Yale Medicine

autumn 2007

Taking the E-ROAD

Young doctors are seeking a lifestyle as well as a calling.


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AUTUMN 2007

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ON THE COVER
Ophthalmologist Hylton Mayer chose his specialty in part so he could spend more time with his wife and 2-year-old daughter, Mia. Like many young doctors, Mayer believes it's important to have interests outside of medicine.

Photographs by Julie Brown

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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.

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Yale announces purchase of 136-acre Bayer campus

President Richard C. Levin announced in June that the university would buy a 17-building, 136-acre pharmaceutical campus that straddles the border of neighboring West Haven and Orange. The Bayer HealthCare complex would provide 550,000 square feet of new laboratory space, 275,000 square feet of office space and 600,000 square feet of warehouse and manufacturing space. Bayer announced last fall that it would close the facility.

The purchase means more than just more room for Yale, which is chronically short of space for laboratories, offices and storage of library and museum collections. New lab space also enhances the university's research capabilities, particularly at the School of Medicine. And it could encourage the New Haven area's continued emergence as an incubator of biotech startups—there are 40 biotech companies in the area, many of them spin-offs from Yale research.

"Yale is already in the midst of a boom in the expansion of its science and medical facilities," Levin said, noting that the university has added several million square feet of space in the last decade and has plans to build more. "The addition of this ready-made, state-of-the-art research space will allow that growth to accelerate at an unprecedented level—potentially making it possible for Yale scientists to develop new discoveries, inventions and cures years earlier. The availability of Bayer's science laboratories will enable us to undertake research programs that we would not have had space to develop for a decade or more."

Despite the purchase of the Bayer campus, Yale will continue with plans to add to its facilities in New Haven. "The heart of the Yale campus will always remain in New Haven," Levin said. "In fact, the university is already committed to building more than 2 million square feet of new facilities in its home city over the next six years. And we are in discussions about the possibility of leasing a significant amount of space in Science Park to help strengthen its role as an incubator for science-based startup companies."

As part of the purchase, Yale will make voluntary payments to West Haven and Orange proportionate to the voluntary payment made to New Haven. The municipalities will receive additional payment-in-lieu-of-taxes funds from the state of Connecticut in recognition of the property's future nontaxable academic status. Yale will also invest $1 million over the next three to four years to enhance and strengthen the professional development of middle and high school science teachers in the Greater New Haven area.

Yale is developing plans for the best use of the facilities at the former Bayer complex.

An aerial view of the 136-acre Bayer HealthCare complex, which Yale purchased this summer.

COURTESY BAYER

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A generational divide, biomedical engineering and a new chapter in organ transplantation

When we were looking for a writer to explore a generational trend—the desire of young doctors to balance their personal and professional lives—we immediately thought of Jenny Blair, M.D. '04. Jenny had written for us before—a witty essay about medical jargon for *Yale Medicine* ["From the Beautiful to the Obscure," Winter 2004] and a feature article about her four years living in the Harkness dormitory ["That College Feeling," Spring 2004]. She also found time as a medical student to write a column for the *Hartford Courant* about becoming a doctor. In her cover story for this issue, Jenny spoke to physicians of her own generation who want time for themselves and their families, as well as to older doctors who conduct their lives by a different ethos. Paralleling her story is New Haven photographer Julie Brown's photo essay about the life of a young ophthalmologist at Yale who's trying to build a career, spend time with his nephrologist wife and young daughter, and still find time to play soccer.

Boston-based writer Pat McCaffrey traveled to Yale this spring to report on the links between three young scientists in the Department of Biomedical Engineering who started their careers in the laboratory of Robert Langer, SC.D., at the Massachusetts Institute of Technology. All three—W. Mark Saltzman, PH.D., Erin Lavik, SC.D., and Laura E. Niklason, M.D., PH.D.—have made huge strides in biomedical engineering, in projects ranging from off-the-shelf vascular tubing for bypass surgery to medication-soaked wafers that dissolve in the brain. They each credit Langer with encouraging and inspiring them.

In our third feature, we welcome liver surgeon Sukru H. Emre, M.D., who arrived at Yale this summer from Mount Sinai Medical Center in New York City to head up the organ transplant program. Throughout his career he's earned accolades from patients as well as former students and residents. "I'd never profiled anyone where so many sources had such extravagant praise for a subject," said writer Colleen Shaddox. Her profile of Emre begins on page 18.

John Curtis
Managing Editor

SECOND OPINION BY SIDNEY HARRIS

A 19th-century craft immortalizes the august

In the 1950s a Yale professor created plaster casts of the faces of the medical school's greats.

In the corridors of the Sterling Hall of Medicine, great men stare out from their portraits with expressions of visionary compassion. But to see what some eminent professors of yesteryear looked like in three dimensions, one must visit the library.

William Lawrence, D.D.S., former associate professor and chief of dental surgery, recently donated to the Historical Library at the Cushing/Whitney Medical Library a series of moulages, three-dimensional figures molded from the faces of the medical school's department chairs, which he made in the 1950s.

The moulages were an experiment in economy, because it was expensive to commission oil portraits of each department chair. So Lawrence was asked by the dean's office to try his hand at sculpture using the techniques of dentistry.

He began the process by covering the subject's face with the film used for taking impressions to make gold inlay fillings. Next came a layer of gauze, followed by a coating of plaster. Meanwhile, the subject breathed through straws inserted in the nostrils. After the mold dried, Lawrence filled it with dental stone. The result was an exact replica of the contours of the subject's face.

The process was somewhat uncomfortable, but it was essential to have the subjects relax in order to prevent tightening of the facial muscles.

"I told them to think of something sexy," recalled Lawrence, now 95. "Imagine those old buggers thinking of something sexy!"

Medical moulages were first introduced late in the 19th century, when they were made from wax and used in the diagnosis and treatment of venereal and skin diseases. They came to prominence at the first International Congress of Dermatology and Syphilology in Paris in August 1889. By the early 20th century moulages were produced by the thousands all over Europe.

Arranging face time with the department chairs, as it were, was difficult for Lawrence. "They all lived exalted lives," Lawrence explained. After lunch in a private dining room, they returned to their offices and were not to be disturbed until 2 p.m., he said.

The first chair Lawrence did was so pleased that they all wanted moulages made. The moulages he donated depict a former dean, Francis Gilman Blake, M.D.; Sterling Professor of Physiology John F. Fulton, M.D.; Anthony Brady Professor of Pathology Harry Greene, M.D.; Chair of Surgery Samuel C. Harvey, M.D.; Dean C.N.H. Long, M.D.; Professor of Preventive Medicine John Paul, M.D.; John Slade Ely Professor of Medicine John P. Peters, M.D.; Associate Professor of Pediatrics Robert Salinger, M.D.; and Associate Professor and Chief of Dental Surgery Bert George Anderson, D.D.S. Anderson was a friend and colleague who preceded Lawrence as chief.

The school did commission oil portraits despite the moulages' popularity, leaving the masks in Lawrence's possession.

More requests followed, including one from a famous patient—author and playwright Thornton Wilder. Lawrence unveiled the moulage during one of Wilder's spirited parties at his residence in Hamden. The subject objected that the moulage did not do justice to his intelligent brow. Wilder was comparing the realistic moulage to the sculpture of him done by Isamu Noguchi. However, he must have come to like the realistic depiction, as it was donated along with his papers to Yale's Beinecke Rare Book and Manuscript Library.

The wife of an intern who died asked Lawrence to make a moulage from the corpse and mail it to her in Wyoming. "I always wondered what it was like when she opened the box and saw her husband's face," Lawrence said.

His handiwork helped the living when he used the technique to make prosthetic noses and ears in latex. Lawrence also devised a tool that fit between the teeth and enabled an armless veteran to turn pages.

The faculty moulages are now preserved at the library, where researchers can use them to grasp "an instant in time, something that a picture won't give you," said Toby Appel, the John R. Bumstead Librarian for Medical History. They may also be exhibited so that a wider community can look into the face of history.

—*Colleen Shaddox*

TERRY DAGRADI

In the 1950s William Lawrence used his skills as a dental surgeon to create moulages of the faces of department chairs, including Samuel Harvey, a former chair of surgery.

Bringing management strategies to Ethiopia's hospital system

In December 1995, Elizabeth H. Bradley, M.B.A., PH.D. '96, professor of public health, received a call from the William J. Clinton Foundation about a project in Ethiopia. Because she had never been to Africa and wasn't an expert on global health issues, her first thought was, "Who can I triage this call to?"

But two weeks later, when foundation representatives visited Yale and discussed the Ethiopian Hospital Management Initiative, Bradley concluded, "I guess I have something to offer." The project involved improving hospital management systems—an area in which Bradley is an expert.

The foundation chose Ethiopia because the need there is great and government officials wanted to focus on improving health. The reputation of Yale's hospital administration and health management programs made the university a logical choice for partnering with the foundation.

Bradley, who is director of Yale's Health Management Program in the Division of Health Policy and Administration, was formerly an administrator at Massachusetts General Hospital. When she came to Yale, she and Harlan Krumholz, M.D., M.SC., the Harold H. Hines Jr. Professor of Medicine and professor of epidemiology and public health, demonstrated how hospitals could shorten "door-to-balloon" time—the crucial period between a heart attack patient's arrival at the hospital and the restoration of blood flow through angioplasty.

The goal of Bradley's Ethiopian project is similar: to improve the quality of health care through better management practices. During two visits to the country, she found that the hospitals lacked a set of reliable systems. "The hospitals have limited patient registration systems, incomplete medical records and inadequate inventory controls," she said.

Whereas Ethiopia's population is about one-quarter the size of that of the United States, it has only 2 percent the number of hospitals. The World Health Organization standard is to have one health worker for every 10,000 people, but in parts of Ethiopia the ratio is one to 50,000. A scarcity of supplies, low salaries and patients who can rarely pay for their care add to the challenge.

Bradley hopes to institute the "fundamental elements" of good hospital management, including triage systems, inventory management and improved infection prevention practices.

To implement these measures, she assembled a team of 23 Yale-Clinton Foundation fellows in international health care management, who have been working side by side with Ethiopian hospital medical directors and managers for 10 months. She received more than 150 applications worldwide for the 23 slots. The successful applicants had hospital administration and public health experience, with master's degrees in public health, health administration or business. After an orientation at Yale, the team left for Ethiopia in July 2006. A subset of the fellows will continue for a second year.

Bradley's team administered a baseline assessment of 100 management indicators to Ethiopian hospitals before the program began. These included the percentage of staff with job descriptions and performance evaluations, whether nurses were trained in standard practices, and the percentage of medical records that could be retrieved on readmission. The average score was 60 percent.

When the project ends, another assessment will determine whether the management methods were implemented and, if so, what impact they had.

But Bradley already sees evidence that the program is working. "Now, when you walk down the hall of one of the hospitals, it's not unusual to hear the medical director and nurses using terms like 'fishbone diagrams,' 'flow charting' and 'quality improvement.' "

—Jennifer Kaylin

JOSH PASHMAN

Hospitals in Ethiopia, such as this one, will benefit from the work of public health professor Elizabeth Bradley.

An anatomist's recovery: surgery hits close to home for head of first-year course

First-year medical students had to make do without one of their most beloved professors last spring, when William B. Stewart, PH.D., associate professor and chief of the Section of Anatomy and Experimental Surgery, underwent spinal surgery in February.

A sore neck prompted Stewart to seek medical attention for what turned out to be a tumor on his spinal cord that required immediate surgery, two weeks at Yale-New Haven Hospital and five weeks of rehabilitation at Gaylord Hospital in Wallingford, Conn. His recovery continued through the spring as he spent time and energy at home doing rehabilitation exercises, learning to walk without a crutch and regaining the ability to tie his famous bow ties, which he has rarely been seen without for the past three decades. He expects to be back in the anatomy lab for the current academic year.

As an anatomist, Stewart is intimately familiar with the inner workings of the human body and aware of any mishaps that might have occurred during the delicate operation. "In some respects it's frightening because you know so much—what might happen, and all of the possible negative consequences," he said. "On the plus side, I think I understand a lot about how my body works so that my interactions with my therapists have been a little richer, because we can discuss what muscles are involved and make a more efficient plan for rehab."

Although Stewart was absent from the anatomy lab for almost the entire second semester last spring, he began preparing for the start of the current school year early by practicing his lectures and drawing on a whiteboard at home. His lectures have traditionally included neurobiology, but he said that now there will be a little more relevance, given his experience as a patient. His colleague and course director Lawrence J. Rizzolo, PH.D., associate professor of surgery (anatomy), filled in while Stewart was recuperating. Rizzolo noted that Stewart also plays a large role in organizing and running the section. "I didn't realize all that Bill does until I was asked to do something," he said.

Every medical student for the past 30 years has studied under Stewart, who instructs physician associate and nursing students as well as future physicians. And in addition to teaching Yale students, Stewart oversees a collaboration between the medical school and Hill Regional Career High School. Students from the high school come to Yale for anatomy classes led by first- and second-year medical students. "He has a very calming presence that makes you enjoy the process of learning about the human body," said first-year student Lionel McIntosh, one of the instructors for the Career High program. "He knows how to make us better teachers. That go-to person if you had a difficult concept to explain was definitely missing." Besides teaching anatomy, Stewart studies the effects of low levels of oxygen on postnatal development of the brain.

But it is obvious to the students who clamor for his attention in the anatomy lab and to anyone who has ever observed his enthusiasm in the classroom that Stewart's first love is teaching.

—Jill Max

JULIE BROWN

A visit to the doctor for a pain in his neck led to surgery to remove a tumor in the spinal cord of William Stewart, who has taught anatomy to generations of Yale medical students. His familiarity with the human body gave him an unusual perspective on the operation. "In some respects, it's frightening because you know so much," Stewart said.

TERRY DAGRADI

ARMENIAN RECTOR VISITS YALE

Gohar P. Kyalyan, M.D., rector of Yerevan State Medical University in Armenia, met with Dean Robert J. Alpern, M.D., in March to discuss instruction in clinical skills using teaching methods practiced in the United States. Kyalyan visited Yale as part of a tour that included Boston University School of Medicine, Columbia University Medical Center, NYU Medical Center and UCLA Medical Center. She is seeking support for exchange programs between the Armenian school and medical schools in the United States.

Student-run free clinic wins Ivy Award for service to the New Haven community

Working at HAVEN Free Clinic has given first-year medical student Emma Barber, who serves as associate director, the chance to meet patients who are "some of the most grateful, humble, amazing people," she said. Open each Saturday, HAVEN (Health Care, Advocacy, Volunteerism, Education and Neighborhood) offers primary care, social services and free specialty referrals. [See "Students Reach Out to the Uninsured at Free Medical Clinic in Fair Haven," Autumn 2006.] Since the student-run center opened in November 2005, more than 200 patients have received free medical care.

Along with the gratitude of the patients, HAVEN also received thanks this spring in the form of an Ivy Award, given to people and organizations that further partnership between New Haven and Yale. The Elm-Ivy awards were established in 1979 with the support of Fenmore Seton, a 1938 Yale College alumnus, and his wife, Phyllis, who established an endowment at the Community Foundation for Greater New Haven. Elm Awards are given to members of the New Haven community, and Ivy Awards are given to Yale staff, faculty and students.

HAVEN is based at the Fair Haven Community Health Center and is run by students in public health, nursing, medicine and the Physician Associate Program with assistance from undergraduates. The students work with attending physicians from the School of Medicine and the community and attending clinicians from the Fair Haven Community Health Center.

Although it was designed to provide temporary free care for patients while helping them obtain medical coverage, many patients—a large number of whom are undocumented workers with no health insurance—see the clinic as their primary care provider. HAVEN offers free medications, Saturday hours and a friendly atmosphere, said Barber.

These long-term relationships have led organizers to recognize new areas for expansion, with latent tuberculosis treatment and Spanish-language mental health services emerging as priorities. Many patients present with depression, said Barber, and they face a 12-month waiting list for low-cost services elsewhere. Along with antidepressants and counseling, organizers are planning community tours to put immigrant patients in touch with churches and other resources that might help them combat social isolation.

—Colleen Shaddox

MICHAEL MARSLAND

Medical students who launched a free clinic in the Fair Haven neighborhood of New Haven received an Ivy Award last spring for their efforts. From left, Maggie Samuels-Kalow, Ryan Hebert, Mallika Mendu, Christopher Janson, Sara Crager and Andrew Simpson received the award from President Richard Levin.

et cetera . . .

TRACKING THE YALE SHUTTLE ONLINE

A new service has taken the guesswork out of waiting for the Yale shuttle. Anyone with a computer, a Web-based cell phone or a PDA can track the shuttle's progress on an online map of New Haven and the Yale campus. Yale Shuttle Services, part of the Parking and Transportation Department, offers the service, called Transit Visualization System, at www.yale.edu/shuttle/locator.

Green, blue, orange and purple routes are outlined on a map of the Yale campus. Buses move along their routes in real time. Yale students, staff and faculty can track the shuttle's progress and leave offices or classrooms in time to catch a ride.

The buses usually appear on the computer about five seconds behind their actual location on the street. This difference is due to several factors, including network traffic, computer speed and the number of programs running on a computer.

—John Curtis

POLICY BENEFITS GRAD STUDENTS

Any graduate student knows that juggling research, teaching duties and scholarship is challenging enough, and becomes even more so when combined with the added responsibilities of parenthood. Now Yale has become more family-friendly with new policies for full-time PH.D. students who become parents during their first to sixth years of study.

After the birth or adoption of a child, PH.D. students may suspend their academic responsibilities and request relief during that semester or the following one. Students will remain registered for that semester and continue to receive financial aid, and their scholarly obligations will be modified. The students' academic clock will also stop for one semester.

"New parenthood at the birth or adoption of a child substantially affects the ability of doctoral students to meet academic and professional obligations," Provost Andrew Hamilton, PH.D., said of the new policies that took effect July 1. These policies, he said, "support the intersecting personal and professional lives of graduate students at Yale."

—J.C.

Danger to patients seen in repeated tests

A Yale physician warns colleagues that overuse of CT scans can increase health risks from radiation.

Since the 1970s, computed tomography (CT) has become an increasingly important diagnostic tool whose use has expanded in recent years to replace such conventional procedures as X-rays and ultrasound. But greater dependence on this imaging technique comes at a price: increased exposure to radiation that could increase a patient's risk of cancer.

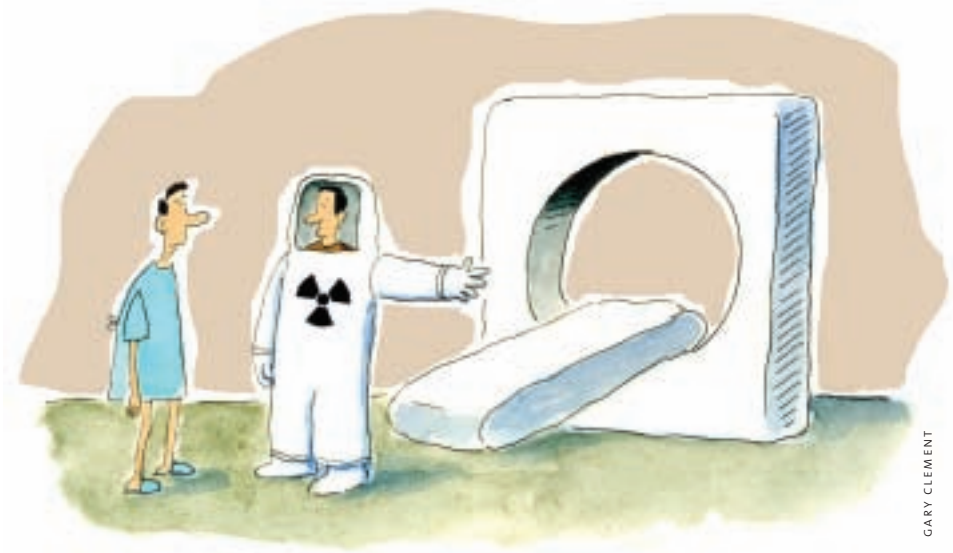
In the keynote address at the 43rd National Council on Radiation Protection and Measurements meeting in April, James A. Brink, M.D., professor and chair of diagnostic radiology, emphasized that physicians need to be more aware of the risk of CT and other imaging devices that use radiation. The number of CT exams administered each year in the United States has increased exponentially, growing from 3 million in 1981 to 63 million in 2005. CT scans commonly give the patient a dose of 10 to 25 millisieverts (mSv), compared to 0.10 mSv for a chest X-ray. But even those low-dose exposures typical of CT scans can increase the risk of cancer, according to the Radiation Effects Research Foundation, formerly the Atomic Bomb Casualty Commission, which studies the long-term effects of radiation from the uranium fission bombs detonated at Hiroshima and Nagasaki. That means that patients who undergo numerous CT scans, which is not uncommon, may be in the medium-dose exposure range of the atomic bomb. And smaller doses have a cumulative effect. "That's important, because if you do several low-dose CT scans, they add up to a larger dose that has the same risk," said Brink.

In the United States, medical necessity and the judgment of physicians determine whether CT scans will be approved, but radiation exposure is not part of the equation, according to Brink. In Europe, however, each country regulates exposure from CT and other imaging modalities that use radiation. "I think we're at least a decade behind Europe in terms of attention and regulation regarding medical radiation," Brink said.

Although Brink is quick to point out that CT has an important place in diagnosis, he also notes that there are a number of ways to control the radiation exposure it entails. "CT should be avoided when MRI or ultrasound is of comparable diagnostic utility," he said, citing one patient who had 18 CT scans over six years for flank pain, a symptom that usually indicates kidney problems. "He probably only needed the first one and didn't need the next 17." In addition, physicians should avoid repetitive exams, tailoring them to the individual patient and the individual application. Manufacturers provide tools to alter the technical parameters of scans, so that a patient having a CT for kidney stones, for example, won't receive as much radiation as a patient undergoing a scan for metastatic colon cancer.

Since physicians can't take steps to avoid or reduce exposure if they aren't aware that the problem exists, education is perhaps the most important component of controlling exposure. In a 2004 study at Yale, Brink and colleagues found that only 9 percent of emergency physicians who had ordered CT scans for pelvic pain over a two-week period believed there is an increased cancer risk from CT. When asked how many chest X-rays are equivalent to one CT, 44 percent of radiologists thought it was equal to between one and 10 chest X-rays—the correct answer is between 100 and 250. "Even radiologists didn't appreciate the difference," said Brink. "It shows that education is lacking across the board."

—Jill Max



GARY CLEMENT

Yale joins national effort to reconsider the benefits of hormone therapy

In 2002, the Women's Health Initiative (WHI), a research program begun in 1991 by the National Heart, Lung, and Blood Institute to address common health issues in postmenopausal women, issued an explosive report. Women who had had hormone replacement therapy (HRT)—a popular and highly recommended method of reducing the discomforts of menopause—were at greater risk of having heart attacks. This news—which was at odds with previous research—rocked the medical and lay communities and prompted many women and their doctors to abandon HRT.

But some researchers had doubts about the study; could limitations in the data analysis have skewed the results? Noting that the WHI studied older women, these researchers questioned whether HRT might provide a higher degree of protection for younger women who had recently entered menopause.

The Kronos Early Estrogen Prevention Study (KEEPS), coordinated by the Kronos Longevity Research Institute in Phoenix, is an effort to answer this question. Nine sites around the country, including the School of Medicine, are participating in a five-year study of 720 women to determine whether beginning hormone therapy in recently menopausal women (ages 42 to 58) protects against atherosclerosis, the major cause of heart attacks.

The principal investigator of the Yale portion of the study is Hugh S. Taylor, M.D., professor of obstetrics, gynecology and reproductive sciences and of molecular, cellular and developmental biology, and director of the department's division of reproductive endocrinology and infertility. Ninety menopausal women who are within three years of their last period will receive one of three regimens—progestin plus an estrogen patch; oral estrogen; or progestin plus a placebo. Researchers will monitor the effects of estrogen on the subjects' cardiovascular systems over four years, studying such markers as coronary calcium levels and the thickness of the walls of the carotid artery.

"We want to look at women from the beginning, before atherosclerosis has already started to develop," Taylor said. The problem with the WHI study, he said, is that researchers looked at women who were already more than a decade past their last period. "It was too late. Those women had already started showing signs of heart disease."

KEEPS will also look at cholesterol levels and other markers to explore which hormone delivery system is better: transdermal or oral. Transdermal estrogen is thought to be safer because it isn't processed by the liver in high concentrations.

In addition to these two studies, each KEEPS site is conducting its own ancillary studies. Yale researchers plan to look at estrogen's effects on skin integrity, bone density, moods, cognition (including memory) and heart rhythms.

Last spring the WHI followed up on its initial research with a study of younger women. Its findings suggest that the KEEPS study may yield encouraging news for women. WHI found a 24 percent reduction in risk of coronary heart disease in women starting HRT less than 10 years after menopause and a 30 percent reduction in overall deaths among women ages 50 to 59 using HRT. And in June, a report by WHI researchers published in *The New England Journal of Medicine* found that women who take estrogen for seven years after menopause had a lower risk of calcification of the arteries.

—Jennifer Kaylin

podcast

A podcast of Hugh Taylor speaking on this subject can be found on the Yale page on iTunes U. Visit itunes.yale.edu or launch iTunes, then select Yale from the offerings under iTunes U. The podcast is included under "Yale Health & Medicine."

et cetera . . .

ERRORS AND TRANSPLANT PATIENTS

Patients recovering from organ transplants run a high risk of medication errors that can land them back in the hospital, according to a Yale study published in the *Archives of Surgery* in March.

In the years after surgery, liver, kidney or pancreas transplant recipients took an average of 10.9 medications. The study found 149 errors occurring in 93 patients, with 32 percent resulting in invasive procedures, rejection or failed transplants.

In more than half the cases—56 percent—patients didn't follow instructions. In other cases, pharmacists substituted generic for brand-name medications or declined to provide the proper medications out of concerns about adverse drug interactions.

"Once the prescription is ordered, we have no routine feedback from the patient, pharmacy or insurer to know whether the medication is being used," said lead author Amy L. Friedman, M.D., associate professor of surgery. Every encounter with a patient should be viewed as an opportunity to clarify which medications are being taken.

