rita O'Boyle, were visiting a clinic in Tuli, a remote district in the northeast, when they took a wildlife tour of the Limpopo River. Root was in the lead canoe when a crocodile leaped out of the river, grabbed him and pulled him under the water. Root came to Yale in 1971 as a professor of medicine and was appointed the first Paul Beeson Professor of Medicine in 1980. He was voted "teacher of the year" by the Yale house staff in 1982. He was former president of

the American Federation of Clinical Research, editor-in-chief of a textbook, *Clinical Infectious Diseases: A Practical Approach*, and director of the National Institutes of Health's AIDS Advisory Committee from 1986 to 1991.

**Norman J. Siegel, M.D., HS** '70, founding director of the Section of Pediatric Nephrology, former vice chair and interim chair of pediatrics and physician-in-chief at Yale-New Haven Children's Hospital, died on April 28 while attending a meeting of the Pediatric Academic Societies in California. He was 63. A native of Texas, he received his M.D. from the University of Texas Medical Branch in Galveston. Siegel, one of the world's leading pediatric nephrologists, came to Yale in 1968 as an intern in pediatrics. He joined the faculty in 1972 and became a tenured professor in 1982. He was elected to the American Society of Clinical Investigation in 1983 and held leadership positions in the American Society of Pediatric Nephrology, the National Kidney Foundation and other national and international organizations.

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**SEND OBITUARY NOTICES TO**  
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TERRY DAGRADI

## Yale innovation in art of observation has worldwide reach

In 1997, worried that physicians' observational skills might be waning in an era of laboratory tests, electronic monitors and medical imaging, Irwin M. Braverman, M.D., professor of dermatology, in collaboration with Linda K. Friedlaender, M.S., curator of education at the Yale Center for British Art (YCBA), offered an unusual approach to training doctors.

"Physicians were losing this ability that they all had, and all used, 50 years ago," Braverman said. At about the same time, Friedlaender had a disappointing experience when she saw that a resident examining a friend of hers prior to surgery failed to notice obvious signs that the patient was agitated. Friedlaender told this story to her friend Braverman, and the program, Enhancing Observational Skills, was born.

Each spring, Yale medical students visit the museum for three hours to study and describe paintings, and they then apply their enriched observational vocabulary to images of human skin lesions they are likely to encounter in the clinic.

The program, now required of all first-year students, has proven so successful that two dozen other medical schools have adapted it. The Frick Collection & Frick Art Reference Library in New York is offering a variation on the program for about 200 medical students a year drawn from Weill Medical College of Cornell University, Albert Einstein College of Medicine of Yeshiva University, Mount Sinai School of Medicine and New York University School of Medicine.

And educators in professions from business to law enforcement are following suit. Yale School of Management Dean Joel M. Podolny, Ph.D., thought business students also could learn how to size up a situation by looking at art, so as part of their orientation last August newly arrived Yale business students paid a visit to the YCBA. Two years ago members of the New York City Police Department were invited to take part in similar training.

New Haven and Yale police officers have also taken the course. According to Friedlaender, the New Haven police will apply their new descriptive skills to photos of street scenes, not skin lesions. "This exercise may encourage officers to consider how the museum looking experience might impact their professional duties," Friedlaender says, adding, "I'm sure they could teach me a thing or two."

—Cathy Shufro



## Special reunions to be held in June

—*Alumni Bulletin*  
January 1956

"Since 1953, special alumni programs and class reunions have been arranged annually in September for the 10th, 15th, 20th, and 25th year medical classes. These programs were planned to supplement the annual February 22 Alumni Day and allow the special classes to meet as individual groups ten years or more following graduation. In 1954 and 1955, the 30th year classes also were included; however, the 10th year classes preferred to hold their reunions in June.

"Although the September programs have been enthusiastically received by the reunion classes, attendance by some classes has been poor. After careful consideration of the problem of scheduling these reunions, the executive committee of your Association of Yale Alumni in Medicine has decided that a June program offers definite advantages. Beginning this year, special alumni reunions for 10th, 15th, 20th, 25th, and 30th year classes will be held annually in June."



## Yale and New Haven Area Health Professionals Appeal for the Prevention of Nuclear War

—*Yale Medicine*  
Spring/Summer 1981

"In a full page advertisement in local newspapers, almost 500 Yale-New Haven Medical Center and New Haven area health professionals issued a 'warning from health professionals for the prevention of nuclear war.' The ad urged readers to join its authors in appealing to President Reagan and Chairman Brezhnev to defuse the current tensions between our countries; to ban the use of all nuclear weapons; and to recognize the threat posed by the very existence of our enormous nuclear arsenals. ...

"In a letter to his colleagues, urging them to support the appeal, Dean Robert W. Berliner wrote, 'Although nuclear war has been a possibility for three decades, recent world events have made that possibility even more likely. We who concern ourselves with human health have a unique stature and responsibility in our society. As physicians and health professionals, therefore, we have an important opportunity to emphasize to our fellow citizens the magnitude and immediacy of this very grave public health danger.' ..."

### A NEW DEGREE CELEBRATES RESEARCH

Since early in the 19th century, when students were first required to submit a thesis for graduation, the medical school has placed a high value on the scientific method. In December the Yale Corporation approved a new program that further celebrates and recognizes the importance of training physician-scientists. Fellows in the Robert Wood Johnson Clinical Scholars program and medical students who spend a fifth year on research are now eligible to receive a new degree, the master's in health sciences research.

To be eligible, students must have a fully funded fellowship in either laboratory or clinical research. "The key ingredient is the research training on a hypothesis-driven topic worked out between the student and a faculty mentor," said John N. Forrest Jr., M.D., HS '67, director of the Office of Student Research. Students and fellows must also provide a written summary of their research, take courses in their concentration and participate in a seminar series.

Harlan M. Krumholz, M.D., M.Sc., the Harold H. Hines Jr. Professor of Internal Medicine, professor of epidemiology and public health and director of the clinical scholars program, said all fellows who complete the two-year program, which includes classes, research and service, will receive the new degree. The ultimate goal of the program is to prepare future physician leaders who can advance knowledge and improve people's lives, he said. "The degree is an acknowledgement that what they achieve here is substantial."

—John Curtis



JOHN CURTIS

Jennifer Dominguez, right, is among the first medical students eligible for a new master's degree in health sciences research. She will spend a fifth year studying the neuroendocrinology of postpartum depression in the laboratory of faculty mentor Neill Epperson. "The idea of the program is to promote a structured environment for students interested in training in research methods," Dominguez said.

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