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Once an exclusively male bastion, surgery is beginning to resemble the rest of academic medicine as more women join its faculty ranks.



ON THE COVER

Barbara Kinder was one of the first two women to complete Yale's general surgery training in the late 1970s. The operating rooms have changed remarkably since then, with a steadily increasing number of women entering the field. At Yale, 17 percent of the surgery department's M.D. faculty is female, compared to a national average of 11 percent.

BACKGROUND

Endocrine surgeon Julie Ann Sosa scrubs in before starting a case.

BACK COVER

Ronnie Rosenthal, who specializes in geriatrics, is chief of surgery at the VA Connecticut Healthcare System's West Haven campus. For profiles of Rosenthal and other women surgeons at Yale, see pages 26 to 32 and our website, info.med.yale.edu/yymm.

Photographs by Terry Dagradi

WINTER 2004

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info.med.yale.edu/ymm

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From the witness stand, more evidence on malpractice

Your article on the malpractice crisis ["Showdown," Summer 2003] prompted me to think about the huge challenges our profession confronts in the face of rising insurance premiums and jury awards against physicians. During 22 years as an expert witness in otolaryngology malpractice cases, I have learned that lawsuits can arise from almost any doctor-patient interaction and that a jury's determination of guilt or innocence is not always rational.

My first experience on the stand was in 1981 in a lawsuit filed against a physician who had treated a 20-year-old man for earache. Four days later, he came to a large, inner-city ER with stupor and seizures and died while under care. A post-mortem revealed high levels of heroin in his blood and a temporal lobe abscess, probably related to talc deposits in his heroin mixture. But the abscess was near the site of his recent ear infection, and the ENT was sued for alleged failure to diagnose a life-threatening situation.

After testifying on behalf of the physician, I was amazed to learn the case had been settled for an astounding \$450,000. I was even more aghast to hear that all the jurors had thought the physician at fault and would have awarded \$1.5 million to the plaintiff. The jury foreman told the judge that I had done a fine job but did not sway them.

Over the next 18 years I acted as an expert for the defense in more than 200 cases. During the past four years I have also done a small amount of plaintiff expert review, both to make me a more acceptable witness before the courts and in recognition that there are incidents of gross negligence in otolaryngology. It is true that HMOs and poor reimbursement have frustrated doctors, and it seems that these frustrations have contributed to worsened communication between referrers and

specialists and between physicians and patients. The easiest way physicians can avoid lawsuits is to listen to patients and to be honest with them about expectations. The level of distrust patients have in their medical care is at an all-time high, and this is something physicians must address.

I chose to leave my practice of 25 years to two well-trained otolaryngologists who are 10 years and 21 years younger than I am. I have no clear solution that will help them cope with the dilemmas of our malpractice crisis. National health care has been a failure in Canada (patients who can afford the best care come to our country quickly). The huge multispecialty groups that are gobbling up solo practices would appear to insulate them from litigation, but consolidation has not decreased the number of lawsuits.

We must police ourselves and not allow attorneys to do it for us. The small number of physicians who are providing standard care should be identified by their colleagues and not be allowed simply to relocate to another state to inflict harm on a new community.

I wish the next generation of physicians good luck. It seems that fewer of our graduates, products of the Yale System, are going into clinical practice these days. Our grandchildren will depend on this group for their medical care. Who will remain to upgrade this talent gap?

*Donald Kent, M.D. '72, HS '76
Palm Harbor, Fla.*

Yale Medicine

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Changing medicine's cultural landscape

When I was a child in Washington in the early 1960s, I was present for, if not exactly cognizant of, the reaching of several milestones on the road to equal opportunity. One was Martin Luther King's "I Have a Dream" speech, which I witnessed from the Mall near the Lincoln Memorial with my parents at the age of 3. Another fell under the general heading of school desegregation; my first classroom experience was at a nursery school and kindergarten called Friendship House, which brought together children from varied racial, social and economic backgrounds. Friendship House was a success, and I still have a yellowed *Washington Post* photograph from the day Lady Bird Johnson came to our classroom for a visit.

Despite this atmosphere of equality, neither of my parents can recall an African-American physician among their acquaintances or on the staff at Children's Hospital, where my grandmother worked as a receptionist in one of the clinics. In fact, by 1970 only 2 percent of American medical students were members of underrepresented minority groups, compared to 13 percent today. While a significant step forward, that increase is not enough to balance the skewed demographics of American medicine, a situation that has inspired medical schools to try to diversify the physician workforce.

The article that begins on page 16, "An Insider's View," by Jennifer Kaylin, describes one of several efforts at Yale to promote diversity in the medical profession. The Summer Medical Education Program, funded by The Robert Wood Johnson Foundation, has graduated more than 765 participants in the past eight years at Yale and increased the number of students of color bound for careers in medicine. The six-week program is organized around the central idea that by exposing applicants to the culture of academic medicine and offering help in the classroom, it can greatly increase their chances of admission to medical school. The undergraduate students who come to New Haven each summer go on rounds, observe in the OR and ER and strengthen their communication and interviewing skills. The program works, says its co-director, at least in part "by fundamentally [altering] their view of the world."