—John Dillon

NEW TREATMENT FOR SVCS

About 15,000 people in the United States have superior vena cava syndrome (SVCS), a blockage of the large vein that carries blood from the head and upper body to the heart. Signs of the syndrome, which is usually caused by a malignancy pressing on the vein, include facial swelling, headache and visual disturbances.

"The superior vena cava syndrome is often clinically striking but rarely requires emergency intervention," said Lynn D. Wilson, M.D., M.P.H. '86, professor and vice chair of therapeutic radiology and professor of dermatology, lead author of a paper published in *The New England Journal of Medicine* in May. In the paper, Wilson and colleagues argue for dealing with the underlying cause—the tumor.

Wilson said, "Deterring from a multidisciplinary management plan and focusing only on the effects of the syndrome should be discouraged."

—John Curtis

Antidepressants shown to nurture neurons

Yale scientists find that a growth-inducing protein plays a role in fighting mood disorders.

Doctors warn patients starting on antidepressants that they will have to wait weeks for the effects to kick in. Marketing materials for the drugs claim that the medications correct imbalances of neurotransmitters in the brain. So why must patients wait?

That lag time sparked the curiosity of Ronald S. Duman, PH.D., the Elizabeth Mears and House Jameson Professor of Psychiatry and Pharmacology. It was clear, he said, that the drugs' effects on neurotransmitter levels cannot fully explain why the drugs can help relieve depression. "You have to wait for something else to happen," says Duman.

Duman and graduate student Jennifer L. Warner-Schmidt have now shown that the "something else" can be attributed in part to a growth-inducing protein called vascular endothelial growth factor (VEGF). In a March 13 article in the *Proceedings of the National Academy of Sciences*, they reported that the neurotrophin VEGF is necessary for antidepressants to work in preclinical models.

In previous rodent studies, Duman had found that sustained use of antidepressants and electroconvulsive therapy (ECT) causes new cells to proliferate in the hippocampus, a brain structure that plays a vital role in memory, emotion and learning. The hippocampus shrinks under long-term stress, and Duman showed that by spurring the growth of new neurons, antidepressant drugs reverse or block the effects of stress on the hippocampus.

Duman and Warner-Schmidt have now linked VEGF to neurogenesis in the hippocampus. They showed that two classes of antidepressants and ECT increase the levels of VEGF, while blocking the effects of VEGF thwarted neurogenesis in the hippocampus.

"Neurogenesis has become very interesting," said Duman. "Even the idea that you can make new neurons is exciting, and we think that neurotrophins contribute to the effects of antidepressants."

Duman said that VEGF and at least one other neuronal growth factor, brain-derived neurotrophic factor, are necessary not only to allow neurogenesis but also to support the function of mature neurons. "Trophic factors are not just necessary for survival," he said. "They are also required for growth, and closely involved in normal function."

Still, Duman said, his discovery of the role of neurotrophins "is probably not the whole story. You can't explain the entire action of antidepressants through neurotrophins and neurogenesis." In the meantime, this new information about VEGF might provide new pathways for antidepressant therapies.

—*Cathy Shufro*

EINAT PELED

Cyclic AMP, a molecule linked to stress, also plays a role in memory loss

Working memory, the sticky-note reminder system of the brain, holds on to temporarily needed information by forming transient neural networks that keep firing even as the brain ponders other matters. That way the message persists despite distractions. Unless, of course, the network is broken—in which case that mental note to pick up your dry cleaning after work vanishes into your cerebral ether.

After two years of experimentation in three animal models, Yale researchers led by Amy F.T. Arnsten, PH.D., professor of neurobiology, have identified the molecular mechanism that can make or break a neural network representing a short-term memory. These findings open the door to understanding what causes cognitive function to falter and how to treat several mental disorders.

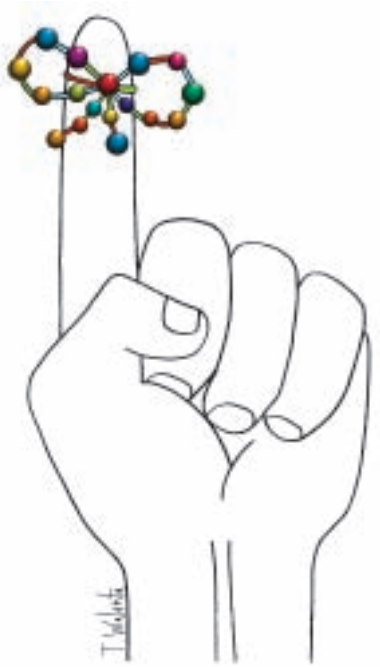
They found that a molecule called cyclic adenosine monophosphate (CAMP), which accumulates in times of stress and in the brains of persons with certain mental disorders, disconnects the neural networks in the prefrontal cortex by forcing open certain ion channels, much like tripping a circuit breaker to halt the flow of electricity. To keep the networks functioning, these channels, called hyperpolarization-activated cyclic nucleotide-gated (HCN) ion channels, must remain closed. They get some help from another type of molecule found next to HCN channels, the alpha 2A adrenoceptor, which, when activated, strengthens the neural networks and keeps them connected by preventing CAMP production.

Alpha 2A adrenoceptors are naturally stimulated by the neurotransmitter norepinephrine, but medications like guanfacine, an antihypertensive agent, also activate them, as the Yale group showed in their paper published in April in the journal *Cell*. It has long been known that guanfacine can improve the performance of working memory, and the drug is now being used to treat several prefrontal cortical disorders, but how it works has remained a mystery until now. Spurred by intriguing data from the lab of David A. McCormick, PH.D., professor of neurobiology, the group began to explore the role of HCN channels. "This is an extraordinary example of knowing how a drug works all the way to the level of an ion channel," said Arnsten.

Excessive HCN channel opening, she said, likely underlies lapses in cognitive function caused by stress, normal aging and several mental disorders, including attention-deficit hyperactivity disorder (ADHD), schizophrenia and bipolar disorder.

With this new finding, researchers can now pursue drug therapies for memory-related disorders involving the prefrontal cortex.

—Kara A. Nyberg



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CHLAMYDIA MORE PREVALENT

Young women between the ages of 14 and 19 are getting infected and reinfected with chlamydia at a rate higher than previously reported, according to a study published in the *Archives of Pediatrics and Adolescent Medicine* in March.

Linda M. Niccolai, PH.D., assistant professor of epidemiology (microbial diseases), tracked 411 young women over four years. More than half were diagnosed with the sexually transmitted disease and almost 30 percent reported repeated infections. Niccolai attributed the high rate of recurrent infection to multiple sex partners, lack of condom use and inadequate treatment of the young women's sex partners.

Niccolai said it is important to educate and counsel patients at the time of the initial diagnosis. "It is possible that young women think chlamydia is 'no big deal' because it is easily treated with a single dose of oral antibiotics," she said. Untreated, however, chlamydia can lead to pelvic inflammatory disease, complications of pregnancy, and sterility or reactive arthritis in men.

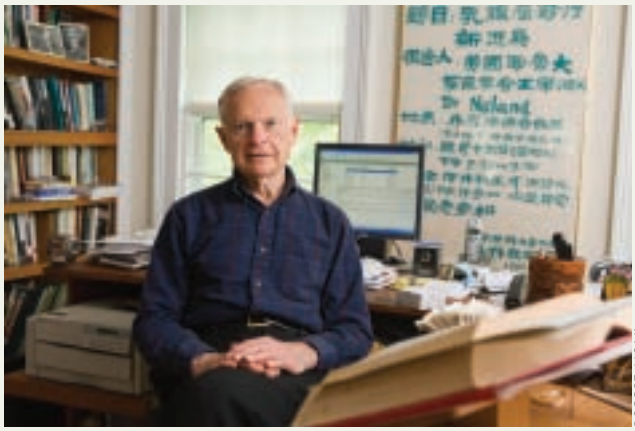
—John Curtis

A SUPERBUG FROM IRAQ

Wounded soldiers returning from Iraq in the fall of 2006 were found to be carrying a "superbug" responsible for highly drug-resistant infections that spread rapidly in hospitals. The culprit is *A. baumannii*, a bacterium that causes pneumonia, meningitis, septicemia and urinary tract infections. Using a new and rapid method called high-density pyrosequencing, Yale researchers sequenced the bacterium's genome to learn how it functions, according to a report in the March 1 issue of *Genes and Development*. Analysis revealed that 17.2 percent of the bacterium's DNA that codes for protein is located in 28 so-called alien islands, sequences that originated in other micro-organisms.

"Drug-resistant bacterial infections are a rapidly growing problem in hospital settings, and now in difficult conditions of combat," said principal investigator Michael Snyder, PH.D., the Lewis B. Cullman Professor of Molecular, Cellular and Developmental Biology. "Having the genome sequence of this microbe is critical for understanding how it harms humans."

—J.C.



ROBERT LISAK

Author Sherwin Nuland in his Hamden, Conn., study: "Because life is finite, we recognize its value."

Reeling in the years

A surgeon reflects on the loss of identity that comes with retirement and on how aging can bring renewal.

Doctors who retire must accept the painful fact that they will "no longer be seen as anybody's healer," said Sherwin B. Nuland, M.D. '55, HS '61, clinical professor of surgery. "Doctors have a great tendency to identify themselves by their calling, their profession, rather than by their humanity. Medicine is their identity."

Fifteen years after he gave up surgery to write books, Nuland, 76, still feels the loss of his identity as a physician: "I've relinquished my technical identity. I've relinquished the leadership of a team. I've relinquished my role as someone to whom a single individual can look for a healing touch." Although his writing career has not disappointed—he won the 1994 National Book Award for nonfiction for *How We Die: Reflections on Life's Final Chapter*, which has sold nearly a half million copies in the United States and been published in 24 languages—Nuland calls caring for sick people "the most important thing I did in my life."

In his 10th book, *The Art of Aging: A Doctor's Prescription for Well-Being*, Nuland interweaves advice, case studies and descriptions of the physical impact of time's passage. Growing old, he writes, is "simply entering another developmental phase of life." While his book provides a scientific survey of the diminishments of age—loss of agility, libido and immunity to disease—Nuland argues that aging can offer its own riches.

"There comes a point, probably in your late 50s, that you ought to start rediscovering yourself, the person you were before you went to medical school or journalism school or business school," he said. "You're rediscovering your humanity and beginning to separate yourself from a complete reliance on identification with that profession."

His own efforts at remaking himself have turned Nuland into "a gym rat." His workouts paid off when he joined a group of physicians on a trip to Sri Lanka in December 2004 to provide emergency medical care after the tsunami. Nuland said he easily kept up with much younger colleagues. (As a scholar, he may be motivated to exercise in part by one fact that he notes in the book: exercise causes secretion of a brain-derived hormone that adds to the functioning of the cerebral cortex.)

As part of the renewal process, Nuland advocates writing. "You find out about your interests, about how you've synthesized life, things that you'd never discover if you didn't write. Most people have a lot more going on in their heads than they ever dreamed they had."

One pleasure of aging for Nuland is his love for his three grandchildren (with the fourth expected this fall). "It's not a question of my DNA continuing," he said. "It's a question of what my children have brought to their own lives, which is a great source of pleasure and wonder to me."

In contrast, the death of friends and mentors causes pain. "My advice is not to think that once that star has fallen out of your firmament that anyone can possibly replace it. ... Let yourself grieve for as long as you need to."

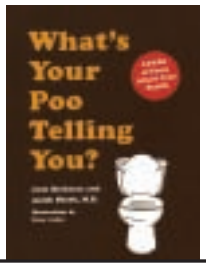
Still, Nuland does not wish that humans were immortal. "Because life is finite, we recognize its value. If life were infinite, we wouldn't understand anything about this treasure we have been given."

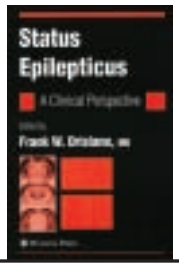
—*Cathy Shufro*

podcast

A podcast of Sherwin Nuland speaking on this subject can be found on the Yale page on iTunes U. Visit itunes.yale.edu or launch iTunes, then select Yale from the offerings under iTunes U. The podcast is included under "Yale Books & Authors."

Bookshelf focuses on books and authors at the School of Medicine. Send suggestions to Cathy Shufro at cathy.shufro@yale.edu.






What's Your Poo Telling You?
by Josh Richman and Anish Sheth, M.D., FW '08 (Chronicle Books) This adult version of the children's book *Everybody Poops* will help you understand what's going on with your body through what's in the toilet bowl. The book offers sidebars, trivia, unusual case histories and medical explanations of "poo" through witty illustrated descriptions.

Appetite for Profit: How the Food Industry Undermines Our Health and How to Fight Back
by Michele Simon, M.P.H. '90 (Nation Books) This book provides a guide to the public relations techniques, front groups and lobbying tactics that food companies employ to market junk foods, especially to children. It also includes an entertaining glossary that explains corporate rhetoric, including phrases like "better-for-you foods."

Status Epilepticus: A Clinical Perspective
edited by Frank W. Drislane, M.D. '80 (Humana Press) This text reviews the many forms of status epilepticus (SE), their causes, manifestations, methods of diagnosis and appropriate treatments. The book focuses on the disease as encountered by the clinician in the field and the importance of correct recognition and diagnosis. Additional highlights include EEG reproductions that provide classic examples of patients with SE, a discussion of SE in very young children and neonates and an analysis of the cellular physiology and processes occurring in SE.

Complementary and Alternative Medicine and Multiple Sclerosis, 2nd ed.
by Allen C. Bowling, M.D. '88, PH.D. (Demos) The second edition of this book reflects advances in the field since the book's initial publication. Therapies are organized alphabetically so that readers can pinpoint a specific treatment and learn about its origins, merits and possible uses in treating multiple sclerosis. Also discussed is the use of supplements, herbs, vitamins, acupuncture, biofeedback and other alternative treatments. This guide offers new options for relief when conventional therapies are limited, exploring which therapies are effective, low-risk and inexpensive and which are ineffective, dangerous and costly.

Your Heart: An Owner's Guide
by John A. Elefteriades, M.D. '76, HS '81, FW '83, chief of cardiothoracic surgery and the William W.L. Glenn Professor of Cardiothoracic Surgery, and Lawrence S. Cohen, HS '65, the Ebenezer K. Hunt Professor of Medicine (Prometheus Books) Heart disease remains the leading cause of death in the United States. The authors provide clear up-to-date medical information about such well-known problems as hypertension, high cholesterol and angina, and such lesser-known conditions as valvular heart disease, rheumatic fever and arrhythmia. They also discuss tests and diagnoses; lifestyle changes; medications and therapies; and such surgical procedures as valve replacement and heart transplants. A special section is devoted to women and their hearts.

Body Language: Poems of the Medical Training Experience
edited by Neeta Jain, M.D., Dagan Coppock, M.D. '04, and Stephanie Brown Clark, M.D., PH.D. (BOA Editions) This anthology of 91 poems by medical students, interns, residents and attending physicians chronicles their challenging experiences. Physicians who are also poets address a diverse range of medical situations in this book, which offers insights into the inner world of people who regularly deal with life-and-death decisions.

Sports Dermatology
by Brian B. Adams, M.D. '95 (Springer) This book gathers the most clinically relevant information in the emerging area of sports dermatology. Each sports-related skin condition—both the commonplace and the unusual—is discussed with attention to the following: epidemiology, clinical presentation, diagnosis, treatment and prevention.

Acute Aortic Disease
by John A. Elefteriades, M.D. '76, HS '81, FW '83, chief of cardiothoracic surgery and the William W.L. Glenn Professor of Cardiothoracic Surgery (Informa Healthcare) This source helps physicians examine and evaluate affected individuals in clinical or emergency care settings. Offering an array of illustrations, X-rays and operative photographs to emphasize key anatomic observations, this guide surveys the latest biologic, radiological, clinical and surgical developments in the field.

DNA Vaccines: Methods in Molecular Medicine
edited by W. Mark Saltzman, PH.D., the Goizueta Foundation Professor of Chemical and Biomedical Engineering and professor of cellular and molecular physiology, Hong Shen, and Janet L. Brandsma, PH.D. '81, associate professor of comparative medicine and pathology (Humana Press) Divided into five sections, this volume contains state-of-the-art procedures for the latest DNA vaccine technology. Part I contains DNA vaccine design protocols, Part II presents methods for DNA delivery, Part III discusses current methods for enhancing the potency of DNA vaccines and Part IV describes several key areas of application in the field. The book concludes with a review of protocols for vaccine production and purification as well as applicable methods of quality control.

Play = Learning: How Play Motivates and Enhances Children's Cognitive and Social-Emotional Growth
edited by Dorothy G. Singer, PH.D., senior research scientist in the Child Study Center, Roberta Michnick Golinkoff, PH.D., and Kathy Hirsh-Pasek, PH.D. (Oxford University Press) This book describes varieties of play—make-believe, storytelling and story-acting, and mathematical—and provides insights gleaned from more than 40 years of research linking play to increased attention span, creativity, constructive peer interaction and mental health. The book also discusses the value of play for children with autism and those who have suffered traumatic injury or loss.

Immunology of Pregnancy: Medical Intelligence Unit
by Gil Mor, M.D., associate professor of obstetrics, gynecology and reproductive sciences (Springer) This book gives a complete review of current knowledge of the role of the immune system during pregnancy and the interactions between the placenta and the maternal immune system. It also covers in detail a range of hypotheses and studies related to the immunology of implantation and provides a practical approach to the application of basic reproductive immunology research to such complications of pregnancy as pre-eclampsia, preterm labor and intrauterine growth restriction.

Autism and Pervasive Developmental Disorders, 2nd ed.
edited by Fred R. Volkmar, M.D., the Irving B. Harris Professor in the Child Study Center and professor of psychiatry, pediatrics and psychology (Cambridge University Press) This updated edition reflects the most recent progress in the understanding of autism and related conditions. Chapter topics include current approaches to definition and diagnosis; prevalence and planning for service delivery; cognitive, genetic and neurobiological features; and pathophysiological mechanisms. A new chapter covers communication issues, while the final chapter addresses the nature of the fundamental social disturbances that characterize autism.

Hardworking Puppies
by Lynn Reiser, M.D. '70, clinical professor of psychiatry (Harcourt Books) This is a story for children between the ages of 3 and 7 about working dogs and their jobs. Like the song "Ten Little Indians," the book helps children learn to count backward from 10 to zero, as each puppy pairs up with a hardworking human—a firefighter, a clown, a lifeguard and a hospital volunteer, among others.

Retinal Degenerations: Biology, Diagnostics and Therapeutics
by Joyce Tombran-Tink, PH.D., visiting associate professor of ophthalmology and visual science, and Colin J. Barnstable, PH.D., adjunct professor of neurobiology and ophthalmology and visual science (Humana Press) This book focuses on what is currently known about the environment, genetic factors and mechanisms that lead to retinal degenerations. It discusses new diagnostic techniques and innovative therapeutic modalities to preserve vision.

The descriptions above are based on information from the publishers.

SEND NOTICES OF NEW BOOKS TO
Cheryl Violante, *Yale Medicine*, 300 George Street, Suite 773, New Haven, CT 06511, or via e-mail to cheryl.violante@yale.edu

A librarian in the OR

When medical librarian Denise Hersey, M.L.S., overheard Paul G. Barash, M.D., HS '74, professor of anesthesiology, joke that he wished he had a librarian in the operating room, she took him seriously. While Hersey does not enter the OR itself, she comes pretty close: every week she spends several hours answering questions in the anesthesiology lounge in Yale-New Haven Hospital's south pavilion.

Anesthesiologists face the universal problem of figuring out how to access information on the Internet. As Barash puts it, "You have a paradox: you have an overload of information and an inability to get it."

Hersey's regular visits to the OR suite solved that problem. As a librarian for liaison activities, she could use the visits to forge a connection between the library and the department. Anesthesiology faculty members and residents began asking for her advice on Internet search strategies.

Soon Hersey began brainstorming with the department's chair of education council, Viji J. Kurup, M.D., assistant professor of anesthesiology and assistant director of medical studies, to find new ways of searching the Web. They held a PDA-loading party at which they showed faculty and residents how to load electronic medical resources into their personal digital assistants.

Kurup and Hersey also enlisted residents to record definitions of anesthesiology keywords so that their fellow residents can listen to them on MP3 players in preparation for board exams. When Hersey noticed that the doctors kept hanging journal club articles on a bulletin board, she posted them on an electronic bulletin board.

"It's been fun," said Hersey, who now serves on the department's residency education committee.

Kurup knew that Hersey was making contributions but, like any good scientist, she wanted proof. A study Kurup conducted found that faculty and residents significantly increased their electronic searches for articles in key anesthesiology journals. Kurup presented her findings at the summer meeting of the Society for Education in Anesthesia.

Barash is enthusiastic, too. "It opens up all of Cushing Library to those whose hours don't let us go to the library." The medical librarians, he said, have "reinvented themselves."

—*Cathy Shufro*

In Circulation focuses on activities at the Cushing/Whitney Medical Library. Send suggestions to Cathy Shufro at cathy.shufro@yale.edu.

MICHAEL LAMB

Can children tell the truth? Evaluating claims of abuse

How, asked Michael E. Lamb, PH.D. '76, should police, psychologists and social workers evaluate children's claims of sexual abuse? Speaking at pediatric grand rounds in April, Lamb, a professor at Cambridge University in England, said that a child's testimony may be the only evidence. "Most incidents of sexual abuse take place in private," he said. "In most cases, the primary source of information is the child."

But children's claims have received numerous courtroom challenges. Some forensic psychologists maintain that children can't remember, that they indulge in fantasy and that they can't distinguish between truth and inventions. These assertions, said Lamb, fail to withstand scrutiny. Children are just as reliable and truthful as adults, said Lamb, who wrote the protocol on interviewing children for the National Institute of Child Health and Human Development at the National Institutes of Health.

But proper interviewing methods are essential. Numerous studies have found that open-ended questions elicit far more accurate information than leading questions. "As much as possible, keep the focus on specific incidents," Lamb said. "The role of the interviewer is to let the child give you information. The less you say, the better the interview."

—John Curtis

LAURA KOUTSKY

Advocating protection against cervical cancer

"This is my favorite topic," said Laura Koutsky, PH.D., professor of epidemiology at the University of Washington School of Public Health.

Koutsky was referring to two human papillomavirus (HPV) vaccines, both of which protect women against cervical cancer, a disease that claims 250,000 lives a year worldwide. Merck's Gardasil was approved by the Food and Drug Administration in June 2006, while GlaxoSmith-Kline filed for approval for its vaccine, Cervarix, in March 2007. Koutsky's research on the HPV vaccine is supported by funds from Merck.

Koutsky gave an overview of the safety, efficacy and immunogenicity profile of the prophylactic HPV vaccines during a talk at the School of Medicine in April. Noting that HPV is highly contagious and widespread (in one study 28 percent of test subjects who had only one sexual partner became infected with genital HPV within 12 months), Koutsky recommended that the vaccines, which have been found to be successful in preventing infections, be "widely used and widely available."

Ideally, girls should be inoculated before they become sexually active. To parents uncomfortable with this recommendation, Koutsky said, "Teach your values," but also advised, "Children need age-appropriate protection from the consequences of sexually transmitted infections, and despite evidence to the contrary, most want their parents' help."

—Jennifer Kaylin

DAVID KOEPSELL

Granting patents on genes hinders biotech research

Companies shouldn't hold patents on genes any more than they should own the air we breathe, said David R. Koepsell, J.D., PH.D., a Donaghue Initiative Visiting Scholar in Research Ethics at Yale University's Interdisciplinary Center for Bioethics, speaking at a lecture in June.

"I think the current situation, where about 20 percent of the genome is patented, is a disincentive for innovation and chills research," said Koepsell, a philosophy professor at the State University of New York at Buffalo. "It's not based in either good policy or logic."

Koepsell argued that genes found in nature do not fit into the current definition of intellectual property. They are neither inventions nor the expression of a new idea. Patents, he said, should reward novel uses of genes for tests and therapies, rather than simply the sequence of DNA itself. Patents are currently granted for both genes and their uses.

Some scientists say putting a stop to gene sequence patents could harm the biotechnology industry, but Koepsell disagrees. "In fact," he said, "I think it will create new opportunities for small players who want to come in who can't afford the licensing fees. I think it would actually be a boon for technology."

—Sarah C.P. Williams

SARAH BERGA

Bringing values, relationships back into medicine

Sarah L. Berga, M.D., administered a dose of idealism to residents in the Department of Obstetrics, Gynecology and Reproductive Sciences during Residents' Research Day in June, calling on the young doctors to "make health the priority, not making money."

Berga, the James Robert McCord Professor and chair of the Department of Gynecology and Obstetrics at Emory University School of Medicine, delivered the 4th Annual Nathan Kase Lecture: "The Social Contract of Medicine." As healing has been transformed into a business and health has become a commodity, she said, the medical profession risks breaking its moral contract with society. "Many people feel we're not doing as well as we should," she said. "Leadership in medicine today is seriously failing." Part of the problem, Berga said, is that some doctors are "overly competitive." Others are so focused on the "technical aspects" of their profession that they give "short shrift to the big picture."

Berga's advice? "Integrate the concept of professionalism—the morals, values and relationships that underpin the trust the public has in doctors—into the business of medicine." She also recommends getting involved in the next presidential election.

—J.K.

From the library's historical treasures

Students peruse first editions of the classic anatomy text by Renaissance physician Vesalius.

By Jill Max

THE HARVEY CUSHING/JOHN HAY WHITNEY MEDICAL LIBRARY (3)

In 1543, when Andreas Vesalius published his text of the human anatomy, *De Humani Corporis Fabrica Libri Septem* (*Seven Books on the Fabric of the Human Body*), he embarked on a revolutionary path. Today, *De Fabrica* is considered the first great book of modern medicine and the first publication to contain extensive illustrations based on observations drawn from human dissections.

"It's extraordinarily important because it's one of the first actual dissection guides to the human body," said Thomas P. Duffy, M.D., professor of medicine and director of the Humanities in Medicine program.

Three copies of *De Fabrica* and other works from the period were the subject of a special session in April of the Humanities in Medicine Lecture Series, one of four yearly gatherings that introduces medical and nursing students to some of the historical treasures in the Harvey Cushing/John Hay Whitney Medical Library. "This is the only context in which students really get to see these things and hear about them," said Susan Wheeler, curator of prints and drawings. Donated by neurosurgeon Harvey Cushing, M.D., a founder of the library and the world's premier collector of Vesaliana, the collection includes two first editions of *De Fabrica*, one of which was given to Cushing by Sir William Osler, M.D., along with the revised edition published in 1555.

Each volume contains more than 400 meticulous illustrations derived from dissections, some carried out by Vesalius in public as he lectured to medical students, professors and religious and government leaders. Prior to Vesalius' instruction, anatomy had been taught primarily by studying the writings of Galen, the ancient Greek physician whose views, based largely on animal dissections, dominated medicine for over 1,300 years. Vesalius' attempt to clarify these early writings through direct observation has been seen by some as anti-Galenist, but in reality he sought to build upon Galen's work, correcting it where necessary. The identity of the artist or artists responsible for the drawings remains a matter of debate, but some works are thought to have been done by Vesalius himself, while others may have been done by Stefan van Kalkar, a student of Titian.

Vesalius published *De Fabrica* when he was 28, five years after receiving his medical degree from the University of Padua. Coming from a long line of physicians, Vesalius had access to medical materials at a young age. As a student, he often visited the cemetery, where he and his classmates would blindfold themselves and attempt to identify the bones they found. Later when he began to teach, Vesalius created charts on which he drew pictures so that onlookers could follow what was happening during his dissections. Six of these drawings were printed on large sheets in 1538 to be used as guides for students and barber-surgeons, and are now known by the title *Tabulae Anatomicae Sex*. The popular publication was quickly plagiarized all over Europe. The contemporary German copy included in the library's collection is extremely rare.

Other highlights of the Vesalius collection include prints of *De Fabrica*'s most famous illustrations, the "muscle men," which depict progressively deeper dissections of the muscular system that were useful for both artists and

OPPOSITE The 16th-century physician Andreas Vesalius, shown in the illustration, wrote *De Humani Corporis Fabrica Libri Septem (Seven Books on the Fabric of the Human Body)* at the age of 28, five years after receiving his medical degree.

BELOW *De Fabrica* is considered to be the first great book of modern medicine. For the first time, a medical text contained extensive illustrations based on observations drawn from human dissections. Neurosurgeon Harvey Cushing, one of the founders of the Medical/Historical Library and the world's premier collector of Vesaliana, donated three copies of the text to the library, including two first editions. Each volume contains more than 400 meticulous illustrations.

students. There are also two volumes by Vesalius' predecessors, the physicians Berengario da Carpi and Johannes Dryander, whose crude, incomplete drawings follow the tradition of using anatomical illustrations as memory aids, as opposed to the realistic representations made famous by Vesalius.

Shortly after publishing *De Fabrica*, Vesalius became physician to the Holy Roman Emperor Charles V and achieved renown as a surgeon. He is most widely recognized, however, for the exquisitely detailed book that is as impressive today as when it was originally published.

Jill Max is a writer in Connecticut.

Putting the fire back into Yale's transplant program

Liver surgeon Sukru Emre has high expectations for Yale's organ transplant program and his colleagues in the OR. He also displays a gentle, quiet confidence: "If you use your brain, your sweat and your heart," he says, "there is no way that you are going to be failing."

Sukru Emre calls transplant surgery "a complex matrix, not a discipline," requiring excellence and cooperation across departments.

By Colleen Shaddox
Photographs by Robert Lisak

When Prometheus stole fire from the gods, Zeus condemned him to have his liver eaten by an eagle every day. The myth, says surgeon Sukru Emre, M.D., shows that the ancient Greeks knew that the liver could regenerate—a property that makes it possible for Emre to take part of a healthy person's liver and use it to sustain another's life. The story of regeneration also serves as a metaphor for Emre's new role as chief of Yale's Section of Organ Transplantation and Immunology, where his charge is to revive a largely inactive liver transplant program while strengthening Yale's kidney and pancreatic transplant programs as well. Like the classic tale, this story has a hero: Emre himself, a transplant surgeon of international reputation whom patients and colleagues alike praise for his skillful innovation, work ethic and ability to empathize with patients and their families.

Karen Lewis says she had "absolute confidence" in transplant surgeon Sukru Emre. Emre operated on her son, Christopher, who needed a transplant because of an aneurysm in his liver.

Emre prefers to think of himself as a team builder. "Could this work if a single part were missing?" he asks, pulling up his sleeve to reveal his watch.

Emre was director of the adult and pediatric liver transplant programs at Mount Sinai Medical Center in New York for five years before joining the Yale faculty in July. At Mount Sinai his pediatric team achieved a 98 percent one-year survival rate and a 92 percent five-year survival rate while increasing the patient census of 15 to 17 cases per year to an average yearly volume of 28 to 30 cases. He uses one of his favorite words to explain the success: chemistry. In this case, chemistry means getting everyone—from administrative assistants to nurses to specialists—to support one another and deliver outstanding patient care. Emre stresses that transplant surgery is "a complex matrix, not a discipline," requiring excellence and cooperation across departments.

And that is why Yale is making a $12.5 million investment in its transplant section that will increase the number of surgeons, nurses and support staff, according to Robert Udelsman, M.D., M.B.A., department chair and the William H. Carmalt Professor of Surgery. Every area touched by transplant medicine, such as intensive care and diagnostic imaging, will improve as the transplant program grows, he said. Yale's strengths in hepatology, transplant immunology and vascular biology set the stage for collaborations between clinicians and bench researchers to improve the level of practice in this young branch of medicine. Emre's goal is to increase the current number of liver transplants at Yale from four or five a year to between 80 and 100; double the number of kidney transplants to 150; and bring the number of pancreatic transplants up to 20, a five- to 10-fold increase over present figures.

Obviously those ambitious goals will take years to achieve. Benjamin Shneider, M.D., the former chief of pediatric hepatology at Mount Sinai, says that nothing is beyond this surgeon. "One of the striking things about Sukru is that he won't accept defeat," says Shneider. He says he routinely saw Emre conquer "unsolvable clinical problems." Shneider recognized that preoperative evaluations of children to ensure that their anatomical structures would permit transplant surgery were "irrelevant" because Emre would always find a solution in the operating room.

Paul M. Sethi, M.D., an orthopedic surgeon in private practice in Greenwich, Conn., and a former student of Emre's, says his mentor implored him not to "accept the

standards, the norm. ... He taught me to use my brain and my hands at the same time for the patient," Sethi said.

But there is no true norm in transplant surgery, a relatively new field. The first liver transplant took place only 40 years ago and many immunosuppressant drugs became available only in the 1990s. Transplant surgeons literally make the norms as they go along while dealing with significant barriers to success, including transplant rejection and shortages of organ donors. Emre specializes in the field's most technically difficult area, pediatrics, in which procedures are necessarily in constant evolution. Transplant possibilities are limited by the patient's size. He routinely performs transplants on adult patients as well, however. Emre has been particularly successful in addressing the shortage of donors through split-liver transplants, in which sections of a single liver are used to serve two patients, a child and an adult; domino transplants, in which the liver removed from one patient undergoing transplantation may still serve another patient with a shorter anticipated lifespan; and living-donor liver transplantation, in which a section of healthy liver is transplanted from a living donor into a recipient whose liver has been removed.

A complete physician

Emre came to the United States from his native Turkey in 1988 to study transplantation. After his fellowship at Mount Sinai was completed, he made the difficult decision to stay in New York because he felt America would offer his children better educational opportunities. Transplant surgery attracted him because of the depth and breadth of medical knowledge it requires. "That makes you a complete physician," he says.

A complete physician is also available and sympathetic to patients, a challenge for a surgeon who may be performing an 11-hour operation on any given day. But patients say that Emre—not one of his assistants—responds to phone calls and e-mails within 24 hours.

Extended conversations with Emre convinced Phil and Lisa Brudos to fly their 11-year-old daughter, Marie, from Chicago to New York so that Emre could operate on her. Marie's case was complex. Born with autosomal recessive polycystic kidney disease and congenital hepatic fibrosis, she needed both kidney and liver transplants and, in the opinion of some surgeons, should also have had her spleen removed. Emre outlined a strategy to avoid removing the spleen. "I sent him pages and pages of questions. I called two or three times a week," Brudos recalls. "Dr. Emre was unbelievable in his compassion and concern." Three years after the transplants, Marie is thriving.

Judy Gilman, a nurse from New Jersey, appreciated the time Emre took to "explain everything you could possibly ask" when she had her transplant. "He was wonderful, truly a compassionate, sensitive man."

Twelve-year-old Christopher Lewis from Killingworth, Conn., is also doing well more than two-and-a-half years after his emergency liver transplant, necessary because of an aneurysm in his liver. Upon the recommendation of Yale physicians who sent Christopher to Emre in New York, his mother Karen Lewis found herself riding in an ambulance to Mount Sinai from Yale-New Haven Hospital as her 10-year-old son was failing rapidly. Emre had to remove Christopher's liver even before the donor organ arrived. "I'll take care of him like I would if he were my own," Emre reassured the terrified mother.

"I could tell he meant it," recalls Lewis, who became the donor of last resort for her son's transplant. "He must love his job."

Emre would agree: "Everything grows with love. You've got to love what you do. Otherwise it becomes a burden and you can't carry it." Still, there are such moments as the fifth-birthday party for his daughter, Gulus, when his beeper went off. Emre apologized to the girl for leaving. "That's okay," she said through tears. "You're going to save lives."

"That's all my wife," Emre says. She instilled a deep appreciation in her children for their father's work, he explains. Umit Emre, M.D., a pediatric pulmonary specialist, has consistently supported her husband's demanding career while tending her own specialty and taking more than her share of responsibility at home, he says.

His children are never far from his mind, particularly whenever a pediatric liver donation arrives—a chance of life for one child arising from the death of another. "I go home and I thank God my kids are healthy," he says. If he missed a few birthday parties, Emre has made it to the debate competitions, the Carnegie Hall recitals and many other milestones in the lives of the three daughters he praises with obvious relish. And perhaps their successes have something to do with the life lesson he often repeats to them: "If you use your brain, your sweat and your heart, there is no way that you are going to be failing."

It's a lesson he'll employ at Yale. "One of the best universities in the world deserves a great transplant program. That's my nature; I accept a challenge," he says. "And I don't give up." **YM**

Colleen Shaddox is a freelance writer in Hamden, Conn.

podcast

A podcast of Sukru Emre speaking about organ transplantation and reasons to be an organ donor can be found on the Yale page on iTunes U. Visit itunes.yale.edu or launch iTunes, then select Yale from the offerings under iTunes U. The podcast is included under "Yale Health & Medicine."


CB

Illustrations
by Calef Brown

The gospel according to Langer

By Pat McCaffrey

Three Yale engineers learned their trade working alongside a legendary MIT professor who believes in thinking big.

One of the most influential people in Yale's fledgling Department of Biomedical Engineering (BME) is not on the faculty, nor is he a student. He never attended Yale, though he received an honorary degree at Commencement in May. In fact, he has never held any position in New Haven, and works miles away in Cambridge, Mass. Nonetheless, his picture hangs prominently in the office of W. Mark Saltzman, PH.D., the department chair, and his vision permeates daily life in the BME labs in the Malone Engineering Building on Prospect Street.

This potent force is Robert S. Langer, SC.D., Institute Professor and the Kenneth J. Germeshausen Professor of Chemical and Biomedical Engineering at the Massachusetts Institute of Technology (MIT), and mentor to a new generation of Yale engineers bent on inventing their way around any obstacle to improve the diagnosis, treatment and prevention of disease.

Want to deliver a killing blow to stubborn brain tumors? Try surrounding them with chemotherapeutic wafers that leak a toxic drug onto nearby cancer cells and leave healthy tissue alone. Need to mend a spinal cord, severed in a disabling accident? Try implanting a plug of plastic polymer seeded with stem cells. Running out of healthy blood vessels to replace damaged arteries during a heart bypass? Take tissue-engineered vessels off the shelf, ready-made like replacement parts for a car.

The first of these visions is now reality thanks to the work of Saltzman, the Goizueta Foundation Professor of Chemical and Biomedical Engineering and professor of cellular and molecular physiology. The others are dreams in progress: Erin Lavik, SC.D., assistant professor of biomedical engineering, has successfully repaired broken spinal cords in rats, preventing paralysis and restoring the animals' ability to walk. Laura Niklason M.D., PH.D., associate professor of bioengineering and anesthesiology, is on the verge of testing manufactured blood vessels in people.

All three began their groundbreaking work in the Langer lab. By their own accounts, Langer is a daunting role model (See sidebar). A hard-working and phenomenally successful researcher and inventor, he also finds time to be an attentive and thoughtful advisor, and even a booster when cheerleading is called for. Most importantly, they say, Langer is a visionary who believes that nothing is impossible. And somehow he has inspired a new generation of engineers to believe that, too.

As the heirs to his scientific legacy, the three Yale engineers have found success by taking Langer's favorite advice to heart. Langer sums it up in five simple words:

"Think big. Don't give up."

Delivering the goods

As a graduate student in the Langer lab, Saltzman remembers sitting with colleagues and trying to analyze what made Bob, as everyone calls him, so successful. What special combination of attributes would young researchers need to cultivate just to approach their mentor's achievements? "We never quite figured it out. We knew that Bob is ridiculously brilliant and that he works really hard," Saltzman says. "Brilliance is hard to emulate, but one thing we figured out is that we could always try to work really hard."

Mark Saltzman, chair of biomedical engineering, is one of the three faculty members who trained under MIT professor Robert Langer.

When Erin Lavik was thinking about a switch from materials science to biomedical engineering, she found "Mecca" in Langer's lab.

By working hard, Saltzman has come far. He runs a lab, teaches undergraduates and graduate students, and has written three textbooks, on tissue engineering, drug delivery and polymer chemistry. He has won awards for research and teaching at every stage of his career. Since he arrived at Yale in 2002 to form the new department, he has seen his faculty group grow to 19 members. That number includes researchers from other departments gathered at last in one place, plus three new recruits.

But back in 1981, as Saltzman was finishing his undergraduate degree in chemical engineering at Iowa State, he was adrift. After four years he realized that he had no interest in manufacturing or going into the oil industry—the things that chemical engineers usually do. Fortunately, he happened into a lecture on biomedical engineering, and he was hooked. "I saw that the things I knew how to do could be used in a different way than I'd ever thought."

At MIT, he found a kindred spirit in Langer, who had also veered toward biology from chemical engineering. Langer's claim to fame at that time was his invention of biodegradable polymers for drug delivery. These pellets and wafers of honeycombed plastic could be loaded with proteins or medicines and implanted within the body. As the polymers slowly broke down in blood or cells, the capsules delivered the goods, then disappeared. Because of the packaging's novel porous structure, it could deliver molecules that were far larger than previously possible. For his doctoral thesis, Saltzman studied the molecular properties of the polymers and fine-tuned them to deliver proteins and other therapeutics.

After receiving his PH.D. in 1987, Saltzman left for a faculty position at Johns Hopkins University and took along some advice from his mentor. Langer suggested that he focus on drug delivery to the brain, an interesting and unexplored area. Even more important, Langer introduced Saltzman to a young neurosurgeon, Henry Brem, M.D., now the Harvey Cushing Professor of Neurosurgery, neurosurgeon in chief and chair of the Department of Neurosurgery at Hopkins.

With Langer supplying the biodegradable polymer, Saltzman and his colleagues developed ways to load it with carmustine, a cancer drug, and track the medication's release, while Brem led the testing in patients. The result was Gliadel, a dime-sized, drug-impregnated wafer that surgeons now use routinely to extend the lives of patients with deadly brain tumors. In 1996, Gliadel became the first of the polymers to be approved by the Food and Drug Administration for human use.

"Bob has a knack for getting the right people together," Saltzman says. The ability to be a scientific matchmaker is critical in biomedical engineering, a discipline in which you do not get very far on your own, Saltzman says. "We borrow skills and techniques from so many different places, you must have those connections."

When Saltzman was recruited to head up the new biomedical engineering department, he recognized Yale as a good place to foster such connections. He cites the medical school's Interdepartmental Program in Vascular Biology and Transplantation (VBT) as just one example. "We have cell biologists and immunologists and surgeons and pathologists and bioengineers all working together in an ideal environment for interdisciplinary work. I think that's a very rare happening among universities," he said.

Today, Saltzman continues to work on drug delivery to the brain, and he is also working with colleagues at Yale on genetically engineered blood vessel cells that could be turned into vascular bandages for restoring blood supply to damaged tissue.

Making a difference

Lavik spent 11 formative years at MIT, receiving a bachelor's degree and a master's in materials science, and then completing her SC.D. in the Langer lab. She is not only a stellar researcher, but also a writer and director of plays and a master cake decorator. She lives in Davenport College, where she is a resident fellow.

As an undergraduate, Lavik intended to study civil engineering. But the minutiae of cement dam construction left her cold, so she switched to materials science. She even started graduate school working on the same topic, but as interesting as it was, she feared her work would never change anyone's life. She wanted to do something that would have a bigger impact on the world.

Lavik was considering leaving MIT when by chance her mother set her on a new course. Flying home to Virginia from a visit to MIT, Mrs. Lavik found herself chatting about her daughter's predicament with her seatmate, who turned out to be Martha L. Gray, PH.D., the Edward Hood Taplin Professor of Medical Engineering and Electrical Engineering at MIT. "Mom called me up all excited and told me Martha Gray told her I should consider going into biomedical engineering, and think about biomaterials," Lavik remembers.

After talking to Gray, Lavik made the rounds of biomaterials labs at MIT. "It was clear that Bob's lab was Mecca," she says.

Taking a cue from a friend who worked on new treatments for spinal cord injuries, Lavik saw her chance to make a difference. Lavik envisioned using engineered tissue to replace broken pieces of spinal cord, reconnecting severed nerves and allowing patients to overcome their injuries.

She saw a chance to use what she knew about materials, but with little background in biology, Lavik was taking a big risk. Over the next five years, she created and tested polymer scaffolds, searching for the perfect structure to support the growth of neuronal stem cells and replicate the complex architecture of the spinal cord. The gamble paid off, and by 2002 Lavik had developed an implant that gave rats with severed spinal cords a full recovery. In 2003, that success earned Lavik a coveted spot among rising research stars when she was chosen as one of the MIT *Technology Review* magazine's top 100 innovators under 35.

Since coming to Yale in 2003, Lavik has continued using animal models to improve the spinal cord implant, but more work is needed. She is also finding ways to protect other types of neurons that can undergo injury or degeneration. Her lab is trying to make a replacement retina, and she is collaborating with researchers in Boston and Denmark on the controlled release of nerve growth factors into the eye to help preserve neurons at risk of dying. All these experiments are still in the animal testing stage.

Lavik remembers a demanding but encouraging environment in the Langer lab. "There is definitely a sense of sink or swim, but the upside is that we had incredible resources. I had no background in the field, and really no business doing this research, but Bob supported it financially and intellectually."

From Langer's example, Lavik said she realized that her work would be only as good as her students. She also saw clearly that her job is to facilitate their research. "I am blessed to have some of the best students I could possibly hope for, and the most important thing for me is to make sure they are well-funded and have the support they need to do the work they want to do."

The direction those students are now pursuing under her guidance addresses a problem at the center of tissue engineering. Lavik wants to find ways to create scaffolding for blood vessels. A vascular network is a critical step to making a template for engineering new tissues. "One of the reasons tissue engineering started with cartilage is that it's not very vascularized. The spinal cord, however, is a highly vascularized tissue. Our hope is that if we can start to make stable microvascular networks, we can use that as a basis for engineering other tissues," she explains.

"A lot of people have done beautiful work making microvascular networks, but it has been hard to make those networks stable," Lavik says. Recently, she figured out a way to do just that.

In the body, vascular cells normally live in close proximity to neuronal cells. It occurred to her that they might be helping each other out. She came up with the idea of using a mixture of neuronal stem cells and blood vessel endothelial cells to seed a 3-D scaffold. To make the scaffold, Lavik produced a water-soluble polymer that looked like a network of microscopic blood vessels. Then, she cast a more stable polymer around it. Finally she dissolved the first scaffold to leave a lacy network of pores in which endothelial cells and neuronal cells could interact to form a vascular bed.

In collaboration with Joseph A. Madri, M.D., HS '76, PH.D., professor of pathology and of molecular, cellular and developmental biology, Lavik started to grow cells on the

Another Langer disciple, Laura Niklason, is developing off-the-shelf blood vessels for use in the operating room.

scaffold. The researchers found that mixing neuronal stem cells and endothelial cells on the new support resulted in blood vessels that last up to 12 weeks, compared to just a few weeks for previous attempts. When they put the whole assembly under the skin of a mouse, the implant fused with the mouse blood supply, and they could watch under a microscope as blood filled the engineered vessels. Best of all, the blood was still flowing three months later.

An idea from the OR

Unlike her fellow Langer alumni, Laura Niklason did not start out as an engineer. She knew early on that she wanted to be a physician-scientist, and after completing an undergraduate degree in physics she went right into the M.D./PH.D. program at the University of Chicago. It was much later, while working in the operating room, that she decided to grow blood vessels for a living.

That was in January of 1995, after Niklason had moved to Boston for a residency in anesthesiology. In her spare time, besides caring for two small children, she joined the Langer lab as a postdoctoral research fellow. "I thought tissue engineering was the coolest thing in the world and I wanted to do that," she says.

The urge to grow arteries came directly from her clinical work. In the operating room, she would witness vascular and heart surgeons searching their patients for spare veins, often finding only vessels of very poor quality. "I'd think, gee, wouldn't it be great if we had some replacement vessels we could pull out of a jar?"

At the time, researchers were just starting to understand how to get blood vessel cells to form microscopic tubes in a petri dish. The Langer lab was the perfect place for Niklason to pursue her dream of growing whole arteries. Because he has such an outstanding track record and a large group, she explains, Langer can place many bets, starting new lines of research. And he is willing to make some very risky bets on new ideas, knowing that he needs only a few successes to keep the whole enterprise going.

"For me, that situation was wonderful. One day I walked into Bob's office and announced, 'I'm going to grow an artery.' He said, 'That's great, Laura. You do that.' "

It was a gutsy move for a young researcher, and the venture turned scary—the project yielded no results whatsoever for two years. But in the third year, Niklason discovered the trick of putting the blood vessel cells on polymer tubes in an incubator and nourishing them by pumping a blood-like nutrient solution through the tubes. By mimicking the natural forces that blood generates when it flows through vessels developing in the body, she had found a way to produce strong, supple artificial arteries. The homegrown vessels were comparable in strength to real arteries, and when she installed them in pigs, the blood flowed.

These are not the lacy microscopic networks of vessels that Saltzman and Lavik are working on, although Niklason is interested in those, too. What she's grown are sturdy tubes about the length of a pencil and only slightly thinner. These are the plumbing supplies for heart and other bypass operations when large, hardy vessels need to be replaced. Niklason launched a company in 2005 to develop the vessels for clinical use; the firm has produced fully human engineered arteries with "spectacular" properties, she says, which are now being tested in baboons.

Niklason's confidence was tested at Duke University, where she went after leaving Langer's lab. During her first years there she wrote 30 grant applications before accruing enough funding to run her lab. "I started to think, 'Well, maybe my ideas aren't very good after all, and maybe I really can't do this.' At that time Bob was very stalwart and kept telling me, 'Your ideas are very good, Laura, just keep working at it.' " Eventually, the money started coming in, and today she supports a lab of 12 researchers working on arteries and heart tissue.

Niklason joined the Yale faculty one year ago. The growing bioengineering group, together with what she calls the "world-class" VBT program, was a combination she could not pass up. Her current work involves collaborations with her BME colleague Themis Kyriakides, PH.D., assistant professor of pathology, and several VBT researchers, including program head William C. Sessa, PH.D., professor of pharmacology, and former head Jordan S. Pober, M.D. '77, PH.D. '77, professor of pathology, immunobiology and dermatology.

"Yale is unique in having a collection of people who all think about blood vessels on many different levels," she says. "What's more, they all talk to each other—that's absolutely unique in my experience, and was very important to my decision to come here."

"Of course, having other Langerites here was a draw, too," Niklason says with a laugh. She and Saltzman have worked together on several large grant applications to expand the research activities in the department. With Lavik, she has made a bond that never existed at MIT, even though they overlapped in the Langer lab for a year. "Bob's lab was so large, and since I was 'vascular' and she was 'neural,' we didn't intersect very often," Niklason says. At Yale the two meet frequently. With their shared experience and vision, they are not only upholding the Langer legacy but at the same time creating their own. **YM**

Pat McCaffrey is a freelance writer in Boston.

podcast

A podcast of Mark Saltzman and Laura Niklason speaking about advancements in biomedical engineering can be found on the Yale page on iTunes U. Visit itunes.yale.edu or launch iTunes, then select Yale from the offerings under iTunes U. The podcast is included under "Yale Engineering & Technology."

An honorary degree for a leading light in biomedical engineering

At Yale's 2007 Commencement, the university bestowed an honorary doctor of science degree on Robert S. Langer, SC.D., Institute Professor and the Kenneth J. Germeshausen Professor of Chemical and Biomedical Engineering at the Massachusetts Institute of Technology. Langer was honored for his unequaled contributions to biomedical engineering—more than 600 patents granted or pending in pioneering new technologies ranging from transdermal patches and microchips that deliver precise drug doses to "manufactured" muscle and organ tissues.

The Yale honor was the latest in a long line of accolades for Langer, 58, an innovator who was among the first to perceive the benefits of marrying engineering and biology. His work has shaped the fields of drug delivery, biomaterials and tissue engineering, the three main branches of biomedical engineering.

His scientific achievements are superlative. Election to one of the National Academies (Academy of Sciences, Academy of Engineering, Institute of Medicine and National Research Council) is a career-capping honor for many scientists; but in 1992, when he was 43, Langer became the youngest person in history to be elected to three. In 2002 he received the Charles Stark Draper Prize, considered the equivalent of the Nobel Prize for engineers, from the National Academy of Engineering. In 2005 he was named an Institute Professor at MIT, the highest honor bestowed by MIT faculty on one of their own.

A prolific inventor, Langer's enthusiasm and flair for licensing his inventions helped to destigmatize the notion that academic researchers could work with companies to translate their research into useful products. In addition, his lab is a premier training ground for new biomedical engineers. By his own estimate, more than 400 people have come through the lab since he came to MIT in 1977, and many of those have gone on to stellar careers in their own rights.

Behind the formidable résumé lies a person who is disarmingly humble about his own achievements and irrepressibly upbeat about his students. The secret of his success? "I just try to get really bright people into my lab, and give them all the support and encouragement they need," says Langer. Of his three Yale-based progeny, he says, "They are all terrific in different ways, and are all having great careers." He uses words like "super smart" and "super nice" and "terrific" to describe each of them, and then adds, "They are all people I'm very fond of."

Saltzman, Lavik and Niklason all give the impression that the feeling is mutual. Last July, Saltzman joined with other Langer lab alums to organize a tribute to their mentor. They put on a four-day symposium marking the 30th anniversary of Langer's seminal publication in *Nature* describing the use of polymers for drug delivery. The event drew more than 400 attendees.

"We started out to plan a casual get-together of people from the lab," Saltzman said. "But it was unbelievable how many people wanted the chance to publicly say 'thank you,' who were fighting for that chance."

At the gala, Niklason spoke about lessons learned in her time with Langer, and Lavik baked a decadent flourless chocolate torte for the honoree, who is known for his love of anything chocolate.

It was a well-deserved tribute, if a bit strangely timed, Saltzman said. "No one has had a bigger impact on the field than Bob, but this was a celebration you might expect for someone who is retiring or turning 80. But I don't believe Bob has hit his peak yet."

—*P.M.*

A busy but balanced life

When Hylton Mayer, M.D., HS '06, FW '07, was a student at the Medical College of Ohio, he participated in medical missions to Ecuador and Honduras. While he found the experience worthwhile, there was something unsatisfying for him about leaving the villagers with boxes of antibiotics "and then just flying away." He realized he wanted to specialize in a field of medicine where he could make a more lasting impact on patients' lives.

He chose ophthalmology because helping patients preserve and restore their ability to see met that standard. He also wanted to specialize in a field of medicine that wouldn't take over his life and leave him with no time for anything else. "Ophthalmology is reputed to have a reasonable lifestyle," he said. "I've always enjoyed balance in my life. I didn't want to be overwhelmed by work."

Which isn't to say that Mayer works the proverbial banker's

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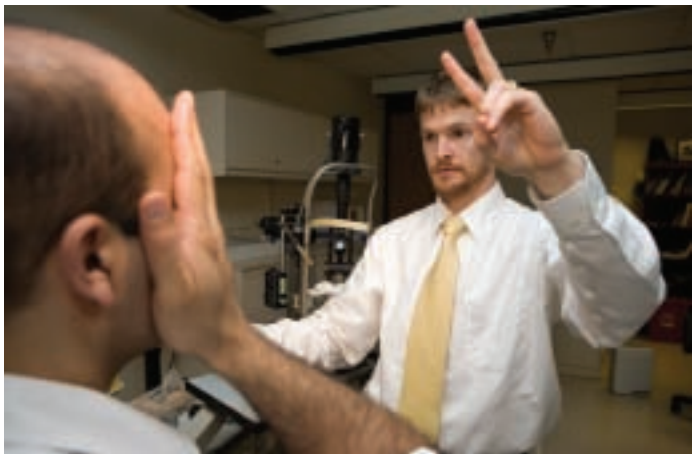
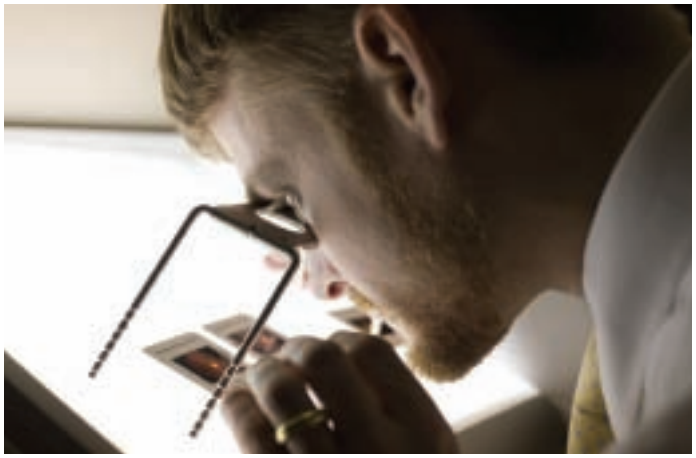
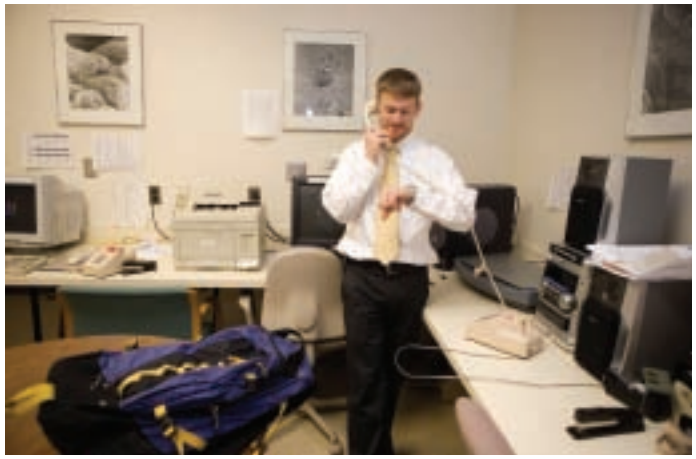
Taking the E-ROAD

A recent Yale graduate reflects on the desire of younger doctors for a fulfilling life outside of medicine.







By Jennifer Blair, M.D. '04
Photographs by Julie Brown

In my emergency medicine residency, we all share the jeopardy pager. Like a hot potato, it is passed among house staff who take turns hoping they won't be called in to replace a sick resident.

My colleagues know that I loathe the idea of doctors working while ill. In my world IVs are commonplace, but I think anybody sick enough to need one shouldn't come to work. I urge interns, who are uncertain of what may be forgiven, to call in sick if they must.

So my convictions were tested on a sunny fall Sunday when the jeopardy pager went off. One of the interns, a former orthopaedics resident who had switched to emergency medicine, called in sick with vomiting and diarrhea. As that day's "jeopardy" resident, I would have to work her shift in the pediatric ER. There went hiking, doing laundry and movie night. I drove to the hospital, reminding myself that she was just doing what I'd recommended.

When the shift ended, I called to see how she was. She apologized for her absence, but I had to tell her she'd done the right thing. What good is it to come to work, only to spread your germs around or run to the bathroom every few minutes? As a purely practical matter, how can you safely resuscitate a critically ill person while you are wracked by nausea and lightheadedness?

"I still feel this surgeon's guilt for not coming in," she confessed. "I worked through kidney stones when I was in orthopaedics."

I found that hard to believe.

"The attending told me he couldn't spare me. I took Motrin. I cried during the whole surgery. Then I went home and passed out on Percocet."

My colleague left her surgical residency to join ours in emergency medicine, along with five other former surgery and

Ophthalmologist Hylton Mayer spends his days seeing patients and performing eye surgeries. His chosen field permits a balanced life, he believes.

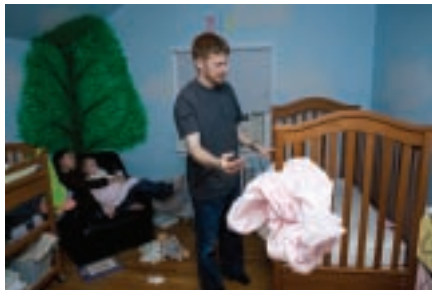
Ophthalmology allows Mayer time to spend with his wife, Patricia Seo-Mayer, and their daughter, Mia, 2.











hours. The day he spoke with *Yale Medicine* was his first day as an assistant clinical professor, so he was still waiting to see what his work schedule would be like. But prior to his new appointment, his days as a glaucoma fellow began at 8 a.m. (an hour earlier if he had a lecture or a meeting) and ended at about 6 p.m. He worked four days a week in the clinic and one in surgery.

On clinic days, he saw between 40 and 60 patients—new patients and others needing ongoing or postoperative care. He performed diabetes screenings and eye exams for patients (children and those with special needs) who needed to be under anesthesia. On his surgery day, Mayer typically performed six procedures, mostly for glaucoma, but also for cataracts.

"The hardest part was dealing with the unpredictable," he said. "Handling 30 patients a day isn't a problem, but if you had a difficult patient, or one who has lots of questions, it throws your schedule off."

Any wrinkle in the schedule can pose problems for Mayer, who is married with a 2-year-old daughter named Mia. Two days a week a nanny comes to the house to care for Mia; the other three days she goes to daycare. On those days, either Mayer or his wife, Patricia Seo-Mayer, picks her up, depending on whose workday is more manageable. Seo-Mayer, a pediatric nephrologist, divides her time between clinical duties and research, which involves studying the kidney damage that occurs in low-oxygen settings, such as after serious surgery or an infection. On research days, she can usually pick Mia up, but when she's at the hospital, the job frequently falls to Mayer.

It's not just the frequent need to relieve the sitter or pick up Mia from daycare that makes Mayer grateful for a predictable workday. "One of my favorite parts of the day is when I come

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family practice residents who have begun a new residency in our group of 48. She is part of a trend that has been noticed primarily among medical students: in growing numbers, they are choosing "lifestyle" specialties.

"E-ROAD" stands for emergency medicine, radiology, ophthalmology, anesthesiology and dermatology. These are part of a group of medical specialties that offer a "controllable lifestyle" by allowing physicians greater ability to control the amount of time spent on clinical duties. A dermatologist may be able to arrange a weekday 9-to-5 schedule (or something close to it), since there aren't many nighttime derm emergencies. Emergency medicine is shift work, and though frequent moves between nights and days play havoc with one's sleep schedule, the field does allow docs to work only as many shifts as they feel they can manage. Compare that with family practice, obstetrics or general surgery, all of which may require the practitioner to come to work unexpectedly and to toil exceptionally long hours to maintain a viable practice.

The trouble with the E-ROAD is that the areas of medicine that most need new physicians are not in the "lifestyle" group. Medical leaders have long recognized a shortage of primary care physicians, or those trained in general internal medicine, family practice and pediatrics. As early as the 1980s, articles were appearing in the medical and surgical literature calling physicians' attention to this disturbing trend. More recently, in 2006, the American College of Physicians called for "a national health care work force policy ... to reverse the impending collapse of primary care medicine." At the Yale School of Medicine, the number of graduates choosing E-ROAD specialties rose from 17 in 1997 to 34 this year. During that same time period, the number of graduates specializing in internal medicine, pediatrics and family medicine dropped from 36 to 22.

These numbers mirror a national trend. A 2003 study in *JAMA: The Journal of the American Medical Association* revealed that the percentage of medical students entering primary care declined from 49.2 percent in 1987 to 44.2 percent in 2002. Of that group, many who train in internal medicine do so with the intent to specialize, not to open an office-based general practice. These numbers are bad news. The Council on Graduate Medical Education estimates a deficit of tens of thousands and as many as 197,000 generalists by 2020, out of a total projected number of roughly a million full-time equivalent docs (there were 781,200 full-time equivalent docs in the United States in 2000). There have been efforts to encourage students to choose primary care careers, with strategies ranging from debt forgiveness to improving academic generalists' schedules. But the dissatisfaction of primary care doctors is growing, and this is not lost on students. The trend has progressed so far that it is unclear who will be providing basic care for coming generations of children, adults and especially the elderly. Aging baby boomers will require generalists who are well-versed in the long-term care of multiple diseases, but it is beginning to look as if specialists will be managing them by organ system, with no one physician coordinating overall care.

"People are using the word 'crisis' to describe what's happening in primary care medicine," says Greg A. Sachs, M.D. '85, chief of geriatrics at the University of Chicago until August, when he became chief of general internal medicine and geriatrics at Indiana University. "We're very worried about where our trainees are coming from."

Asghar Rastegar, M.D., professor of medicine (nephrology) and associate chair of the Department of Internal Medicine at Yale, points out that medicine is defined as a profession because it has made a social contract with the public. "If our profession does not honor that contract, the public will rewrite the contract," he warns.

But laments and lambasting alone will not reverse the trends of the last few decades. Doctors have traditionally been willing to work long hours at the cost of personal and family time, perhaps because there are ethical rewards and societal respect that come with doctoring. The postwar "golden age" of medicine, when health care expenditures grew faster than the number of doctors did and doctors enjoyed a great deal of decision-making autonomy, has faded, for better or worse, in the face of a changing health care system.

Another article in *JAMA* in 2003 was one of several that elucidated the principal factors that make doctors miserable: not only long work hours, but also decreasing autonomy, more time pressure and difficulty in maintaining high-quality care. Today's pressure to see more patients in less time, the diminished freedom of action that has accompanied managed care and reimbursements for *thinking* that are far less than for *doing* (an internist who decides upon a treatment strategy earns much less for his trouble than the gastroenterologist who scopes the patient, for example) have begun, perhaps, to alter students' ambitions. What has always been a difficult

job has become increasingly thankless, and students are quietly rebelling.

"About 20 years ago," says Peter N. Herbert, M.D. '67, HS '69, senior vice president and chief of staff at Yale-New Haven Hospital, "I was sitting at the dinner table with my four kids, and I said to them, 'Who would like to go into medicine?' And they answered almost as a chorus, 'Not me!' I asked them why, and they said, 'We don't want to live like you.' "

Sachs muses, "I think that unfortunately things like [students'] debt, what they see happening in terms of career options, reimbursement, NIH funding, et cetera—those are things that are shaping people. How much of it's a generational thing in terms of how much people want out of it, I'm not sure. People want more defined hours. If I was coming out of medical school with $120,000 in debt, I don't know if I would have made the same choices. ... The amount of debt I had is nothing compared to what people have these days."

Thomas P. Duffy, M.D., professor of medicine (hematology) at Yale, readily acknowledges that heavy debt handicaps today's graduating medical students. Still, he criticizes their financial aspirations. "Some medical students' expectations [are] now to achieve upper-class lives shortly after graduation from medical school. The amounts of money that can be made in dermatology and plastic surgery are a temptation that many people cannot resist," he says. "The need for luxury is more urgent in the current generation than it was in mine."

A crisis in primary care

Though they may disagree about students' motivations, nobody questions the fact that the primary care shortage is serious. But how do students' preferences for "lifestyle" specialties affect the way they care for patients? Overwork and frequent overnight call are often mentioned as repellent factors in primary care medicine. Growing evidence suggests that residents who are forced to neglect personal needs such as adequate rest may be doing patients a grave disservice. A recent Harvard study, published online in December 2006 in the journal *PLoS Medicine*, found that residents who were more frequently on call reported committing an increased number of medical errors that resulted in harm to a patient. Sleep-deprived workers have been likened to drunk drivers with regard to neurobehavioral abilities—according to research published in *Nature* in 1997, 24 hours of wakefulness causes impairment comparable to a blood alcohol level of 0.10 percent.

Whether impairment by fatigue actually outweighs the benefits of "continuity of care"—being cared for by the same physician hour after hour, thereby avoiding the errors inherent in handoffs to other physicians—has not been formally examined. There is no universal consensus on this topic. "The patients often feel that nobody is conducting the orchestra," says Herbert. "They see a dizzying array of subspecialists to deal with each of their individual problems, but they often feel that nobody is prioritizing the problems. ... Something major has been lost." Rastegar agrees. "Continuity of care," he says, "is probably more important than physicians being 'well-rested.'"

After all, medical students, residents and doctors are used to pushing through fatigue and a lack of enthusiasm. That's what we do. That's how we come out at the top of our high school classes, ace chemistry and physics in college and survive the demands of med school. That's how we drag ourselves away from a half-hour nap in the middle of a 30-hour call to answer a page. We *can* do it. The question is, *should* we? Do mental and physical fatigue make us worse doctors? I'm convinced of it. It has long seemed clear to me that sleep deprivation must be as dangerous to doctors as it is to pilots and truck drivers. But not everyone is so sure that work-hour reforms, such as the 80-hour work week introduced in 2003 by the Accreditation Council of Graduate Medical Education, produce better physicians.

"[When] I was a resident," Sachs recalls, "we were on call every third night. We got one day off every three weeks, always on Sunday. You stayed until your work was done, even post-call. If you had a patient you admitted at 2 a.m. and they crashed 2 p.m. post-call, you admitted them [to the ICU]. I hated that. I thought it was pretty barbaric and inhumane. I think it clearly needed to change. I'm glad that it has. There need to be the sorts of things that allow people to have a life—I certainly didn't have a life when I was a resident.

"But people's expectations have also changed. Despite how 'good' they have it [compared with] what I went through, people still manage to complain bitterly about how hard they're working, how many hours they're working and those sorts of things. I have concerns about how patient-centered and how devoted they are to their patients. [I don't know] whether it's changes in training, changes in attitudes or the indebtedness that's shaping people's choices. It's hard to find people who are turned on by the notion that 'this is my

patient, I'm there for them, I put that first, even if that means a lot of inconveniences for me and my family.' "

A life in medicine takes its toll

Yale is not particularly noted for turning out primary care doctors, though every year a number of students do choose this path. Three recent classes have produced a total of seven residents bound for family practice, 25 for pediatrics (and six more for medicine/pediatrics) and 19 for internal medicine/primary care. That's about a fifth of the students who graduated between 2004 and 2006. By comparison, the top primary care med schools, like the University of Washington and the University of North Carolina at Chapel Hill, boast an almost 50 percent primary care graduate rate, according to *U.S. News and World Report*. (Yalies are no exception to the tendency to seek out E-ROAD specialties: the Class of 2004 had 12 students bound for dermatology, a specialty which offers only about 300 positions each year to the nation's 15,000-plus medical graduates.)

Kristen Sueoka, M.D. '07, is headed for internal medicine/primary care. She chose her field because she wants to focus on patient education and preventive medicine, as well as the management of chronic disease. "I really liked everything I rotated through, and dabbled with the idea of being a surgeon. But it seemed a little too painful a specialty in terms of the training," she said.

What about being on call?

"I feel like it's something that I was aware of when I signed up for the job in the first place."

Yet Sueoka is interested in the psychological toll that a life in medicine can exact. "I think you're a better doctor if you have a life outside the hospital, if you have outlets for stress, frustration and the emotional issues you encounter at work. One of the best ways to improve medicine, decrease the number of mistakes, decrease the fact that doctors have higher rates of suicide and substance abuse than the general population, is to try to encourage doctors to be well-rounded instead of being married to their career. I think that truly does make for better doctors and better patient care. ... The attempt at selflessness really hurts both doctors and patients more."

Finding a balance

Aisha Sethi, M.D., HS '06, a University of Chicago dermatologist, went to medical school in Pakistan and chose dermatology after seeing the skin manifestations of leishmaniasis, hemorrhagic fever and other illnesses. "Lifestyle was definitely an important factor in my choice—with having the daily opportunity to perform procedures, but not having to stay in the OR for long hours. I absolutely love it. I could not imagine myself doing anything else. It's got the lifestyle I expected."

Her typical day in academic dermatology? "I have clinic all day with one or two residents with me. I get some time off during the week for academic purposes, so I can attend conferences in other departments. I am also the associate residency program director, so I'm working on curriculum development for the residents. On weekends I mostly work on manuscripts I have in progress or go in to the hospital and catch up on biopsy results. When I'm on consults for the month, one to two months a year, then I go in and see consults. With any specialty you can make it as busy or as relaxed as you want. It's always a balance."

A Yale-trained geriatrician is finding her own version of that balance. Caroline N. Harada, M.D. '01, completed a geriatrics fellowship at the University of Chicago, where she is now on the faculty. She says lifestyle did not play a large role in her decision to enter primary care, but she admits that as an academic geriatrician she probably has an easier call schedule and better support than her colleagues in the community.

"There aren't that many geriatricians out in the community, because in private-practice geriatrics it's hard to make a living. Medicare reimburses by the number of patients seen, not by time, and interviews [with elderly patients] can take a long time."

I asked her if she'd noticed a difference in attitudes about medicine between older generations of docs and doctors of her own generation.

"I'm too young to say. Geriatrics is such a young field that there aren't a lot of old geriatricians," she said. "I think because geriatricians approach things from a very interdisciplinary background, we understand that the biopsychosocial model of medicine applies to everyone, all of us. You've got to put a person in their context. Doctors as much as patients have a context. If that's not appreciated and recognized, then you aren't dealing with the full person."

Are patients better served by physicians who feel this way?

"It's good for patients, because I don't think well when I'm tired. I don't think well when I'm preoccupied with something at home, or need to be in two places at once. When I'm here at work, I try to be 100 percent here. As long as you have

home and get to play with her. We love going to the park," he says. When Seo-Mayer works late, he also feeds Mia dinner and makes her lunch for the next day.

Between work and being with Mia, Mayer doesn't have a lot of time for hobbies, but one passion he does indulge is soccer. He's played most of his life, including competing in Division III soccer in college. These days he tries to get to as many pickup games near the Yale Bowl as he can. "It's a great cosmopolitan collection of players from all over the world and walks of life," he says. "I love playing."

When Mayer is treating patients, walking to the park with Mia or suiting up for a soccer game, he knows ophthalmology was the right career choice for him. "Sure, it's easy to become enamored by the drama and high intensity of some specialties," he says. "It gives you a rush, but I was willing to give up that rush. In the long run, it wasn't that satisfying to me."

He also knows that any field of medicine can become all-consuming, but he's confident that as an ophthalmologist, it will be easier for him to live a balanced life than it would be in many other specialties. "I'm just on the doorstep of my attending career, so I'm anxious to see how it works out, but so far I'm very pleased," he said.

—Jennifer Kaylin

an intelligently designed schedule where there's always somebody on call to address patient concerns and take care of emergencies, patient care doesn't have to be compromised by allowing doctors to have a decent lifestyle and personal time."

A lifestyle within a lifestyle

My residency in emergency medicine is over, and I'm working at an academic emergency department in a Chicago hospital. Teaching residents in an urban setting is important to me. But there was another *sine qua non* in my job search: I must work part-time. After years of topsy-turvy schedules, of rushing home to choose between eating and exercising in the one hour before bed, of wrenching myself from sleep rather than waking naturally and fully rested, of mentally prodding myself through many hungry, discouraging shifts, I was tired. So tired that tendrils of resentment crept into my thoughts about my career in medicine. Fantasies of leaving the field began to take on unsettlingly realistic detail. Yet I think these were the symptoms of fatigue, not of a mistaken choice. I was anxious to prevent these feelings from flourishing into full-blown burnout. One might say I chose a "lifestyle job" within a lifestyle specialty.

I rather thought that those feelings might arise. That is why I chose Yale Med. The Yale system, which treats medical students like graduate students who can be trusted to organize their own learning, allowed me space to ponder, grow up a little and study medicine that interested me in addition to the requirements. Rather than learning to equate medicine with drudgery, I graduated with my passion intact. Residency, though, saw it wane. I can cultivate it again because I've chosen a specialty that will let me. My patients, I think, deserve to have a rested, enthusiastic and well-read doctor. Anyone who has had a kidney stone, or has watched someone having one, will perhaps grasp not only the brutal indifference of a culture that does to its members what it did to my colleague, but also the folly of a medical system that tends to ignore the basic needs of physicians. There may not be a simple solution to the crisis in primary care, but it seems likely that students will continue to choose specialties that acknowledge them, not only their patients, as human beings. "Physician, heal thyself." We will need, I think, to heal one another. YM

Jennifer Blair, M.D. '04, finished her residency in emergency medicine at University of Chicago Hospitals in June 2007. She now works at Mercy Hospital in Chicago.

Thomas Steitz

Becca Levy

Hal Blumenfeld

Lawrence Moss

John Persing

Robert Schultz

Ribosome scholar receives Gairdner Prize

THOMAS A. STEITZ, PH.D., Sterling Professor of Molecular Biophysics and Biochemistry, professor of chemistry and a Howard Hughes Medical Institute investigator, was among five scientists honored in April with the 2007 Gairdner International Award to recognize their contributions to medical science. The Gairdner Foundation honored Steitz and Harry F. Noller, PH.D., of the University of California, Santa Cruz, for pioneering work that led to the identification of the detailed structure and function of the ribosome, the subcellular structure in which proteins are synthesized. Steitz and Noller identified that RNA-catalyzed reactions are critical, and their work explains how many antibiotics operate and how new ones can be developed.

Steitz uses X-ray crystallography and molecular biology techniques to establish the structures and mechanisms of the proteins and nucleic acids involved in gene expression, replication and recombination. In 2000, Steitz and colleagues published two articles in the journal *Science* in which they unveiled the basic structure of the ribosome. Their work provided the first unequivocal proof that the ribosome is a ribozyme, an RNA enzyme. Steitz and his colleagues used a high-energy X-ray beam to probe fragile crystals of RNA and protein and produce detailed images of the ribosome, where amino acids are linked to form chainlike proteins.

In more recent experiments, Steitz and his team have been studying antibiotic resistance. Their research has shown how the main target of antibiotics in bacterial cells becomes resistant to some medications. The findings are already leading to new experimental antibiotics that are being engineered to circumvent resistance, which is a major worldwide health problem.

Each Gairdner awardee will receive $30,000 in October in Toronto. The awardees are chosen by two advisory committees made up of leading medical scientists from Canada and around the world.

According to the Gairdner Foundation, 68 of the 283 scientists who have received the award in the past 48 years have gone on to win the Nobel Prize. Last year, the award went to two Yale scientists. JOAN A. STEITZ, PH.D., Sterling Professor of Molecular Biophysics and Biochemistry and a Howard Hughes Medical Institute investigator, was honored for her discovery of snRNPs, 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, was 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. In 2004, 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.

Special advisor leaves dean's office post

LAWRENCE S. COHEN, M.D., HS '65, the Ebenezer K. Hunt Professor of Medicine, has stepped down after 16 years in the dean's office but will continue as a faculty member and practicing cardiologist. As deputy dean from 1991 to 1997, then as special advisor, his responsibilities ranged from overseeing faculty appointments and promotions to raising money for endowed professorships to investigating scientific misconduct and fraud.

Cohen came to Yale in 1958 as an intern, following undergraduate studies at Harvard University and medical school at New York University. Twelve years later, after stints in Baltimore, Boston, Bethesda, Md., and Dallas, he returned to Yale as chief of cardiology.

In 1991 Cohen was appointed deputy dean of the medical school by then-Dean Leon Rosenberg, M.D. He continued in that position under Rosenberg's successor, Gerard N. Burrow, M.D., and as special advisor to former Dean David A. Kessler, M.D., and Dean Robert J. Alpern, M.D.

Lawrence Cohen is congratulated by a colleague during a ceremony honoring him in May.

Two Yale scientists have received Investigator Awards from the Patrick and Catherine Weldon Donaghue Medical Research Foundation for Health-Related Research this year. These awards will fund studies about the way the elderly see themselves, as well as new treatments to help people continue to drive. Each researcher will receive $600,000 over five years.

Becca R. Levy, PH.D., associate professor of epidemiology (chronic diseases) and psychology, will conduct a randomized controlled trial aimed at increasing behaviors that promote good health in older individuals.

Hal Blumenfeld, M.D., PH.D., associate professor of neurology, neurobiology and neurosurgery, will study patients using driving simulators during epileptic seizures. While patients are "driving," neuroimaging and electrical measurements will help determine the brain regions involved in epileptic seizures and how seizures cause loss of consciousness.

Three appointments to endowed professorships were announced in May. **R. Lawrence Moss**, M.D., has been named the Robert Pritzker Professor of Pediatric Surgery. **John A. Persing**, M.D., has been named the Irving and Silik Polayes Professor of Plastic Surgery. **Robert T. Schultz**, PH.D., was appointed the Harris Associate Professor of Psychology and Child Psychiatry.

Moss specializes in general, thoracic and laparoscopic children's surgery, neonatal surgery and the separation of conjoined twins, as well as extracorporeal membrane oxygenation. He is surgeon in chief at the Yale-New Haven Children's Hospital and

Paul Cleary

Vincent DeVita Jr.

Daniel DiMaio

Arthur Horwich

chief of pediatric surgery at the School of Medicine. He also serves as program director of the School of Medicine's Fellowship in Pediatric Surgery. He joined the Yale faculty in 2002 after teaching at the University of New Mexico in Albuquerque and the Stanford University Medical Center.

Persing specializes in craniofacial surgery, with a particular interest in craniosynostosis, the premature fusing of cranial sutures, which often results in abnormal brain and skull growth. His clinical and research interests also include the treatment of craniofacial trauma; vascular malformations of the head and neck; cranial base tumors; and disorders of the brachial and lumbar plexuses and peripheral nerves. Persing joined the Yale faculty in 1992 as a professor of plastic surgery and neurosurgery and chief of the Section of Plastic Surgery, and as chief of plastic surgery at Yale-New Haven Hospital.

Schultz focuses his research on the biological bases of autism spectrum disorders. The director of the Yale Developmental Neuroimaging Program, Schultz also studies genetic forms of mental retardation, such as Williams syndrome, and a variety of other childhood psychiatric disorders. Schultz uses structural and functional magnetic resonance imaging (fMRI) and detailed neuropsychological assessments to study brain anatomy and function in these disorders. Using fMRI, he and his colleagues are also mapping brain systems involved in the perception of human faces, facial expressions and inferences of social attribution in patients with autism and Williams syndrome. Schultz came to the Yale Child Study Center in 1994 on a fellowship. He is currently affiliated with both the Child Study Center and the Department of Diagnostic Radiology.

Paula A. Armbruster, M.S.W., associate clinical professor in the Child Study Center, has been named *Cambridge Who's Who* Professional of the Year in Child and Adolescent Mental Health. Only one member in each discipline is named Professional of the Year. A selection committee selects *Who's Who* honorees based on accomplishments, academic achievement, leadership and service. Armbruster has served on national and local boards, committees and task forces for child mental health, including school-based services, Medicaid managed care and licensing for child outpatient psychiatric services.

Christopher K. Breuer, M.D., assistant professor of surgery (pediatrics) and pediatrics, has received a Doris Duke Charitable Foundation Clinical Scientist Development Award, marking the first time a Yale faculty member has received this award. The foundation provides grants to junior physician-scientists to facilitate their transition to independent clinical research careers.

Paul D. Cleary, PH.D., dean and C-E.A. Winslow Professor of Epidemiology and Public Health in the Department of Epidemiology and Public Health, was elected to the Connecticut Academy for Science and Engineering in May. The academy was established in 1976 by the Connecticut General Assembly to identify and study technological issues and advances of concern to the citizens of Connecticut. Cleary's recent research includes a study of how organizational characteristics affect the costs and quality of care for persons with AIDS; a national evaluation of a continuous quality improvement initiative in clinics providing care to HIV-infected individuals; the development of Web-based decision tools to improve cancer care decision making; and a study of the long-term impact of patient-centered hospital care.

Vincent T. DeVita Jr., M.D., the Amy and Joseph Perella Professor of Oncology at the Yale Cancer Center (YCC), was presented with a Statesman Award by the American Society of Clinical Oncology at its annual meeting in Chicago. The award pays tribute to members whose work has contributed to the betterment of the society. This year, the award gives special recognition to outstanding past achievement. Director of the YCC from 1993 to July 2003, DeVita currently serves as chair of the YCC Advisory Board. He spent the early part of his career at the National Cancer Institute (NCI). In 1980 he was appointed director of the NCI and the National Cancer Program, a position he held until 1988.

Daniel C. DiMaio, M.D., PH.D., has been named scientific director of the Yale Cancer Center (YCC). DiMaio will have broad oversight of all basic science research within the YCC. He is currently vice chair of the Department of Genetics, the Waldemar Von Zedtwitz Professor of Genetics and professor of therapeutic radiology. As part of his new responsibilities, he will chair the YCC Scientific Steering Committee, whose mandate is to recommend expenditures of funds for scientific recruitment and programmatic enhancements. He will also oversee the Basic Science Research Program Division.

Bernard G. Forget, M.D., professor of medicine (hematology) and genetics, is one of 10 Yale faculty members named fellows of the American Academy of Arts and Sciences. Forget researches the mechanisms of normal and abnormal gene expression during red blood cell differentiation. Fellows are scholars and practitioners of disciplines ranging from mathematics, physics, biological sciences, social sciences, humanities and the arts to public affairs and business. The newly elected fellows will be inducted at a ceremony in October at the academy's headquarters in Cambridge, Mass.

Arthur L. Horwich, M.D., HS '78, the Eugene Higgins Professor of Genetics and Pediatrics and a Howard Hughes Medical Institute investigator, received the Wiley Prize in Biomedical Sciences in April for his contributions to the understanding of how proteins fold. He was honored along with Franz-Ulrich Hartl, M.D., DR.MED., of the Max Planck Institute of Biochemistry in Germany. Over the last 17 years, Horwich and Hartl's labs have helped explain how proteins are transformed from chains of amino acids to three-dimensional structures whose shape determines their function. The prize is given by the Wiley Foundation, which was


Arthur Levy


Charles Lockwood


Gil Mor


Gerald Shulman

established in 2001 by John Wiley & Sons, a 200-year-old publisher of scientific, technical and medical books and online services.

Carol H. Lee, M.D., professor of diagnostic radiology and chair of the Breast Imaging Commission of the American College of Radiology, was named the second leading Women's Imaging Specialist in the April 2007 issue of *Medical Imaging* magazine. The second annual *Medical Imaging Industry Top 10* honors professionals whose knowledge is incorporated into practice—improving the lives of people with cutting-edge techniques, industry interaction and problem-solving abilities.

Arthur L. Levy, M.D., associate clinical professor of medicine and nursing, has been appointed medical director for medical oncology. Levy will oversee clinical activities in the medical oncology practice at the Yale Cancer Center (YCC). In addition to his administrative and leadership roles at the YCC, Levy will be actively involved in the training and education of medical students, house staff and fellows. As part of this role, he will continue to care for cancer patients with a wide range of diseases, including lymphoma and other hematologic malignancies as well as solid tumors. Before joining the YCC Levy was a medical oncologist in private practice in New Haven for 30 years. He is the author or co-author of numerous articles, book chapters and reviews, including several on hematologic malignancies.

Charles J. Lockwood, M.D., the Anita O' Keefe Young Professor of Women's Health and chair of obstetrics, gynecology and reproductive sciences, has been named president of the Society for Gynecologic Investigation (SGI) for the 2007–2008 term. The SGI is the world's leading research organization in reproductive sciences. Lockwood will preside over the society's 2008 annual meeting in San Diego with **Hugh S. Taylor**, M.D., associate professor of obstetrics, gynecology and reproductive sciences and of molecular, cellular and developmental biology, who will serve as the meeting's program director. Lockwood served as SGI president-elect in 2006–2007 and previously served as SGI secretary-treasurer.

Bernard Lytton, M.B.B.S., the Donald Guthrie Professor Emeritus of Surgery/Urology, was elected president of the American Association of Genitourinary Surgeons in April. The term is for one year.

Cindy R. Miller, M.D., associate professor and co-section chief of pediatric imaging in diagnostic radiology, received the Jack O. Haller Award for Excellence in Teaching from the Society of Pediatric Radiology (SPR) in April. The award is given in memory of Haller, who excelled as an educator, mentor and author. The SPR is dedicated to leadership in advancing pediatric health care through medical imaging and image-related therapy.

Gil Mor, M.D., PH.D., associate professor of obstetrics, gynecology and reproductive sciences, received the J. Christian Herr Award from the American Society for Reproductive Immunology in May. The award is given annually to a person who has made outstanding achievements in basic or applied research in reproductive immunology, particularly for investigators involved in technology transfer.

Clarence T. Sasaki, M.D., the Charles W. Ohse Professor of Surgery and chief of the Section of Otolaryngology, has been named president of the American Broncho-Esophagological Association (ABEA), after three years as the association's treasurer. The ABEA's multidisciplinary membership supports research related to diseases of the vocal tract, hypopharynx and esophagus.

Robert S. Sherwin, M.D., the C.N.H. Long Professor of Medicine, received the Banting Medal for Scientific Achievement from the American Diabetes Association (ADA) at the organization's 67th Scientific Sessions in Chicago in June. The Banting Medal honors an individual who has made significant long-term contributions to our understanding of diabetes, its treatment and/or prevention.

Warren D. Shlomchik, M.D., associate professor of medicine and immunobiology, received a Clinical Scientist Award in Translational Research from the Burroughs Wellcome Fund in March. The $750,000 award supports established physician-scientists who are dedicated both to mentoring physician-scientist trainees and to translational research. Shlomchik studies graft versus host disease and graft versus leukemia in allogeneic stem cell transplantation.

Gerald I. Shulman, M.D., PH.D., professor of medicine (endocrinology) and of cellular and molecular physiology and a Howard Hughes Medical Institute investigator, was one of 72 new members elected to the National Academy of Sciences in May in recognition of their distinguished and continuing achievements in original research. Those elected, including 18 foreign associates, bring the number of active members to 2,025. Shulman is known as an expert on diabetes. His lab group examines insulin resistance in patients with diabetes and in transgenic mouse models. The lab's long-term objectives are to elucidate the cellular mechanisms of insulin resistance and to identify new therapeutic targets to reverse insulin resistance in patients with type 2 diabetes.

Robert I. White Jr., M.D., professor of diagnostic radiology, has been inducted into the Johns Hopkins Society of Scholars for his work in the fields of radiology and cardiology. The society inducts former postdoctoral fellows and junior and visiting faculty at Johns Hopkins who have distinguished themselves in the sciences or humanities.

SEND FACULTY NEWS TO
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The Class of '07

JOHN CURTIS (2)

ABOVE From left, Maria Mazzeo, Arianne Boylan and Lauren Krause marched toward Old Campus for the university's ceremony.

RIGHT From left, Kristin Sueoka, Joshua Shofner and banner-bearer Karen Morris-Priester waited for the start of the procession to Old Campus.

Neurosurgeon Ben Carson offered the Commencement address.

Phoebe Koch carried her 1-year-old son, Oak, onto the podium to receive her diploma from Dean Robert Alpern.

TERRY DAGRADI (2)

From the inner city to Yale and neurosurgery

Benjamin Carson, M.D., told graduates that hardship can be a good thing.

An elite neurosurgeon born in crushing poverty, Benjamin Carson, M.D., told the Class of 2007 how learning transformed his life and urged the graduates to use their education to transform society.

Carson, selected by the graduating class of 86 new physicians as their Commencement speaker, is director of the Division of Pediatric Neurosurgery at Johns Hopkins Children's Center and a former fellow of the Yale Corporation. He performed the first successful separation of twins joined at the back of the head and has written several popular books, including his autobiography, *Gifted Hands*. Carson shared some of that life story, beginning with his humble origins and continuing through his education at Yale College and eventual rise to a position of prominence in medicine.

Carson was a badly behaved, low-achieving elementary school student until his mother, who had only a third-grade education, began assigning him twice-weekly book reports. Her strategy worked, and Carson became an excellent student, only to backslide in high school because of peer pressure. "Peers, that's Persons who Engage in Errors, Rudeness and Stupidity," he joked. His mother quickly got him back on track.

Carson credited the struggles of his childhood in inner-city Detroit for his perseverance. "It puts fire in your belly. Hardship is a good thing," he said.

He now has CEOs and royalty come from around the world for consultations. "Every single one of them would have gladly given every title and every penny for a clean bill of health," he said. The physician's power to restore health is cause for humility, not pride, he continued. "It doesn't make us special, but it makes us incredibly privileged."

Carson's success spurred him to create the Carson Scholars Fund with his wife, Candy. The nonprofit organization gives cash awards and development opportunities to outstanding students in grades 4 through 11, with scholarships awarded for attendance at four-year colleges and universities upon the students' graduation from high school.

Society is plagued by problems that "we in the medical profession have some of the tools to solve because we are the most highly educated people in society," Carson said. He urged the class to be active in their own communities and to be a voice on such national issues as the 47 million Americans living without health insurance. "How can we abide that?" he asked.

Several faculty members received teaching prizes at the ceremony. The Bohmfalk Teaching Prize went to Fred Gorelick, M.D., professor of medicine and cell biology, for basic science teaching, and to Jessica L. Illuzzi, M.D., assistant professor of obstetrics, gynecology and reproductive sciences, for clinical teaching. The Leah M. Lowenstein Award was given to Vincent J. Quagliarello, M.D., professor of medicine, and to Karen Santucci, M.D., associate professor of pediatrics. Hal Blumenfeld, M.D., PH.D., associate professor of neurology, neurobiology and neurosurgery, received the Francis Gilman Blake Award. Damani Piggott, M.D., PH.D. '03, HS, received the Betsy Winters House Staff Award. The Leonard Tow Humanism in Medicine Award was given to Majid Sadigh, M.D., associate professor of medicine. Leo M. Cooney Jr., M.D., the Humana Foundation Professor of Geriatric Medicine, received the Alvan R. Feinstein Award for outstanding teaching of clinical skills.

The class gift will be split between the Society of Distinguished Teachers, a program that supports excellence in the school's teaching mission, and beautification of the patio outside Marigold's, the medical school's cafeteria.

—*Colleen Shaddox*

JOHN CURTIS (3)

TOP From left, Rina Dhopeshwarkar, Michelle Gubatina, Saki Miwa, Anne Reiner and Cynthia Tsai posed for a photo before Commencement.

MIDDLE From left, Sonia Lee, Elizabeth Lutzker, Katherine Johnson and Joshua Rosenzweig in the procession to Commencement at Old Campus.

BOTTOM Dean Paul Cleary with Commencement speaker Julie Gerberding, head of the Centers for Disease Control and Prevention.

Learning, collaboration and engagement are essential, CDC chief tells EPH grads

In an increasingly interconnected world, public health networks are vitally important, Commencement speaker Julie L. Gerberding, M.D., M.P.H., told public health students during Commencement ceremonies in Battell Chapel on May 28.

Gerberding, the director of the Centers for Disease Control and Prevention (CDC), described four qualities that will foster these networks. She said that in order to answer urgent questions, men and women in the field of public health will need the "fast science" that can result from integrated scientific platforms and collaborations. Public health professionals should share ideas across disciplines to create a marketplace of ideas. "We must talk not just to each other," she said, adding that public health practitioners need to engage people at all levels of society. "We're used to doing everything from the top down," said Gerberding. "That isn't going to work anymore." Finally, CDC's core values of respect, integrity and accountability should be incorporated into the work of public health at all levels.

Gerberding told the 119 graduating master's-degree candidates, faculty and guests that she believes that "every life is equally valuable" and that we should continue to learn every day. "You have a privilege," she said. "You have graduated from a university that will open doors for you."

Officiating at his first Yale graduation, Dean Paul D. Cleary, PH.D., presented the 2007 Award for Excellence in Teaching to Robert Dubrow, PH.D., M.D., associate professor of epidemiology and public health. Dubrow said that any celebration of public health in 2007 "must be tempered by the catastrophe of the war in Iraq," which "represents a public health disaster on many levels." Peace, Dubrow said, is an essential condition for human well-being.

Student speaker Lubna Tanveer Shamsi, M.P.H. '07, spoke with gratitude of the public health initiative of a classmate, Anant C. Shah, M.P.H. '07, who petitioned the city for improved pedestrian safety after Shamsi was struck by a car near campus.

Prizes awarded to graduating students included the Dean's Prize for Outstanding M.P.H. Thesis, to Martin Anderson, Anne Reiner and David Thomas; the Henry J. (Sam) Chauncey Jr. Inspiration Award, to Seamus Collins; and the Cortlandt Van Rensselaer Creed Award, to René Herbert.

—*Cathy Shufro*

BELOW Neil Vason, accompanied by a chorus, sings "The System of Yale."

BOTTOM Mark Schlangel, right, portraying Deputy Dean for Education Richard Belitsky, with cast member Yasha Modi.

Anxiety penetrates Yale system! Students, faculty stressed! Deputy dean to the rescue!

TERRY DAGRADI (2)

What happened to the freewheeling, easygoing Yale system? How did stress enter the lives of Yale med students? Was it a curse? An infection?

Thus began *Infected,* the second-year show presented in February by the Class of 2009. Anxiety first surfaced with the transition in the school's office of education. Herbert S. Chase, M.D., the former deputy dean, had left, to be replaced by a seemingly befuddled Richard Belitsky, M.D., played by Mark Schlangel. What did this change portend? "Will we have to study embryology?" the students asked.

The students expressed their worries in a parody of "Circle of Life," the hit song from the Broadway show *The Lion King*:

From the day we arrived on campus
Been in lecture, never seeing the sun,
There's more to read than can ever be read
More to learn, our work's never done.
There's far too much to take in here,
Catch your breath and you'll fall behind.
So we study in threes,
Shadow surgeries.
The only reason we're not losing our minds
Is the system of Yale.
It's what keeps us calm
Through secret codes,
Lectures forty minutes long.
It's the only way to avoid competing—
It's the system, the system of Yale.

The plot thickened with the emergence of Johns Hopkins lymphoma, also called Johns Hopkins disease, a plague of unknown origin that laid waste to the relaxed and hallowed Yale system of medical education. Students began to worry about exams, class rankings and competition from classmates. The virus spawned a new pickup line—"I hear the virus is sexually transmitted. Wanna find out?" Faculty noticed the change but didn't expect the virus to spread to them. After all, they admitted, there was little contact between students and faculty.

But spread it did, as the cast performed an original song by second-year student Josh Trufant:

Dr. Bia spends his days watching
Girls Gone Wild,
Fortin's teaching Zen in the Art of
Kitchen Tile,
Rizzolo's robbing graves, Hep C's
in Duffy's eye,
JHD spreads like cream cheese.
Now the faculty has it too—
We're screwed! We're screwed!

By the end of the show all had worked out for the best. Belitsky, a psychiatrist, realized the problem was all in the students' heads rather than being caused by an infectious agent. Sanity prevailed, the Yale system was safe and calm returned to the medical school.

—John Curtis

As budding researchers, students reveal a talent for 'mind-boggling' science

From a study of a transgenic mouse with Alzheimer's disease to an analysis of the effects of clinic attendance on weight loss after gastric bypass surgery, a diverse array of projects were on display on Student Research Day in May.

Jack A. Elias, M.D., the Waldemar Von Zedtwitz Professor of Medicine, and chair of internal medicine, called the quality of the science exhibits in the Hope Building "absolutely mind-boggling," while one older guest was overheard saying to a contemporary, "Can you imagine us doing anything this sophisticated when we were students here?"

April Levin, a fourth-year medical student who plans to specialize in pediatric neurology, studied epileptic seizures in WAG/Rij rats, an inbred strain of rat that is genetically susceptible to seizures. Levin wanted to see whether having a seizure somehow teaches the body to have more seizures. Through the use of ethosuximide (ESX), a treatment for absence seizures, Levin and her team were able to prevent seizures in very young rats. Months later, a brain-wave comparison showed that early treatment with the antiepileptic drug ESX before the onset of seizures resulted in decreased seizure activity months after ESX was discontinued.

Karen Archabald studied whether prenatal discussion of breast feeding by health care providers makes a difference in a new mother's feeding choices. Archabald, a fourth-year medical student planning to specialize in obstetrics and gynecology, found that while 95 percent of the women she interviewed had concerns about breast feeding, only a quarter of those had their concerns addressed by a health care provider. While 75 percent said they were asked about their feeding plans, only 25 percent of those felt they had had a conversation with their health care provider. "There is a lot of room for improvement in terms of discussion," Archabald concluded.

The day's keynote address, the 20th annual Farr Lecture, was delivered by Elias, who has spent his career studying pulmonary disease. Asthma, he said, is a "silent epidemic" that afflicts up to 20 million people in the United States alone. One slide Elias showed drove the point home, however, even more forcefully than that staggering number. The slide was an autopsy specimen from an 11-year-old girl who died in the grip of an asthma attack while her mother raced her to the hospital.

Elias ended on a note that surely left his audience of budding scientists feeling energized about their career paths: the work conducted in his lab laid the scientific groundwork for Aerovant, a new asthma treatment. Aerovant is now showing promising results in clinical trials.

Abstracts and complete theses by Yale medical students are accessible online via the Yale Medicine Thesis Digital Library at http://ymtdl.med.yale.edu/.

—Jennifer Kaylin

TERRY DAGRADI (2)

Medical student Ryan Kaple studied atherosclerotic plaque components.

Five students who made oral presentations posed with John Forrest Jr., director of the Office of Student Research, internal medicine Chair Jack Elias and Dean Robert Alpern. Back row from left: Rajesh Rao, Forrest, Paul Kalanithi and Ranjit Bindra. Front row from left: Brent Schultz, Elias, Alpern and Bernice Ng.

Lu Anne Dinglasan, left, and Alison Maresh celebrated Maresh's match at New York-Presbyterian Hospital.

Match Day 2007

Nationally, this year's match was the largest in the program's 55-year history, with almost 28,000 medical students vying for just under 22,000 slots. At Yale, for the second time in the past three years, all 84 students in the match found residencies.

California

Cedars-Sinai Medical Center, Los Angeles
Aram Lee, medicine-preliminary

Contra Costa Regional Medical Center, Martinez
Rebecca Kershnar, family medicine

Harbor-UCLA Medical Center, Torrance
Hassana Ibrahim, transitional

Santa Clara Valley Medical Center, San José
Anika Nina Watson, transitional

Stanford University Medical Center
Aaron Berger, plastic surgery
Paul Kalanithi, neurosurgery
Bernice Ng, dermatology

UCLA Medical Center, Los Angeles
Hassana Ibrahim, diagnostic radiology
Aram Lee, diagnostic radiology
Peter Yang, internal medicine

University of California, San Francisco
Jason Andrews, internal medicine/primary
Lucy Goddard, internal medicine/primary
Priya Shete, internal medicine
Stephen Shiao, radiation oncology
Ramnath Subbaraman, internal medicine
Kristen Sueoka, internal medicine/primary

University of Southern California, Los Angeles
David Jeng, ophthalmology

Ventura County Medical Center, Ventura
Emlyn Jones, family medicine

Colorado

University of Colorado School of Medicine, Denver
Arianne Boylan, surgery-preliminary, neurosurgery

Connecticut

Greenwich Hospital
Silas Wang, medicine-preliminary

Hospital of Saint Raphael, New Haven
Phoebe Koch, medicine-preliminary
Peter Lin, transitional
Robert McGlynn, medicine-preliminary
William Worden, medicine-preliminary

St. Vincent's Medical Center, Bridgeport
James Schafer, transitional

Yale-New Haven Hospital
Omar Chaudhary, ophthalmology
Sean Christensen, medicine-preliminary, dermatology
Mary Dombrowski, medicine/primary-preliminary, neurology
Matthew Egalka, pediatrics
Gretchen Graff, medicine/primary-preliminary, dermatology
Brendan Jackson, internal medicine/primary
David Jeng, medicine/primary-preliminary
Hristos Kaimakliotis, surgery-preliminary, urology
Stefan Mansourian, medicine/primary-preliminary
Anthony Ndu, orthopaedic surgery
Bernice Ng, medicine/primary-preliminary
Sally Romano, psychiatry
Stephen Shiao, medicine-preliminary
Linus Sun, medicine-preliminary
Edward Teng, plastic surgery
Nataliya Uboha, internal medicine

Georgia

Medical College of Georgia, Augusta
Omar Chaudhary, medicine-preliminary

Illinois

McGaw Medical Center of Northwestern University, Chicago
Rajesh Rao, transitional

Maryland

Johns Hopkins Hospital, Baltimore
Peter Lin, anesthesiology
Arnab Mukherjee, anesthesiology

Massachusetts

Beth Israel Deaconess Medical Center, Boston
Bidhan Das, general surgery
Victoria Kuohung, medicine-preliminary
Ahou Meydani, medicine-preliminary
Charlotte Wu, internal medicine

Boston University
Chukwuemeka Nwanze, ophthalmology

JOHN CURTIS (4)

Boston University Medical Center
Victoria Kuohung, dermatology

Brigham and Women's Hospital, Boston
Bridget Collins, internal medicine
Rebecca Hunter, medicine-preliminary
Lauren Kendall Krause, emergency medicine
Karen Morris-Priester, anesthesiology
Oren Rosenberg, internal medicine
Joshua Shofner, medicine-preliminary
William Worden, anesthesiology

Children's Hospital Boston
Christopher Janson, pediatrics
April Levin, pediatrics

Massachusetts Eye and Ear Infirmary, Boston
Rebecca Hunter, ophthalmology
Rajesh Rao, ophthalmology

Massachusetts General Hospital, Boston
Eric Ackah, internal medicine
Kristopher Kahle, surgery-preliminary
Aida Kuri, internal medicine/primary
Chukwuemeka Nwanze, medicine-preliminary
Oyere Onuma, internal medicine
Russell Ryan, pathology
Joshua Shofner, dermatology
Marlynn Wei, psychiatry

Michigan
University of Michigan Health System, Ann Arbor
James Schafer, diagnostic radiology

Minnesota
Mayo Clinic College of Medicine, Rochester
Brian Koh, internal medicine/research

University of Minnesota, Minneapolis
Phoebe Koch, dermatology
Brian Yablon, medicine-pediatrics

Mississippi
University of Mississippi Medical Center, Jackson
Anika Nina Watson, diagnostic radiology

New Jersey
UMDNJ-New Jersey Medical School, Newark
Ahou Meydani, dermatology

New York
Albert Einstein College/Montefiore Medical Center, Bronx
Cameron Page, internal medicine/primary/social

Beth Israel Medical Center, New York City
Arnab Mukherjee, medicine-preliminary

Memorial Sloan-Kettering Cancer Center, New York City
Ranjit Bindra, transitional, radiation oncology
Viral Juthani, transitional

New York Eye and Ear Infirmary, New York City
Robert McGlynn, ophthalmology

New York-Presbyterian Hospital–Columbia University Medical Center, New York City
Sheila Kumar, internal medicine
Stefan Mansourian, neurology
Alison Maresh, otolaryngology
Caryn St. Clair, obstetrics and gynecology
Lara Suh, surgery-preliminary, urology
Linus Sun, neurology

New York-Presbyterian Hospital–Weill Cornell Medical Center, New York City
Jana Colton, psychiatry
Maria Mazzeo, anesthesiology
Aditya Sharma, emergency medicine

New York University School of Medicine, New York City
Viral Juthani, ophthalmology
Victoria Potterton, medicine-preliminary
Alain Ramirez, general surgery
Silas Wang, ophthalmology

North Shore University Hospital–NYU School of Medicine, Manhasset
Masha Diede, emergency medicine

Ohio
Cleveland Clinic Foundation
Kikelomo Olorunrinu, anesthesiology

University of Cincinnati College of Medicine
Deborah Kaplan, physical medicine and rehabilitation

Pennsylvania
Albert Einstein Medical Center, Philadelphia
Jessica Kirk, transitional

Children's Hospital of Philadelphia
Nana Akua Asafu-Agyei, pediatrics
Jennifer Kalish, pediatrics

Hospital of the University of Pennsylvania, Philadelphia
Farrah Datko, internal medicine
Roshan Shah, orthopaedic surgery/research

Lehigh Valley Hospital, Allentown
Karen Morris-Priester, transitional

University of Pittsburgh Medical Center
Shekar Davarya, obstetrics and gynecology
Rebecca McNutt, emergency medicine

Rhode Island
Brown University–Women & Infants Hospital, Providence
Karen Archabald, obstetrics and gynecology

Roger Williams Medical Center, Providence
Jessica Kirk, dermatology

Washington
University of Washington Affiliated Hospitals, Seattle
Maya Maxym, pediatrics
Brent Schultz, plastic surgery

The following students chose options other than residencies in the United States. Shobi Syed Ahmed is studying Middle Eastern and Islamic studies at Harvard University. Ryan Kelly plans to pursue teaching and research in the biological sciences. Douglas Lyssy is an investment banker at Merrill Lynch Global Healthcare Group. Kyeen Mesesan will work in international health research and policy. Alexander Nissen is in a residency training program in Norway.

OPPOSITE From left, Zofia Piotrowska, Lara Suh and Viral Juthani, joined by Juthani's girlfriend, Neha Surana, looked over the 2007 Match list.

LEFT Charlotte Wu shared the news of her match to the internal medicine program at Beth Israel Deaconess Medical Center in Boston.

TOP Matthew Egalka, who matched to the pediatrics program at Yale-New Haven Hospital, shared the news with classmate Bridget Collins, who matched to internal medicine at Brigham and Women's Hospital in Boston.

ABOVE Karen Morris-Priester, left, matched to the anesthesiology program at Brigham and Women's Hospital, and Gretchen Graff matched to dermatology at Yale-New Haven Hospital.

Reunion 2007

Scores of alumni returned to Yale in June for a weekend of reminiscing and reconnecting.

Reunion 2007 opened on June 1 with the traditional reception and clambake—but in a departure from past years, the reception was held in Harkness Courtyard rather than in the Medical/Historical Library.

The reunion, said Dean Robert J. Alpern, M.D., Ensign Professor of Medicine, marked his third anniversary as dean. He assured alumni about the status of the Yale system of medical education. "The Yale system is alive and well—so relax and enjoy the weekend."

The following morning, after a reunion symposium on brain function, Alpern offered a more detailed view of the state of the school. Applications to the medical school have increased, he said. With more than 4,000 applicants each year for 100 slots, the admissions committee has been increased from 30 to 74 members. "The quality of the applicants is incredible," he said. He also mentioned that for the second time in three years, 100 percent of students matched this year.

In addition, 102 new graduate students entered the medical school in 2006. This year a new collaborative project with China will begin, wherein eight Chinese graduate students will come to Yale, with their education funded by universities and the Chinese government. "It will be really good for China and for Yale," Alpern said.

Three new research centers have been established at Yale: the PET Center; the stem cell center funded in part by the state of Connecticut; and the Yale Center for Clinical Investigation. Two important initiatives are also under way, Alpern continued. One is to ensure that the clinical practice is run as efficiently as possible: Navigant Consulting, a specialized independent consulting firm, has identified areas in which the practice can be improved. And Yale-New Haven Hospital (YNHH)

ROBERT LISAK (5)

The Association of Yale Alumni in Medicine elected new officers in June. From left, Dean Robert Alpern joined Vice President Harold Bornstein Jr., President Jocelyn Malkin, and outgoing President Frank Lobo.

Dean Robert Alpern, left, and outgoing alumni association President Frank Lobo, right, joined Howard Minners and Peter Herbert, who received the Distinguished Alumni Service Award this year.

and the medical school are working on joint service line planning for cardiovascular care, organ transplant, neurosciences, oncology and pediatrics.

The medical school's endowment has grown from $1 billion to $1.8 billion over the past three years. In addition, three major facilities are in the works: a cancer hospital is under construction; a new research building on Amistad Street is set to open in October; and still another research building is on the drawing board.

The Association of Yale Alumni in Medicine (AYAM) elected a new slate of officers this year. Jocelyn S. Malkin, M.D. '52, HS '54, FW '60, became president. Harold D. Bornstein Jr., M.D. '53, HS '56, was elected vice president. Robert W. Lyons, M.D. '64, HS '68, stayed on as secretary, a three-year position. Francis M. Lobo, M.D. '92, completed his two-year term as president.

Howard A. Minners, M.D. '57, and Peter N. Herbert, M.D. '67, received the Distinguished Alumni Service Award. Minners was honored for his service to the medical school, the country and the world. He has worked as a flight surgeon for the National Aeronautics and Space Administration, developed vaccines at the National Institutes of Health, was assistant surgeon general and served as a science advisor to the United States Agency for International Development.

Herbert, chief of staff at YNHH, was recognized for his achievements in elucidating the mechanisms of lipid metabolism and for his service to three hospitals in the New Haven area—YNHH, the Hospital of St. Raphael and the VA Connecticut Healthcare System in West Haven.

At the scientific symposium on brain function on June 2, Sreeganga Chandra, above, described the role of a protein in Parkinson's disease, and Susumu Tomita, right, described the regulation of synaptic strength.

Cell biologist Pietro De Camilli, right, spoke about neurotransmitters.

JOHN CURTIS (3)

Honoring first African American alumnus

Today, more than 350 African Americans hold degrees from the Yale School of Medicine, but 150 years ago there was only one: Cortlandt Van Rensselaer Creed.

When Creed received his degree in 1857, he was the first African American to be awarded any degree from Yale University and the first to obtain a medical degree from an Ivy League school. The School of Medicine celebrated this landmark event during the June reunion weekend as 50 Creed family members attended commemorative events, including a visit to Creed's grave in the Grove Street Cemetery during which Curtis Patton, PH.D., professor emeritus of epidemiology and public health, unveiled a new gravestone for Dr. Creed. The centerpiece of the weekend was a presentation on Creed's life by Forrester A. Lee, M.D. '79, assistant dean for multicultural affairs and professor of medicine (cardiology).

It took extensive genealogical detective work on the part of Darryl K. Daniels, M.D. '91, and others to fill in the details of Creed's life and to track down his descendants; no photograph of him has ever been found. Still, much has been learned about Creed and his many accomplishments.

A New Haven native, Creed was the grandson of Prince Duplex, a Revolutionary War soldier. His mother, Vashti Duplex, was New Haven's first African American schoolteacher, and his father, John Creed, was a Yale College janitor and caterer.

Creed served as a surgeon during the Civil War and as medical officer of the Connecticut National Guard. He went on to practice medicine in successful mixed-race practices in New Haven and

TERRY DAGRADI

TOP LEFT Forrester Lee described the life of Cortlandt Van Rensselaer Creed, the first African American to graduate from the School of Medicine.

TOP RIGHT Diane Williams and her mother, Gwen Washington, sang at the dedication of a gravestone for their ancestor, Cortlandt Van Rensselaer Creed.

MIDDLE Descendants of Cortlandt Van Rensselaer Creed attended the clambake with Forrester Lee and Dean Robert Alpern.

ABOVE Creed's descendants gathered at his grave in the Grove Street Cemetery for the unveiling of a new tombstone.

Brooklyn, N.Y., drawing the attention of the press for his surgical and forensic skills. Reportedly, Washington physicians sought his expertise when President James Garfield was assassinated in 1881. At that time there were no X-ray machines or other devices that could detect the precise location of bullets lodged deep within the body, and eminent surgeons outside Washington were consulted in an effort to locate the bullet and remove it to prevent infection and save Garfield's life.

Creed's memory at Yale endures through scholarships and awards. At the School of Public Health (EPH), the Creed/Patton/Steele Scholarship supports outstanding students from underrepresented minorities. Both the School of Medicine and EPH present an annual Creed Award to an underrepresented minority student for academic achievement and commitment to community service.

After Lee's presentation, several Creed family members took turns at the podium in Rosenberg Auditorium in the Jane Ellen Hope Building. An emotional George Creed said, "You have immortalized one of our ancestors. I can think of no greater gift for man on earth." Referring to Creed's descendants, Georgette Creed added, "We're all activists in some form or fashion. We're still carrying the banner."

Remembrances of women at Yale

Alumni who returned for reunion weekend in early June surely expected misty-eyed reminiscences over lobster and Chablis with former classmates and professors, but some also had the chance to delve into the past in a more structured way with Naomi Rogers, PH.D., associate professor of history of medicine and of women's and gender studies.

JOHN CURTIS

Lisa Straus was one of a dozen women who recalled their medical school experiences for historian Naomi Rogers during reunion weekend. Straus described the evening she didn't feel like studying and thought, "I don't have to do this. There's no test." A moment later it hit her, "These are people's lives. I have to do this."

Rogers, who is compiling an oral history of women graduates of the School of Medicine from the Class of 1920 to the present, met individually with alumnae to record their recollections of life in medical school. She spoke with about a dozen women from the classes of 1944 through 1986.

Most of the older women Rogers interviewed were either pediatricians or psychiatrists, specialties deemed appropriate for women in the early years of women's admission to medical school. Although discrimination wasn't a burning issue for the women Rogers interviewed, sometimes specific incidents surfaced as they spoke. One woman who graduated in the late 1960s remembered an uncomfortable episode during her surgical rotation. After an operation was over, she and the rest of the surgical team started discussing the case. As they talked, they moved together into the dressing room. A man in his underwear was irate that a woman had just entered the "doctors'" room and told her to use the room marked "nurses."

"This was a powerful moment for her and not a deeply unusual story," Rogers said.

Still, the women interviewed by Rogers looked back on their medical years with great fondness. "They were almost all upbeat," she said. "Going to medical school was a marvelous experience. They got what they wanted and made some good friends along the way."

Rogers said she undertook the oral history project to broaden what's known about the history of the medical school and to inspire women to value their own stories. By the end of the weekend, Rogers said, a number of men came up to her and said, 'When are you going to interview us?'"

Rogers likes that idea.


TERRY DAGRADI

Former chair of surgery Arthur Baue attended the Surgical Society reunion with his wife, Rosemary, their children and their children's spouses.

Former surgery chair feted

At its 12th annual spring reunion in May the Yale Surgical Society honored surgeon, professor emeritus and author Arthur Baue, M.D., who spent 10 years at Yale as chair of surgery and surgeon in chief at Yale-New Haven Hospital.

Baue's daily mission, said Walter E. Longo, M.D., M.B.A., professor of surgery (gastroenterology), was to strive for excellence in patient care and student education. Longo credited Baue with laying the groundwork for a methodical approach to surgical education and setting standards for the peer review process in medical journals.

Baue called his decade at Yale "the highlight of my career" and said that what he misses most are his weekly meetings with students. "They didn't take anything for granted," he said. He recalled a student politely but firmly challenging something he'd said in class. "And you know what?" Baue said. "He was correct."

Baue, who was at Yale from 1975 to 1984 before moving to St. Louis University, graduated from Harvard Medical School and completed a residency in surgery at Massachusetts General Hospital. He has authored or coauthored 12 books on medical topics, published 600 professional articles, edited a two-volume text on cardiothoracic surgery and served for 10 years as editor of the American Medical Association's *Archives of Surgery*. His most recent book, *Doctor, Can I Ask You a Question? Your Health Care Questions Answered*, came out in March 2006. Baue continues to write but no longer sees patients. He and his wife, the Reverend Rosemary Dysart Baue, live on Fishers Island, New York.

The surgical society reunion also featured a talk on the future of thoracic surgery by Frank C. Detterbeck, M.D., chief and professor of thoracic surgery. Detterbeck described some of the new treatments on the horizon for lung cancer patients. From real-time imaging techniques and robotic surgery to artificial lungs and tailored chemotherapy, he said that tools being developed will enable doctors and patients to manage lung cancer in the not-too-distant future as a chronic disease rather than an often-fatal illness.

The society presented travel awards to third-year student Heather McGee, for $1,000, and to second-year student Amanda Silverio, for $500. The awards will help pay for McGee's international travel clerkship in Zambia and for Silverio to attend and deliver a presentation at the American College of Surgeons conference this fall in New Orleans.

AIDS remains a global health threat

A diagnosis of AIDS used to be a death sentence, but in the 25 years since the disease was identified, drug therapies have vastly improved the long-term prognosis for many patients. With AIDS no longer dominating headlines or the obituary pages, it's easy to draw the conclusion that it's not a serious health threat anymore.

Nothing could be further from the truth, according to panelists in a workshop held at the School of Public Health's Alumni Day reunion weekend. While a small percentage of patients have access to lifesaving drugs, AIDS remains a devastating illness for much of the planet, speakers said. "The Evolution of a Global Pandemic: The Story of HIV/AIDS and Health Policy Responses from around the World" focused on the ways different countries—Iran, China, Russia, the Caribbean nations and the United States—are handling the epidemic.

Keynote speaker Peter Selwyn, M.D., M.P.H., medical director of Leeway, a

JULIE BROWN (2)

JOHN CURTIS (2)

TOP TO BOTTOM

In his keynote address at the School of Public Health's Alumni Day, Peter Selwyn said that the dynamics of transmission in different countries must be understood in order to stop the AIDS epidemic.

Kaakpema Yelpaala, who received the Eric W. Mood New Professionals Award, works on development and health issues at the William J. Clinton Foundation.

Epidemiologist Linda Niccolai described the HIV/AIDS epidemic in Russia.

Idalia Sanchez believes HIV/AIDS remains a serious problem in the United States despite advances in treatment.

New Haven-based nursing facility for AIDS patients, and professor and chair of the Department of Family and Social Medicine, Montefiore Medical Center and Albert Einstein College of Medicine, said that to stop the spread of AIDS, the "transmission dynamics" must be understood. In Iran, for example, intravenous drug use is the major mode of AIDS transmission. In Asia, it is prostitution, and in Russia, it's a combination of both. "You have to look locally at the specific dynamics of how AIDS is spread," said Selwyn, who spent seven years at Yale as associate director of the AIDS program. That information can then be used to customize effective intervention strategies.

Post-communist Russia has become the perfect breeding ground for HIV/AIDS, with the second-fastest-spreading epidemic in the world after Ukraine. One reason for Russia's dubious distinction, said Linda M. Niccolai, PH.D., assistant professor of epidemiology, is that the government won't acknowledge the magnitude of the problem. "It doesn't fit in with their international image," she said. At a time when the government allocated only $4 million a year for local AIDS prevention and care, it was contributing $20 million to a global fund to fight AIDS elsewhere. "They have a desire to be seen as *helping* nations in need rather than *being* a nation in need," Niccolai said.

The Caribbean, one of several locations where Kaakpema Yelpaala, M.P.H. '06, has worked for the Clinton HIV/AIDS Initiative, faces a different roadblock: stigma and discrimination. As a result, said Yelpaala, who is now based in the United States, patients often don't get tested or seek treatment. Despite these obstacles, Yelpaala said there has been significant improvement in negotiating price reductions for the antiretroviral drugs used to treat AIDS.

Kaveh Khoshnood, M.P.H. '89, PH.D. '95, assistant professor of epidemiology (microbial diseases), proposed what he called "health diplomacy"—improving international relations through collaborations centered around disease management. "Health can and should have a prominent role in global discussions," he said.

While the disease remains a growing problem in North Africa and the Middle East, Khoshnood said a major shift in attitude on the part of some government officials in Iran has been positive. Iranian government officials now accept that HIV/AIDS is a serious problem and support such progressive measures as methadone treatment and needle exchange programs.

While China also has some enlightened AIDS policies, including free drugs for AIDS patients in rural areas, the stigma placed on patients and the financial burden of caring for them have thwarted adequate diagnosis and care, said Kenneth E. Legins Jr., M.P.H. '95, chief of the HIV/AIDS Programme at the UNICEF Office for China. "Even when good policies do exist, stigma and discrimination—including parading sex workers through the streets to humiliate them—is a major barrier," he said. Legins is hopeful that young people, with their more enlightened views, will help bring about a much-needed change in attitude in China.

Idalia Ramos Sanchez, M.P.H. '81, associate director of the division of science and policy at the U.S. Department of Health and Human Services, stressed that despite encouraging news about survival rates and treatment options, AIDS remains a serious problem in the United States, too. She advocates making AIDS testing routine and paying more attention to underlying problems that create barriers to care such as housing. "If you don't have adequate housing, what good is a drug that needs refrigeration?" she asked. Public opinion polls have found that Americans now view AIDS as more of a global problem than a domestic one.

"It's not seen as something urgent any more," Sanchez said, "but it is."

A vision for public health

Over lunch at the Lawn Club, Paul D. Cleary, PH.D., told alumni of his efforts in his first year as dean of public health and described his vision for the future. He has streamlined the administration, he said, by reducing the number of committees. Searches are under way for scientists specializing in genomics, HIV, health management, analytic sciences and ecological epidemiology. And 11,000 square feet of new space have become available at 135 College Street.

Because public health is a small school, Cleary said, it can increase its impact through partnerships and alliances with other graduate and professional schools at Yale, as well as civic and government groups in New Haven. How, he asked, can New Haven have the health problems it does with such a pre-eminent research institution as Yale within its borders? "We have got to do better," he said. "We have got to make New Haven better." Noting a significant incidence of rickets in the city, he said, "It is not OK that this is happening."

His vision includes a new yardstick for measuring success—improving the lives of people. "We are not just academicians," he said. "We want to train people who will have an impact."

After lunch, alumni were honored for their service to the school and their professional accomplishments. Elaine Anderson, M.P.H. '76, who served in numerous positions in state government and at the school, received the Distinguished Alumni Award. Carolyn Millman, M.P.H. '84, who spent 20 years at the school, most recently in alumni relations, received the Bulldog Award. The Eric W. Mood New Professionals Award went to Kaakpema Yelpaala, M.P.H. '06, who specializes in development and health issues at the William J. Clinton Foundation.

Kaveh Khoshnood, M.P.H. '89, PH.D. '95, assistant professor of epidemiology (microbial diseases), and Edith Pestana, M.P.H. '93, were named to the 2007 Alumni Public Service Honor Roll. Khoshnood was honored for his commitment to human rights, infectious disease prevention and the eradication of social stigma related to HIV/AIDS. Pestana was honored for embodying the underlying principle of the profession—protecting the health of the public.

JOHN CURTIS (4)

TOP Carolyn Millman received the Bulldog Award for her 20 years of service to the school.

MIDDLE Elaine Anderson received the Distinguished Alumni Award for her work in public health.

BOTTOM Edith Pestana was named to the Alumni Public Service Honor Roll for her commitment to public health.

LEFT Kaveh Khoshnood received the Alumni Public Service Honor Roll award from Susan Addiss.

1947

60th Reunion

On December 23, 1943, the incoming Class of 1947 assembled at the Sterling Hall of Medicine. Sixteen members of that class gathered this year for a 60th reunion. On Friday, June 1, the Captain's Room at Mory's was dominated by our octogenarian contingent for a social session and dinner. We were pleasantly surprised by an unexpected visit of a dozen former Whiffenpoofs from the Yale College Class of 1977 celebrating their own reunion at Mory's.

On Saturday, June 2, we gathered at the Graduate Club at 6 p.m. for a social hour and dinner. Classmates in attendance were: **Henry** and Lorraine **Blansfield**, **Roy** and Margaret **Breg**, **John Cannon**, **Bob** and Ann **Chase**, **Amoz** and Renate **Chernoff**, **Bill Collins** and daughter Ruth, **Bob** and Susan **Darrow**, **Bob** and Claire **Kerin**, **Brock Lynch**, **Bill** and Betty Jean **McClelland**, **Bob** and Martha **Newton**, **Bill Rudman** and guest, **Olive Pitkin Tamm**, **Bill** and Claire **Thompson**, **Ellis** and Ann **Van Slyck**, and **Sumner** and Marie **Ziegra**.

Three classmates had made plans and reservations to attend that were derailed. Two of them, **Betty Price** and **Dick Carlin**, are mentioned together since their medical school romance united them in marriage. **Phil** and Josephine **Philbin** were also unable to attend.

Letters from four classmates all recalled fond memories of medical school days, and each sent best wishes. **Roland Chambers** sent his greetings from Australia, where he has settled. Others sending remembrances were **Owen Doyle**, **Edgar Phillips** and **Henry Williams**.

It was apparent that it does not take long to reach 80 on either the speedometer or the calendar.

Robert J. Kerin and
Robert F. Newton

1952

55th Reunion

Although regrettably fewer of us made it back to this our 55th reunion, those of us who came enjoyed our usual camaraderie. Of our 35 known survivors, a significant number live far away. Those who attended were **John Wolff**, who traveled from Florida, **Frank** and Barbara **Coughlin**, who live in Connecticut, **Jack Roberts**, who came in from Philadelphia, **Bob Gerety** and Margie, who traveled from Vermont, and **Bob Owen** and Edie from St. Louis. Also, the Class of '52 officially welcomed to our ranks **Jocelyn Malkin**, who had graduated with members of our class. She is also the incoming president of the Association of Yale Alumni in Medicine.

Several of us got to see each other and renew old friendships on Friday morning while registering in the entrance rotunda of the Sterling Hall of Medicine. That place for our first meeting seemed fitting, for, like the Medical Historical Library, its steadfast unchanging character is reassuring in the otherwise necessarily rapidly evolving environment of modern medicine.

Of course, there was a time for further fellowship at Dean Robert Alpern's welcome cocktail reception and during the legendary New England-style clambake that followed. **Jack Roberts**, having also been a Yale undergrad, sang along with reverence and flawless memory when the Dixieland band struck up some old Yale songs.

The reunion symposium on Saturday presenting current research in neurotransmitter release and regulation of synaptic strength was very enlightening. The sherry buffet luncheon was another fine opportunity for fellowship among us, as well as for making new friends among alumni from other classes.

Our class dinner was held at the Graduate Club. **Jack** distributed copies of photographs from our senior class play; it had been a real spoof, and the pictures evoked many memories. Since we were a small group, there was opportunity for a lot of circulating conversation among us, rich with reminiscences. We covered many subjects, ranging from the sublime (the marvels of modern-day medicine) to the ridiculous (the lyrics of the Whiffenpoof Song). It was an enjoyable evening to be long remembered. It was also a reminder, along with the passing years, for us all to keep in touch.

Bob Owen

1957

50th Reunion

The Class of 1957 held its 50th reunion with a record number of classmates returning—about 60 percent of the living members of the class. We all had a wonderful time meeting and talking with one another.

At the Annual Meeting on Saturday morning we were happy to see one of our members, **Howard Minners**, receive the Distinguished Alumni Service Award, a well-deserved tribute to his work with the alumni fund and our class over the years.

Later that afternoon, after the class picture on the steps of the entrance to the Medical School simulating the one taken 50 years ago, we convened in the Beaumont Room for our class meeting. **Gil Hogan** told of his work as the alumni representative to the education, policy and curriculum committee and his experiences teaching the clinical skills course. **Harry Briggs** told of his many years of teaching anatomy. **Calvin Bigler** delighted us by recounting his years of practicing in a rural setting as a "compleat surgeon."

Later on Saturday we reconvened at the home of **Bill** and Priscilla **Kissick** in Branford for our class dinner, which was a great success. Dean Alpern and his wife came and broke bread with us, making it even more special.

Earlier in the evening a champagne toast was given by the assembled class for our survival and for our return to a wonderful school with many memories. As usual, we were happy to be with one another.

Gil Hogan

1962

45th Reunion

The 2007 reunion weekend celebration—the 45th anniversary of our graduation from Yale Medical School—was a classic mix of all we might have asked for. The Friday night outdoor reception on the lawn at Harkness Medical Dorm was casual, comfortable and complete with, among other things, delicious grilled fresh lobster and oysters on the half shell. Inside seating at Harkness was elected by most but a few chose the tents, which proved to be secure as well as dry; in fact, pleasant.

Bruce Elfenbein and wife Christine, and **Joe Ferrone** and wife Pat were able to make only this one-day portion of the weekend because of commitments elsewhere, but enjoyed the evening every bit as much as the rest of us. This group consisted of **Fred Cantor**, **Charlie Carl** and wife Diane, **John** and Trudy **Harrington**, **Walt Karney**, **Manny** and Marcia **Lipson**, **Bill** and Ann **Miller**, and **Dick** and Peggy **Pschirrer**. Many of us also had the pleasure of spending time over the weekend with **Stew** and Emily **Wright,** who were here for his 50th Yale College reunion.

Saturday activities included lectures on forefront scientific medical research at the Medical School as well as the Dean's address regarding his appraisal of the medical school in 2007. To the point, it was very upbeat ... highest number of applicants per year, excellent yield (acceptances) and a rapidly growing medical school endowment (distinct from the general Yale University endowment). He remarked specifically that the Yale system is still intact, working to the continued satisfaction of all, with only minor tweaks in the last 45 years.

A pleasant highlight for many of us Saturday night was

the class dinner held at the New Haven Lawn Club in the private dining room on the first floor. This was attended by **Fred** and Anita **Anderson**, **Dick** and Lucie **Collins**, **Arnie** and Nancy **Eisenfeld**, **John German**, and **Alan** and Rhona **Lieberson** in addition to those already mentioned.

The food and wine were quite good, the service of the staff was efficient, pleasant and congenial ... but the after-dinner standing and voluntary comments by virtually everyone present, men and women, will be remembered above all. Friendly and intimate warmth, but especially the sincerity and candor of all, were remarkable in the discussion of careers and lives to date. As the evening concluded, there was a sense of pleasurable togetherness, which I feel will be long remembered.

Dick Pschirrer

1967

40th Reunion

From William Faulkner's Nobel acceptance speech: "... when the last ding-dong of doom has clanged and faded from the last worthless rock hanging tideless in the last red and dying evening, that even then there will still be one more sound: that of [*man's*] puny inexhaustible voice, still talking." For [*man's*] put [*'67's*] and you have the situation as it is whenever we meet. I always feel I should say a little something momentous to open our proceedings, but by the time I say "Welcome," no one is listening—everyone is completely immersed in their own conversations. It is marvelous and like no other thing in my life.

Those in attendance at the 40th reunion for the Class of 1967 included **Daniel** and Elissa **Arons**, **Mary Williams Clark**, **Cynthia Rapp Curry**, **James** and Dolly **Dineen**, **Alexander** and Trina **Dora**, **James Dowaliby**, **John Drews** with Janet Eyster, **Richard** and Lilian **Hart**, **Richard** and Carol **Heppner**, **Peter** and Maureen **Herbert**, **Robert** and Gale **Kirkwood**, **Melvyn Korobkin**, **Anthony** and Kathleen **Lovell**, **Stephen** and Christina **Miller**, **John** and Marilyn **Pastore**, **Brian Rigney** with Jessica Coviello, **Sidney** and Lucy **Smith**, **Helen Smits** with Roger LeCompte, **Richard** and Caroline **Swett**, **Robert S.K. Young**, **Ihor** and Areta **Zachary**, and **Peter** and Ellen **Zeman**.

The feeling of solidarity among those of us who attend our reunions is indeed remarkable. Conversation does not begin; it simply continues where it paused five years ago. I wondered for a long time if all YSM classes had this quality. Now I think not—I really believe it is special. One bit of evidence to support this: **Alex Dora** reported that on Friday night at the clambake, '67 was still clustered together talking when everyone else had gone home.

Dinner Saturday night at Mory's was well-attended. The only flaw was that we were in two rooms, so if you wanted everyone to hear what you were saying, you either had to stand in the doorway or say it twice. **Steve Miller** stood in the doorway to report that our reunion gift to the school is significant. **Peter Herbert** was not in the doorway when he spoke for himself (and for the rest of us, too) of his admiration and affection for the group, so he must have said it twice. **Peter**, it should be noted, was honored by the school with the Distinguished Alumni Service Award—an award well-deserved, earned by hard work and devoted service.

I had to say goodnight and leave the party early this year. As I waved and walked out, I looked back. Guess what. No one noticed my exit—they were already completely immersed in their own conversations. Marvelous!

James M. Dowaliby II

1972

35th Reunion

Our 35th reunion, attended by 13 classmates and 10 spouses, was truly memorable. As was the case for our 20th, **Jerry** and Roz **Meyer** hosted a fabulous dinner at their magnificent waterfront estate in Guilford. The "official" dinner on Saturday was held at the Quinnipiack Club.

Attending were **Phil Rothfield**, who is "easing back" on his radiology practice and summering on Bantam Lake. **Lenny Cohen** continues his part-time GI practice and also spends time as a financial consultant. He was in good form as an avid lap swimmer. He was accompanied by wife Linda. **Felix Freshwater** brought his laptop with pictures of the second-year class show! **Bob Glassman**'s new hobby is photographic restoration. He and Louise have four sons, one of whom is a theoretical physicist. **Bruce Haak** has retired as chief of neurology at the Hospital of St. Raphael in New Haven. He and Valerie summer in Connecticut and winter in Walnut Creek, Calif. **Fred Henretig**, attending with Marnie, continues in pediatrics but also participated in relief efforts during the aftermath of the Indonesian tsunami and Hurricane Katrina in New Orleans. **Phil Liebowitz**, attending with Susan, is director of clinical research in anesthesiology at Montefiore Hospital in New York and has recently aspired to golf and piano. **Jerry Meyer**, having retired from psychiatry, is a seasoned artist and has a solo show opening in Chelsea this year. **Gary Strauss**, attending with Meda, runs the oncology fellowship at Tufts. **Phil Cohen**, attending with Annie Hall, will soon be serenading Anne with his new Steinway piano. **Bob Goodman** practices orthopedics in Durango, Colo. **Frank Kahr**, attending with Katherine, is a competitive rower and singly sculled from Albany to the George Washington Bridge. **John Fulkerson** attended the Saturday lunch.

Cell phone calls were placed to **Tom Converse** following his touching regrets letter, and to **Harry Malech**, who had a keynote speaking address in Seattle.

Plans were initiated for major recruitment of attendance at our upcoming 40th.

Bruce Haak

1977

30th Reunion

New Haven weather on Friday, June 1, and Saturday, June 2, cooperated nicely, enabling a smaller but energetic group of members of the Class of 1977 to gather, exchange news and take in the changes and growth on Cedar Street, the rest of the Yale campus and downtown New Haven in general. We owe special thanks to **Bob Hand**, who has set up a website and repository for class news, biographies and photos, and to **Ricky Schneider**, who ably communicated receipt of new information in almost real time during the weeks and months leading to our reunion. All classmates and friends are welcome to visit our site, *yale.medlung.com*; click on the fox, enter user ID *harkness* and password *esophagoose*.

In addition to golf, tours, lectures and similar events, **Alan Penziner** recounted a serendipitous venture on Saturday with other classmates into the Historical Library, where one of the librarians took him and his group into a little-known side office housing artifacts and books from the personal collection of Harvey Cushing. The visitors were so impressed that the Alumni Office was contacted and will try to arrange tours of this collection on subsequent reunion weekends.

Our class dinner took place Saturday night at Sage (formerly the Chart House), right on the water at the end of Howard Avenue overlooking Long Island Sound and the entrance to the New Haven harbor. During that afternoon's library tour, some classmates were able to recover copies of our class's original (fall 1973) individual photos, which they brought to and circulated at the dinner, reminding us of classmates we hadn't heard from in a while; of how little those of us at the reunion had really changed; and perhaps most importantly, of how fleeting was the period from 1973 to 2007.

Attending for all or part of the weekend were: **Marcia Clark Arem**, **Wayne Barber** and Sharon Nelson-Barker, **Diane Barnes**, **Harriet Comite** and Alan Geltman, Alissa and **Jim Fox**, **Julia Frank**, **Attilio Granata** and Claudia Dinan, **Bob Hand** and Marianne Lynch, **Bob Mitchell**, **Alan Penziner** and Paula Cohen, **Rachel Ritvo** and Steven Beckman, **Steve Scheinman**, Wendy and **Ricky Schneider**, **Gail Sullivan**, **Polly Thomas** and Rick Bell, and **Sharon Weinstein**.

Attilio V. Granata

1982

25th Reunion

Twenty-six of us gathered to celebrate our 25th anniversary of graduation from medical school and catch up with life journeys in and outside medicine.

Jim Reinprecht arrived carrying multiple copies of our mug shots from the first week of medical school. The general agreement was that we all look better now than we did then! Jim practices internal medicine in Abington, Penn. Several people came thousands of miles to share the weekend. **Fred Drennan** and **Terry Massagli** got the award for having come the farthest, from Seattle, where **Fred** is practicing gastroenterology after a foray into health care administration, and **Terry** is on the faculty of the University of Washington in pediatric rehabilitation medicine. **Augusta Simpson Roth** and her husband, Bruce, flew in from Arizona. **Gus** started out in ob/gyn, but **Bob Rohrbaugh**, who directs medical studies for the department of psychiatry at Yale, convinced her to switch specialties, and she is now enjoying her practice in psychiatry. **David Goldstein** and his 6-year-old son came from New Mexico, where he practices anesthesiology. **Gary Garshfield** sent a bio for us to read from California, where he is a pathologist. **Bert Ungricht** came from Salt Lake City, where he is in private practice in ophthalmology. **Bert** brought news of **Don Stromquist**, who is also in Salt Lake City practicing rheumatology.

Patty Kellner was in New Haven celebrating her 30th Yale College reunion and joined us Friday night. She is working in family practice in Cleveland, Ohio. **Paula Braverman** is also in Ohio**,** having moved to Cincinnati several years ago to become director of community programs in the division of adolescent medicine at Cincinnati Children's Hospital. **Michael Katz** (newly married in April) arrived from Boca Raton, Fla., where he is practicing pediatric radiology. **Michael** brought news of two other classmates in Florida: **Henry Stern** is also a radiologist in Wallington and **Peter Namnum** is a pulmonologist in Broward County. **Vangy Franklin** came from Louisiana, where she is chief of clinical services and employee health for the City of New Orleans. **Vangy** survived the ravages of Hurricane Katrina and is intent on staying in the city to help improve health care delivery.

On the eastern side of the country, **Pat Toth** is practicing radiology at Hackensack Hospital in New Jersey. Pat tells us that **Steve Resnick** is a dermatologist in Cooperstown, N.Y., and that **Ron Voit** is in Hilo, Hawaii, practicing ob/gyn. **Michael Carty** drove down from Boston, where he is practicing internal medicine at Harvard Student Health Services. **Duncan Wright** entertained us at the Saturday night dinner with a memorable skit about a lighthouse—you had to be there—appropriate to his location in Maine, where he practices psychiatry. **Bill Sikov** is living in Providence, R.I., teaching at Brown, practicing adult oncology and doing clinical research in breast cancer. **Bill** brought news of **Joyce O'Shaughnessy**, who is living in Dallas and working for US Oncology, focusing primarily on breast cancer clinical trials. **Jeff Tepler** is also a hematologist-oncologist at New York-Presbyterian/Weill Cornell. **Jeff** sees **Jose Guillem**, who is a colorectal surgeon at Memorial Sloan-Kettering. **Steve Gore** is also a hematologist-oncologist on the faculty of Johns Hopkins, specializing in adult leukemia. **Steve** had news of **Risa Chait Jampel**, practicing dermatology in Baltimore, and **John Younger**, who is a geriatrics specialist in Seattle. **Philip Sager** is back on the East Coast. **Phil** moved back from California to become director of cardiovascular research at AstraZeneca. **Kamau Kokayi** is practicing holistic medicine, including acupuncture, homeopathy, applied kinesiology and herbalism, in his clinic in New York City. **Stephanie Wolf Rosenblum** arrived from New Hampshire, where she is chief medical officer at Southern New Hampshire Medical Center in Nashua. **Jessica Herzstein** came from Philadelphia. **Jessica** trained in occupational medicine and is presently medical director of Air Products and Chemicals, a global company based in Allentown, Penn. **Jessica** tells us that **Troy Brennan** is now medical director of Aetna and is living in Boston. **Jessica** also sees **Sylvia Beck**, who is practicing ophthalmology in Philadelphia. **Katalin Roth** sent a hello to the class from Washington, D.C., where she is the division director of geriatrics and palliative medicine at George Washington University. **Jane Cross** is practicing pediatrics in Holyoke, Mass. **Jane** tells us that **Kate Albert** and **Hugh Hemmings** are working in Manhattan, where they live with their daughter. **Daphne Hsu** is also in New York City, where she is on the Columbia faculty in pediatric cardiology. **Daphne** recently heard from **Mary van der Velde**, who is also a pediatric cardiologist at the University of Michigan. **Daphne** also brought a hello from **Muriel Cyrus**, who is practicing emergency medicine in Vermont.

Then there are those of us who somehow never left New Haven. Several members of our class are actually teaching the newest generations of Yale medical students. **Stuart Gardner** has a solo community pediatric

practice in the New Haven area. **Bob Rohrbaugh** is associate chief of psychiatry at the VA Connecticut Healthcare System in West Haven as well as being the above-mentioned director of psychiatric training at Yale. **Carrie Redlich** is professor of medicine in occupational medicine at Yale and still playing soccer. **Lynn Tanoue** is medical director of thoracic oncology and interim section chief in the division of pulmonary and critical care medicine at Yale. Those of us on the Yale faculty think that the Class of 1982 might be interested in knowing that the Class of 2009 skipped just as many lectures this year as we did when we were rehearsing the second-year show! **Lynn** and **Daphne** finally heard from **Colin Lee**, who practices interventional cardiology between hiking, kayaking and mountain climbing in Idaho. **Lynn** also got a call recently from **David August**, who is practicing internal medicine at Harvard Community Health in Boston, and hears that **Paul Sylvan** is alive and well, practicing radiology and playing golf in San Diego.

We took a moment as a group to reflect on the passing of three of our classmates—**David Sears**, **Tom Brennan**, and most recently **Saul Sadka**. We also want to send our heartfelt sympathies to **Victor Perez,** practicing psychiatry in Guam, who lost his daughter to osteosarcoma last year. These losses remind us that life is short and should be lived to its fullest, and that we should celebrate family and friends often and joyfully. The reunion was a wonderful time to be together again even for a few hours, to remember, to share life stories and to laugh.

Lynn Tanoue

1987

20th Reunion

The Class of '87's reunion was a chance to travel back to New Haven from Orlando, Fla., to see old friends, many of whom are now in new places. **Joe King** and **Amy Justice** have returned to the Yale community and both are working at the VA Connecticut Healthcare System in West Haven. **Ken** and Debby **Newhouse** traveled from Idaho with their three kids for the reunion and to tour New England colleges. **Bob Malison** and **Gene Vining** remain happily in New Haven, and stopped by the clambake. Saw **Diane Louie** at the clambake, too. **Mike Solon** took the walking tour of the campus. **Matt Miller** surprised us by coming to the class dinner at the Graduate Club Saturday night. Matt finished his PH.D. in public health, and is doing research at Harvard. **Lisa Cairns** has been working at the CDC in Atlanta but is preparing to leave for a several-year stint in Beijing. Dinner at the Graduate Club turned up more classmates, including **Leslie Vogel**, **Kristen Mertz**, **David Ives** and **Ian Chandler**. **Ian** is working on Wall Street rather than in the world of medicine. Caught up with **Lisa Straus**, who reports that she is a "country doctor" practicing primary care in a rural setting ... and loving it! Although a lot of the class had trouble making it to the 20th reunion, we're gearing up for a strong showing at the Big 25th Reunion in 2012!

Barry Weinstock

1992

15th Reunion

Hello, Med School Class of 1992! For those of you unable to attend our 15th reunion, here's the latest on the attendees:

Mike and **Nancy Girardi** have five (yes, FIVE) boys. Anyone not carrying a hot beeper or with four or fewer kids who missed the reunion really has no valid excuse. Five boys—yet both Mike and Nancy look even younger than in medical school 15 years ago. Hey, **Mikey**, share some Yale dermatology secrets with one of your crinkling and wrinkling classmates (an anonymous urologist, married with three kids, living and working just outside Boston).

Virtually without exception, those in attendance at our reunion seemed healthy and enthusiastic as ever, despite the best efforts of our health care system. **Claudia Reynders** (radiologist), who is at the core of a large and excellent radiology group on Boston's North Shore, was accompanied by husband Chat and their son and twin daughters. **Annie Egan** (pediatrics) was in town with her husband, who also attended his undergraduate reunion, and with their *two* sets of twins. **Annie**, who lives an otherwise salubrious life in Jacksonville, Fla., was sporting a temporary crutch earned after an incident with an equine friend.

Unfortunately, orthopaedists **Tobenna** "let-me-tell-u-somethin'" **Okezie**, **Evan Fischer** and **Chai Kulsakdinun** don't do legs. (Well, at least not at reunions). **Tobenna** and **Evan**, who both practice solo in New Jersey, were accompanied by their wives. I didn't get much news from **Tobenna**, who chased his son and daughter over Harkness lawn for most of the evening. **Chai**, who is on the faculty at Montefiore, and **Lawrence Gardner** (hematology), who moved from Hopkins to NYU, never run into each other in New York City, to my surprise. I guess it's not so amazing when you consider they work in different departments. Also, **Lawrence** mentioned something about spending a fair amount of time at Bellevue, especially in the prison unit.

Nate Schmiechen (emergency medicine), having made a long expedition from the Twin Cities, organized a pre-reunion tea (OK, beer party) in Newton, Mass. Unable to make the trip to New Haven but present Thursday evening were **Fred Welt** (cardiology) and **Dan Solomon** (rheumatology), both mending lives via the Brigham and Women's Hospital. **Nate**'s wife, Malinda, has finished law school and now advocates for human rights. Their twin girls are now 12 years old! I drove to the reunion with **Nate**, who remains a master of wit and insight.

On short notice, **Tom Davenport** (plastic surgery) drove from Long Island, where he is vice president and soon-to-be president of a large group. When not enjoying the NYC social life, he devotes a good amount of personal time in the Third World as a volunteer surgeon with Interplast. **Ross Zbar** (plastic surgery) also volunteers for Interplast but now lives in New Jersey. Go **Tom** and **Ross**! **Suresh Karne** (GI) and wife and kids also attended Saturday evening's dinner at the Graduate Club, making the trip from Alabama.

Robin Goldenson (aka BooBoo) and **Elizabeth Mullen** (aka Betsy) arrived together to the class dinner, a blatant denial of the dangers of hitchhiking. I would expect more responsible behavior from two prominent Boston physicians, each of them a mother of three. **Robin**, a radiologist at Brigham and Women's Hospital, has two XXs and one XY; and Elizabeth, a pediatric oncologist at Children's Hospital Boston (CHB), has three XXs. **Mustafa Sahin** (pediatric neurology), also at CHB, has an active research lab where he studies tuberous sclerosis in addition to his clinical responsibilities. He split his reunion time with his wife's undergraduate reunion somewhere down York Street. They have kids and live outside Boston.

We ran into **Nancy Harthun** (vascular surgery) and her family, who were attending the undergrad reunion. She's living happily in Charlottesville, Va., and is a faculty member at UVA.

Hope everyone's well. Make plans for the 20th!

Mat Massicotte

1997

10th Reunion

The Class of 1997 had a great showing for its tenth reunion, including what appeared to be about 59 children between the ages of 0 and 6. Lobsters and oysters delighted the folks at the clam bake, including **Julie MacRae**, up from her plastic sur-

gery practice in Delaware, and **Jaimie** (completing what he assures us is his final fellowship) and **Amy** (one of several happy pediatricians in attendance) **Nathan** from Cincinnati. **Max** and **Rachel (Rapaport) Kelz** brought their brood, including future alligator wrestler Zeke, from Philly, where **Max** now gets paid to put people to sleep and **Rachel** works and teaches in the OR. **Dan** and Lesley **Wolf** also came from Philadelphia with adorable children. **Brigitte Kerpsack**, fresh off an NYC pediatrics accolade, came from New York, as did **Tony** and Juliet **Aizer** with munchkin in tow, **Nina** and Lou **Fisher**, and even busy neurosurgeon **Nirit Weiss**. **Jason Gold** attended with wife Ann, while former world-class fencer **James Boren** continues to show mastery of all objects pointy as he regaled classmates with tales of new urologic techniques. **Jim** and Eileen **O'Holleran** brought one of three children from Massachusetts, while Dan (MED '98) and **Barb McGee Coughlin** brought their two from Rhode Island. **Matt Klein** and **Bob** and Andrea **Kalus** from Seattle and **Jerry O'Regan** from Boston could only marvel at their fertile colleagues. **Jon Grauer**, **Eric Fan**, **Kristina Crothers** and **Mark Skirgaudas** entertained us with stories of their exploits in and around the New Haven area. **Sarah Nikiforow** was able to break away from Yale-New Haven Hospital toward the end of the dinner to show off pics of her own beautiful tyke. The group finished Saturday night at Richter's, struggling to come up with unused synonyms for the word "kid."

2002

5th Reunion

The Class of 2002 five-year reunion was a smashing success! The award for the longest distance traveled goes to **Kinari Webb,** who came all the way from West Kalimantan, Indonesia, where she is working on a health and environmental conservation initiative for Health in Harmony (www. healthinharmony.org). The shortest-distance awards go to **Anna Gibb Hallemeier**, **Anita Karne** and **Alison Norris**, who came from none other than New Haven. **Anna** and her husband, Pete, have a daughter, Nola, who is nearly 3 years old; and a son, Nicholas, who was born in September 2006. **Anna** works as a med/peds attending at Waterbury Hospital. **Anita** is an assistant professor of medicine at our own Yale-New Haven Hospital. She attended the reunion with husband Mehul Dalal. **Alison** is preparing to graduate from YSM with the Class of 2008. After a 10-year stint as a Yale medical student, she will leave New Haven with an M.D., a PH.D., and three children—Maggie, Franklin and Solomon (not to mention her always-entertaining husband, Dodie McDow).

Scott Berkowitz and wife Lesley Farby traveled from Baltimore, where **Scott** is preparing to start his cardiology fellowship at Johns Hopkins. Despite being post-call from the MICU, **Scott** managed to partake of all the festivities. Also from Baltimore, **John Koo** is about to complete his ophthalmology residency at Johns Hopkins. He plans to spend the coming year as a consultant before beginning an oculoplastics fellowship at Johns Hopkins.

Premila Bhat and husband Kiran Mandrekar made the trip from Manhattan. **Prem** is a nephrology fellow at Columbia. **George Lui** and wife Vanessa rounded out the New York contingent. **George** is a cardiology fellow at Columbia and plans a career in adult congenital heart disease.

Deb Smith came to New Haven from Michigan with husband Daniel Buday. **Deb** is a primary care physician in private practice. The couple has a 5-year-old daughter, Emma, who had better things to do than have dinner with a bunch of doctors.

The Boston contingent included **Karen Thomas** and Mike Rothenberg, who were accompanied by their adorable 4-week-old daughter, Jane. **Karen** is completing a cardiology fellowship at Beth Israel-Deaconess, and she plans a second fellowship in cardiac electrophysiology. **Eileen Scully**, who was allowed to leave the hospital for a few short hours to attend the reunion, is about to complete a medical internship at Brigham and Women's Hospital. She plans a career in infectious diseases. **Margaret Bourdeaux** is finishing her med/peds residency and will start a fellowship in global women's health at Harvard. She and husband David Charbonneau have two beautiful daughters, Stella, born in November 2005, and Aurora, born in May 2007. **Tracey Cho** and his wife, Josalyn, were also in attendance. **Tracey** is neurology chief resident at Massachusetts General and Brigham and Women's hospitals. He plans to complete a fellowship in neuro-infectious diseases at Massachusetts General. **Andrew Norden** and wife Pamela attended as well. **Andrew** is about to start a job as an attending neuro-oncologist at Dana-Farber Cancer Institute and Brigham and Women's Hospital.

Reunion social co-chair **Jackie Park** was unable to attend because she is studying oral rehydration solutions for children in India with infectious diarrhea. She has requested to have 75 freeze-dried clams mailed straight from the clambake to her home in Vellore, India.

We look forward to seeing you at our 10-year reunion!

Andrew Norden

A PA alumna serves those who served

Amanda Turner Magee helps wounded veterans of Iraq and Afghanistan in their recovery.

How many alumni of the Physician Associate Program receive visits at work from U.S. senators, the secretary of defense and President George W. Bush?

For Amanda Turner Magee, PA-C, M.M.Sc. '03, it's a frequent occurrence at Walter Reed Army Medical Center, where she is a physician assistant for inpatient amputee and blast injury care in the Physical Medicine/Rehabilitation Department. She's part of a team that cares for injured soldiers returning from Iraq and Afghanistan. This team includes physiatrists, surgeons, physician assistants, physical and occupational therapists, nurses, prosthetists, social workers and psychologists.

SCOTT SUCHMAN

Amanda Turner Magee works with wounded veterans at Walter Reed Army Medical Center.

"The workings of military medicine and the logistics that go into treating combat-injured soldiers are new things I'm learning," said Magee, who previously worked in an emergency room in Pennsylvania and was a physical therapy tech before coming to Yale. As a large teaching facility, however, Reed resembles the "big academic hospitals I rotated through at Yale." But in her current job, "... we are often in the public eye."

Politicians, military leaders and celebrities often visit the soldiers at Walter Reed. "The president comes every few months, sometimes completely unannounced," Magee discovered. "One particular visit was announced because he was presenting Purple Hearts, some to patients I had treated. I was selected to attend the ceremony and the informal gathering where he spoke individually with the recipients and other patients. A few weeks later, the White House sent me a photo of the president, my patient, the patient's wife and myself. It was a lovely surprise."

Her department averages 15 to 25 inpatients, flown by MedEvac twice a week from a hospital in Germany to

nearby Andrews Air Force Base. Most patients have been involved in some type of blast. "An amputee patient not requiring ICU support is usually admitted to our service about a week from his or her injury date. They have multiple medical issues, including infections, orthopedic injuries and often severe pain syndromes," said Magee. "We provide general medical care, including treating infections and blood clots, pre- and post-operative care, pain management and wound care. ... We initiate their rehab process, including educating the patient and family, and oversee their progress in therapy to establish their long-term rehab plans." Patients' co-morbidities often include vision loss; brain or spinal cord injury; fractures; severe nerve or vascular injury; and post-traumatic stress disorder.

"Most of our patients adjust remarkably well. They have great support here in PT, OT and prosthetics, surrounded by soldiers who are the same age with similar injuries," Magee said. "When they're well enough to leave their rooms and become more involved in rehab, they improve psychologically, feeling they're part of a group again, and seeing progress."

On their first extended breaks at home, patients suddenly face the reality of civilian life as an amputee. "We try to anticipate [the physical and often emotional difficulties they will face after discharge], and help send patients home with a plan—such as a job or college enrollment—so ideally, after months of rehab, they know what they'll be doing if they're getting out of the military," said Magee.

Initially, a series of articles in the *Washington Post* in February that outlined neglect and deficiencies in treatment of outpatients at Walter Reed didn't affect Magee's team. "I truly feel that patients get very good care here. We have a comprehensive amputee rehab program which focuses on returning patients to their highest possible level of functioning. Some go on to complete marathons, skydive and return to active duty service," Magee said. Since the media attention to difficulties at Walter Reed and the resignations of key officials, however, a recent hospital-wide emphasis on administrative issues keeps her busier than ever. "We're following new policies when they become outpatients. We're doing a better job of tracking them after discharge and making sure that patients [continue to] get mental health support, too."

Mary L. Warner, M.M.SC., PA, assistant dean and program director of the Physician Associate Program at Yale, remembered Turner standing out during clinical training. "She demonstrated excellent relationships with patients and staff, which has likely been crucial in her work at Walter Reed. I am sure the patients benefit from the breadth of her knowledge base and true enthusiasm for providing outstanding health care."

Her experiences have created deep bonds between Magee and her patients. Magee senses that she's "becoming committed to veterans' health care. I'd like to stay in it—it is a privilege to be involved in people's lives at a time like this, to be able to help them. The patients are wonderful and it's very rewarding."

—*Carol Milano*

An American doctor finds home on opposite sides of the Pacific Ocean

Alice Shepard Cary, M.D. '45, HS '47, recalls sitting on a tatami mat made of woven straw, her legs tucked neatly beneath her, in the home of a patient in Kyoto, Japan, in the early 1950s. As the light softly filtered in through the translucent washi-paper walls, she steadied her hand as she prepared to insert a needle attached to a pneumothorax machine between the ribs of the young woman lying on a futon. Careful not to puncture the girl's lung, Cary injected air between the lung and chest wall until she felt confident that she had collapsed the cavity in the young woman's lung, praying that she was saving the girl from a fatal case of tuberculosis.

Cary treated several patients with tuberculosis during 48 years as a medical missionary in Kyoto. Before streptomycin reached this corner of the world in the mid-1950s, the common treatment for tuberculous cavities was to collapse the infected lung in order to "rest" it so lesions could heal, or to remove it surgically—often using only local anesthetic. Like her parents and grandparents before her, Cary's lifelong passion has been to heal the sick and care for others in accord with her Protestant faith.

Born in June 1920, Cary spent her first 14 years in Turkey, where her father, Lorrin A. Shepard, M.D., a surgeon and 1914 Yale College graduate, was director of the American Hospital in Istanbul. Cary came to the United States in 1934 to attend high school

in Massachusetts and went on to pre-med studies at Wellesley College.

During this time, Cupid's arrow struck. The object of her affection was Otis Cary, her brother's handsome roommate at Deerfield Academy. Born in Kyoto, Otis was also the child and grandchild of missionaries. When World War II began, Otis left Amherst College to join the Navy and was assigned to a POW camp at Pearl Harbor, where, because of his fluency in Japanese and his affable nature, he became the executive officer of interrogation. Alice and Otis were married in December 1944.

Alice, meanwhile, was one of three women among 56 men in the Yale School of Medicine's Class of 1945. Her memories of the time are nothing but fond. She is quick to point out that she experienced no discrimination because of her gender from either the professors or her male classmates. "The few professors who used sarcasm as a teaching tool were just as sarcastic to the men as to the women," she says.

COURTESY ALICE SHEPARD CARY

Alice Shepard Cary was one of three women in the medical school's Class of 1945. After a residency at Yale she and her husband moved to Japan, where she spent 48 years as a physician.

After the war Otis returned to Amherst, then began graduate studies in history at Yale. Alice, meanwhile, was an intern and assistant resident at New Haven Hospital. In 1947 the couple settled in Japan, where Otis had been sent by Amherst College to teach American studies at Doshisha University in Kyoto. Alice began working in the student health center. The two lived in Amherst House, a small on-campus dormitory where they bridged Western and Eastern cultures for the next four decades.

The early years in Japan were difficult, as Alice struggled with the language and tried to turn dehydrated potatoes, eggs and Spam into appetizing meals. In 1957 she joined the Kyoto Baptist Hospital, where she saw outpatients, roughly half of them Japanese and half foreigners. Despite being a Western doctor in Asia, she had little difficulty caring for patients and says she never received negative reactions from her Japanese patients.

"During the early years there were many requests for medications not yet available in Japan," she said. "I could, and did, order them from the United States, but had only limited funds, so had to disappoint most patients." She also worked part time treating outpatients in the Louis Pasteur Institute and raised four children, three of whom have Japanese spouses.

Alice retired from the hospital in 1993 and returned to the United States in 1996 with Otis, who was beginning to suffer from Alzheimer's disease. Otis died from pneumonia in April 2006. Alice, who lives in Oakland, Calif., returns to Japan at least once a year to visit two of her children still living there. She has served on the board of the East Bay Chapter of the United Nations Association of America, an organization that strives to support the principles of the U.N. by educating and mobilizing Americans. "I want to back the U.N. because, like me, it tries to have its eyes on the whole world, and I would like the United States to know more about and be more concerned with the welfare of the rest of our planet." She also manages to visit with her Yale roommate, Louise Burr Albulet, once or twice a year.

Alice says that her lifelong goal has been to "love the world and everyone in it—even difficult patients and relatives. I've not been totally successful." But then again, she says, "A worthy goal is always just beyond one's reach."

—Kara A. Nyberg

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 or write to Faces, *Yale Medicine*, 300 George Street, Suite 773, New Haven, CT 06511.


Maxine Singer


Lee Goldman


Bonnie Kerker

1940s

Irving G. Rudman, M.D. '47, received the Silver Cross Sehring Medal of Excellence for Healthcare in December from the Silver Cross Foundation in Joliet, Ill. Rudman, a surgeon, retired in 1996 after 42 years working at Silver Cross Hospital in Joliet. As vice president for medical affairs at the hospital, Rudman was instrumental in forming the largest paramedic system in the state.

1950s

Maxine F. Singer, PH.D. '57, president emeritus of the Carnegie Institution of Washington, D.C., received the Public Welfare Medal in April, the most prestigious award bestowed by the National Academy of Sciences. The medal is presented annually to honor extraordinary use of science for the public good. Singer will receive the award for providing inspired and effective leadership in science and its relationship to education and public policy. Singer is a pioneer in molecular biology and leader in science policy who has dealt with many of today's key issues. She has advanced the cause of women and minorities in science, fostering equal access to education and career opportunities, and has worked tirelessly to improve science education.

1960s

Norman C. Fost, M.D. '64, M.P.H., professor of pediatrics and bioethics at the University of Wisconsin School of Medicine and Public Health, has received two awards honoring his achievements in biomedical ethics and human research protection. Fost accepted the Patricia Price Browne Prize in Biomedical Ethics in February 2007. The prize, now in its founding year, is supported by the Children's Medical Research Institute and administered through the University of Oklahoma College of Medicine. In late 2006 Fost received the Award for Excellence in Human Research Protection, created by the Health Improvement Institute, a nonprofit charitable organization. This lifetime achievement award recognizes excellence in promoting the well-being of people who participate in research.

1970s

David Adler, M.D. '73, professor of psychiatry and medicine at Tufts University School of Medicine (TUSM); senior psychiatrist at Tufts-New England Medical Center (T-NEMC); senior scientist at the Health Institute, Institute for Clinical Research and Health Policy Studies; and Director of Mental Health Services Research at T-NEMC, was awarded TUSM's Distinguished Faculty Award for 2006. The award recognizes faculty who have made outstanding contributions to the medical school in teaching, scholarship and service to TUSM academic life, patients and associates.

Lee Goldman, M.D. '73, M.P.H. '73, executive vice president of Columbia University and dean of Columbia University's College of Physicians and Surgeons, was awarded the 2007 John Phillips Memorial Award by the American College of Physicians in April. The award is bestowed for outstanding work in clinical medicine. Goldman was also honored by the American Heart Association (AHA). The AHA Quality of Care and Outcomes Outstanding Achievement Award was presented at the AHA's Scientific Forum on Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke in Washington, D.C., on May 9.

1990s

Bonnie D. Kerker, M.P.H. '95, PH.D. '01, was married in New York in March to Peter J. Ephross. Kerker is the assistant commissioner of epidemiology services at the New York City Department of Health and Mental Hygiene. Ephross also works for the Health Department, writing in-house reports, journal articles and testimonies given at State Assembly and City Council committee meetings on mental health topics.

2000s

Heather M. Babington, P.A. '05, and Jeffrey A. Tomchik were married on October 27 in Bethel, Conn. Heather Tomchik is a physician associate in Waterbury Hospital's Department of Orthopaedics. Her husband served in the U.S. Marine Corps for six years and is now a firefighter in Danbury, Conn.

Brad Helfand, M.P.H. '03, received the American College of Healthcare Executives (ACHE) Early Careerist Healthcare Executive of the Year award for metropolitan Chicago in November 2006. ACHE is an international professional society of more than 30,000 health care executives who lead hospitals, health care systems and other health care organizations.

Badri Rengarajan, M.D. '99, and Avanti Ambekar, M.D., were married on October 8, 2006, in Chicago. Groomsmen included **Ron Yap**, M.D. '00. Badri and Avanti were introduced by **Matthew Falk**, M.D. '00, and his wife, Gloria Lee. Badri and Avanti live in San Francisco, where Badri is a biotechnology equity research analyst at Lehman Brothers and Avanti is a fellow in musculoskeletal and neuroradiology at the University of California, San Francisco.

Eric M. Poolman, M.D. '05, M.B.A. '05, FW '07, and **Emlyn S. Jones**, M.P.H., M.D. '07, were married in April at Harkness Memorial State Park in Waterford, Conn. The two met at Yale, where Poolman was a postdoctoral fellow in infectious disease. Jones is a resident in family medicine at Ventura County Medical Center in California.

SEND ALUMNI NEWS TO
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Oscar W. Avant Jr., M.P.H. '59, died on March 17 in Sumter, S.C. He was 75. Avant was an administrator at Barnwell County Hospital in South Carolina and chief of licensure and certification for North Carolina's department of human resources. He was also the executive director of a company that owned and operated four nursing homes, president of a health care and retirement center and owner of many nursing homes.

Arthur W. Boddie Jr., M.D. '67, died on October 22, 2006, in Chicago of complications related to frontal-temporal lobe dementia. He was 64. Boddie was retired as vice chair of the surgical oncology department at the University of Illinois at Chicago (UIC). He was recruited to UIC from the University of Texas Medical School as an associate professor of surgery in 1990 and was named vice chair of surgical oncology in 1997.

Richard Alan Cazen, M.D. '74, a gastroenterologist and HIV specialist in San Francisco, died of a brain tumor on April 26 in his hometown of Pittsburgh, Penn. He was 58. Cazen started his practice in 1981 as the AIDS epidemic was emerging and became a pioneer and activist in the treatment and protocol of the new disease. As a gastroenterologist, he maintained one of the few subspecialty practices in San Francisco, concentrating on not only the disease itself, but the gastrointestinal symptoms from AIDS and adverse effects from HIV-related drug interactions and toxicities.

Hunter Hall Comly, M.D. '43, died on February 16 in Denver of pancreatic cancer. He was 87. Comly, a psychiatrist and educator, spent his career treating children in Iowa, Michigan and California. As a researcher, he determined the cause of "blue baby syndrome," which he linked to nitrate contamination in water drawn from shallow wells. *JAMA: The Journal of the American Medical Association* cited this research in 1983 as one of the journal's 50 landmark articles. During his career he taught child psychiatry and pediatrics at the University of Iowa, was director of the Childrens' Center in Wayne County, Mich., and was in private practice in Iowa.

Thomas P. Cotter, M.D. '45, died on March 19 in Riverside, Calif., after a long illness. He was 85. Cotter served in the Army Air Corps in Riverside. He co-founded the Riverside Radiology Medical Group and was on the medical staff of Riverside Community Hospital. He practiced radiology until his retirement in 1991.

Philip G. Deane, M.D. '52, died on March 15 in Shaw Island, Wash. He was 83. Deane served in the 10th Mountain Division of the U.S. Army in World War II. After medical school he served his residency at Harborview Hospital in Seattle, then opened a pediatric practice on Mercer Island. In 1985 Deane and his wife, Lola, a nurse, took early retirement to work in medical service and teaching in American Samoa, Zimbabwe and Pakistan. Upon their return to the United States they worked with the Tulalip Tribes in the Puget Sound area.

Claude W. Delia, M.D. '50, died on April 12 in Myrtle Beach, S.C. He was 82. Delia served as a medical officer in the U.S. Army and in 1952 went to the Walter Reed General Hospital for a residency in pathology. He then spent two years as a military pathologist in Japan, Korea, Taiwan and the Philippines. In 1958 he became professional assistant to the scientific director of the American Registry of Pathology in Washington, D.C. In 1960 he joined the staff of Conway Hospital in South Carolina, becoming director of the laboratory. He resigned in 1995 to devote his time to surgical pathology.

Stephen J. Fricker, PH.D., M.D. '62, died on May 21 in Massachusetts. He was 80. Born in England, Fricker came to the United States to study at the Massachusetts Institute of Technology (MIT), where he received a doctorate in electrical engineering in 1953. He worked at the Lincoln Laboratory, a research and development center managed by MIT, before attending medical school. Fricker did his residency in ophthalmology at Massachusetts Ear and Eye Infirmary and continued to work there until February of this year.

Dorothy Y. Hall, M.P.H. '49, died on April 15 in Montpelier, Vt. She was 89. Hall was a public health educator in the areas of tuberculosis and diabetes and was active in Democratic political campaigns.

Howard B. Hamilton, M.D. '44, died on April 27 of a heart infection at his home in Falls Church, Va. He was 88. After his graduation, Hamilton served in the U.S. Navy, where he was assigned to the Atomic Bomb Casualty Commission in Hiroshima. He went on to an internship at Massachusetts General Hospital and research at the Long Island School of Medicine and the New York College of Surgeons. While in Japan he became a student of the ancient theatrical art of Noh, which features dramatic masks and carefully defined movements.

Thomas S. Harvey, M.D. '41, of Titusville, N.J., died on April 5 in Princeton of complications from a stroke. He was 94. During World War II Harvey did medical research with the U.S. Army's Chemical Research Center in Edgewood, Md. After the war he became an instructor in pathology and neuroanatomy at the Hospital of the University of Pennsylvania and in 1950 became assistant director of the hospital's Laboratory of Clinical Pathology. In 1952 he became director of the pathology laboratory at Princeton Hospital, where in 1955 he performed the autopsy on Albert Einstein. During the 1960s and early 1970s he was the pathologist for New Jersey State psychiatric hospitals and at the Veterans Hospital in Lyons. In the 1970s he moved to Kansas, where he was director of a commercial medical laboratory. He eventually entered general medical practice in Kansas and Missouri.

John V. Haxo, M.D. '51, died on March 19 in Warren, Conn. He was 82. In 1956 Haxo opened a private practice as a general surgeon in New Milford, Conn. He also served as chief of surgery at New Milford Hospital and was active on hospital boards until he retired in 1987.

Charles L. Hopper, M.D. '56, died on April 25 in Portsmouth, R.I. He

was 76. Hopper was a medical officer in the U.S. Navy, attending divers at the Underwater Ordnance Station in Newport, R.I. After a surgical residency at Hartford Hospital in Connecticut, Hopper returned to Rhode Island and began a practice as a general and thoracic surgeon. From 1967 until 1983 he was chief of surgery at Newport Hospital.

Thomas R. Johnson, M.D. '68, HS '75, died on February 19 at his home in Billings, Mont. He was 64. Johnson, an orthopaedist, became a fellow of the American Academy of Orthopaedic Surgeons in 1981 and served on the group's publications and patient education committees.

Beatrice Hruska Kaasch, R.N., M.P.H. '48, died on February 25 in Omaha, Neb. She was 94. Born in Lewistown, Mont., Kaasch attended a one-room country school before going to boarding school. She worked as a private-duty and staff nurse at St. Joseph's Hospital in Lewistown, taught at nursing schools in Montana and was a health educator for the Montana Tuberculosis Association and the Montana State Health Department. A longtime member of the Montana Nurses Association, she served as its president from 1944 to 1947.

James A. Kleeman, M.D. '46, HS '53, died on March 30 in Woodbridge, Conn. He was 85. Born in Springfield, Ohio, Kleeman attended the Taft School in Waterbury, Yale College and the School of Medicine. After serving in the U.S. Army in Hawaii, he returned to Connecticut to complete his residency in psychiatry and psychoanalysis. He wrote many papers on early child development and was a master fly fisherman.

Melvin Lewis, M.D., professor emeritus and senior research scientist in the Child Study Center, died on April 28 in New Haven. He was 79. Born and educated in London, Lewis was nationally and internationally known as a scholar and editor. During his 12-year term as editor of the *Journal of the American Academy of Child and Adolescent Psychiatry*, from 1975 to 1987, he transformed it into the flagship American journal at a time of rapid discoveries and developments in the field. Lewis was also the founding consulting editor of the *Child and Adolescent Psychiatric Clinics of North America*, which he led for 14 years. His scholarly achievements included the first three editions of the now-classic *Comprehensive Textbook of Child and Adolescent Psychiatry,* as well as numerous scientific articles. Originally trained as a pediatrician, Lewis directed the Consultation-Liaison Service in pediatrics at Yale for many years.

Roslyn L. MacNish, M.P.H. '41, died on February 21 in Hartford, Conn. She was 88. MacNish had worked as a research statistician for the State Department of Health in Connecticut. She was a member of the Charter Oak Photography Society, the Massachusetts Camera Naturalist and vice president of the New England Camera Club Council.

John J. McGillicuddy, M.D. '38, died on January 14 in Massachusetts. A veteran of World War II, McGillicuddy was an orthopaedic surgeon at Sancta Maria Hospital in Cambridge, Mass., where he was also head of orthopaedic surgery. He was an orthopaedic surgeon for Boston College and for the Boston Red Sox.

Stewart J. Petrie, M.D., HS '55, died of cancer at the Connecticut Hospice in Branford on March 17. He was 83. Petrie served in the Army Air Corps during World War II. He received his medical degree from Temple Medical School. In 1955 he entered private ob/gyn practice in the Naugatuck Valley. For many years he was chief of staff and chief of ob/gyn at Griffin Hospital in Derby, Conn. He was a fellow of the American College of Gynecology and the American College of Surgeons. He published three books about medicine during the Civil War.

Ernest L. Sarason, M.D. '39, died on November 28, 2006, in Syracuse, N.Y. He was 92. After a residency at Mount Sinai Hospital in New York and three years in the U.S. Army, Sarason returned to his home town of Syracuse in 1947. He was known as an outstanding surgeon and as a fundraiser and philanthropist whose efforts supported the Syracuse Symphony, the Syracuse Jewish Federation, the United Way and local hospitals.

William J. Wedemeyer, M.D. '46, died of cancer on November 25, 2006, in Walnut Creek, Calif. He was 84. Wedemeyer served as chief pathologist for the Atomic Bomb Casualty Commission in Japan, where he met his wife, Midori. In 1960 he accepted a position at Herrick Memorial Hospital in Berkeley, where he stayed for 25 years. In 1985 he left to work at the VA hospital in Martinez, Calif. He retired in 1994.

Paul W. Weld, M.D. '48, died on January 16 in Mendon, N.Y. He was 82. Weld was a diplomate of the American Board of Internal Medicine. He was a physician at Rochester General Hospital for 33 years and served as director of medical education, chief of physical medicine and director of the division of diagnostic ultrasound. He retired in 1991. He was an avid birdwatcher and passionate climber in the Adirondack Mountains.

Asa J. Wilbourn, M.D., HS '71, died on February 6 in Cairo, Ill. He was 68. Wilbourn had been a staff neurologist at the Cleveland Clinic Foundation since 1973 and for more than 33 years directed the electromyography laboratory. He received his medical degree from the Northwestern University School of Medicine in 1964, and after an internship in Dallas joined the U.S. Air Force. As a flight surgeon during the Vietnam War he received two Distinguished Flying Cross awards and the Airman's Medal. At the Cleveland Clinic he became an internationally recognized expert in electromyography and neuromuscular diseases.

SEND OBITUARY NOTICES TO

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TERRY DAGRADI

A surprise for medical school's first grandmother

Karen Morris-Priester, M.D. '07, who received her medical degree on May 28, hopes she'll be remembered for more than being the first grandmother to graduate from the School of Medicine.

"It's kind of surprised me that that's what people think about, because there's a whole lot more that I've accomplished," said the 44-year-old mother of five and grandmother of four, "but I'm not complaining, because it's one reason I've been able to impact a lot of younger people."

Her story of deferred dreams, resolve and sacrifice [See "Long Road to Cedar Street," *Yale Medicine*, Winter 2003] inspired her classmates and professors, who asked her to carry the school's banner at Commencement. It also caught the eye of Oprah Winfrey, who invited Morris-Priester to be part of a "Cheers for You" episode of her television show on May 9.

The week before, Morris-Priester's teachers had lured her to a classroom for "an important graduation meeting." Instead, Oprah appeared on a video screen to tell Morris-Priester and her assembled classmates about the honor. "Oprah was saying my name!" said the shocked Morris-Priester as her fellow students cheered. "You don't expect Oprah to be talking about you!"

Following graduation, Morris-Priester began an internship at Lehigh Valley Hospital in Allentown, Pa., to be followed by an anesthesiology residency at Brigham and Women's Hospital in Boston.

While at Yale, Morris-Priester served on two national committees aimed at increasing diversity in medicine and dentistry and coordinated the Yale chapter of the Summer Medical and Dental Education Program, which helps disadvantaged students prepare for application to medical and dental school.

During her appearance on *Oprah*, Morris-Priester learned that AMBI Skincare, a Johnson & Johnson company, will pay her medical school debt. Johnson & Johnson is also establishing a scholarship in her honor to increase the number of minority women in the sciences. Morris-Priester's role in that effort will surely involve public appearances.

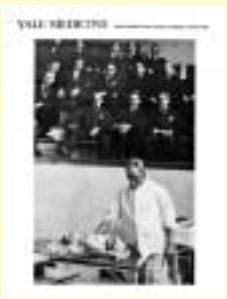
Already a popular speaker at events geared to young people, Morris is most pleased when older members of the audience approach her. "They tell me they've put off something they've always wanted to do, but after hearing me, now they're going to give it a try."

—Jennifer Kaylin

Bone Engineering
—Alumni Bulletin
January 1957

"An unusual research project involving an orthopaedic surgeon and an engineer from the Yale faculty was the subject of a recent nation-wide television program originating from the Yale-New Haven Medical Center. Dr. Charles O. Bechtol, associate professor of orthopaedic surgery, heads the research work on bone engineering. His colleague is Henry Lepper, Jr., associate professor of civil engineering. Biomechanics of bone and muscle are being studied in an attempt to correlate the structure and biologic characteristics of bone with structural characteristics of metal. Such information is basic to considerations regarding the design and use of various metals in bone splints and internal fixation of fractures. Another aspect of the project deals with the microscopic structure of bone and is under the direction of Dr. Harold M. Frost, Jr., assistant professor of orthopaedic surgery. His particular interest is the changes in bone structure seen in the process of aging.

"The manner in which this research contributes to a better understanding of the treatment of fractures was shown on 'Medical Horizons' sponsored by CIBA Pharmaceutical Products, Inc., over the ABC-TV network in December."



A Review: A Sense of the Ending
—Yale Medicine
Winter 1982

" 'A Sense of the Ending' is a television production about terminal illness as seen from the quite different perspectives of two women who had cancer. It was directed and produced by William Guth, director of Media Communications, Yale School of Medicine.

"Richard Sewall, professor emeritus of English at Yale, related with compassion and poetry 'the very remarkable experience' of his wife Mathilde's death. Mrs. Sewall, a potter and weaver, was a woman whose spirit and sense of humor remained until the day she died at their home in Bethany, Connecticut. ...

"Charlotte Barnard spent the last six months of her life in the hospital, conscious—reading and 'thinking about things'—and attached to an intravenous, hyperelementation [sic] life care pump, with a tube out of her nose. She, too, was a woman of tremendous courage and a sustaining sense of humor. She had hoped to be able to die at home, but circumstances of her death necessitated hospitalization.

"During those six months, Mrs. Bernard did a great deal of thinking about her situation and what she could do to improve similar experiences of other patients. She agreed to be interviewed for a short videotape prepared for a seminar on medical ethics for Yale medical and law students. Her physician and friend, Dr. Howard Spiro, professor of medicine and well-known gastroenterologist, conducted the provocative and moving interview."

JULIE BROWN

CADAVER BALL MARKS END OF FIRST-YEAR ANATOMY COURSE

On March 24 about 200 revelers gathered at the New Haven Lawn Club to celebrate the end of the first-year anatomy course in an annual ritual known as the Cadaver Ball. A longstanding tradition at medical schools around the country, at Yale the celebration is held in conjunction with a service honoring the individuals who have donated their bodies to the medical school. Those attending the ball included faculty; most first-year medical students; and students from other classes and from the public health and graduate school departments. Bryan Hong, one of the organizers of the ball, danced with his girlfriend, Laura Hahn.

—John Curtis

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