Our cover story, "Closing the Gender Gap," tells of another demographic change, this one affecting the tradi-

tionally male-dominated discipline of surgery. Since the mid-1970s, Yale has trained an increasing number of female surgeons and now has one of the highest percentages of women on the surgical faculty. Contributing Editor Cathy Shufro explores the factors behind this change and profiles eight women on the Yale faculty, starting on page 26 and continuing on our website, info.med.yale.edu/yymm.

Finally, a parting note that takes us back to Washington, this time to the National Press Club. There, in early November, Associate Editor John Curtis received a top award from the Association of American Medical Colleges (AAMC) for his 2002 article, "Everyone Loves the Yale System. So Why Can't They All Agree?" It was the second year running that John received an Award of Distinction from the AAMC for his feature writing, and I doubt it will be the last time he distinguishes this magazine or the School of Medicine. If you missed these articles, they, too, may be read on our website by visiting the address above and selecting "Awards."

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SECOND OPINION BY SIDNEY HARRIS





TO MASZ WALENTA

Preparing schools for the worst-case scenario

A Yale pediatrician trains educators in New York and around the world to help children cope with crisis.

In a hotel conference room last April in New York, Yale pediatrician David J. Schonfeld, M.D., guided 100 school counselors, teachers and administrators through a hypothetical school crisis: the star of a high school play has died of cancer, and classmates hold a fund-raiser in her memory to benefit medical research. When a television news team covers the event, they learn that a second student had died of the same form of cancer. They also report that toxic substances have been found in the soil around the school.

The next day half the student body is absent, and the school is surrounded by reporters; finally, the principal says that she has been diagnosed with another form of cancer.

Working in teams, Schonfeld's audience had to respond to each stage of the crisis. They discussed how to determine whether there were any health risks to students and staff; what to tell staff, students, parents and the press; and how to support the students, the principal and other staff. The teams had 10 minutes to spring into action, the same deadline many New York City educators faced on September 11, 2001.

In fact, the attacks on the World Trade Center were a major reason for the exercise. New York City school officials had asked Schonfeld, an associate professor of pediatrics with an appointment in the Child Study Center

who has been helping schools deal with crises for more than a decade, to train response teams that include educators, administrators, mental health professionals, nurses and safety personnel from the city's approximately 1,200 schools. Along with Scott R. Newgass, M.S.W., and David Szydlo, M.D., PH.D., Schonfeld provided more than 50 full-day workshops for teams from throughout the school system. With colleagues at the National Center for Children Exposed to Violence (NCCEV), he also developed guides for talking about 9/11, the anthrax scares, the war in Iraq and death.

Though the participants in the cancer-scare scenario groaned with each mounting crisis, they found the discussion instructive. Most had lived through 9/11, when administrators had to decide whether to send children home amid the chaos. Parents flocked to schools seeking not only their children but also information. News spread by word of mouth, more distorted with each telling. Teachers waited for hours with students who had no way to get home. And educators had to explain to children why this was happening while grappling with their own distress.

"It was hours and hours of dealing with things you never could have anticipated," said Janet Hughes, a Bronx high school principal. "There were a lot of things on the school level that people were just not prepared to deal with."

And not only in New York. Educators around the world are thinking more about how to help children cope with disasters, including plane crashes and earthquakes, as well as political violence. Schonfeld has also provided training in England, Sweden and Israel; in March 2003, he provided a series of workshops in Osaka and Tokyo as part of the establishment of Japan's National Mental Support Center for School Crisis.

Ten years ago Schonfeld was running the School Crisis Prevention and Response Initiative in New Haven, with an eye to designing a national model.

Today that model is in place as part of the NCCEV at the Yale Child Study Center. NCCEV grew out of the Child Development-Community Policing Program established by Steven Marans, PH.D., the NCCEV's director, and the late Donald J. Cohen, M.D. '66, who led the Child Study Center from 1983 until his death in 2002.

Schonfeld's model is broad enough to help guide children through a range of events. It helps educators plan for the needs of children and school staff at a time of crisis. It also aids schools in identifying and addressing symptoms of emotional distress and devising memorial events that are meaningful and healing. And the model emphasizes the importance of letting students vent. "When comments or questions come up naturally, if the teacher is ready for them, there can be useful discussion," Schonfeld said.

Schonfeld wants to bring mental health needs into the mainstream of pediatric medicine. As the physical health of children has improved, attention in pediatrics has shifted to developmental and behavioral concerns, a relatively new area of specialization. Yale's Department of Pediatrics recently created a subsection for developmental-behavioral pediatrics, and it is the site of one of nine fellowship programs funded in July 2003 by the Maternal and Child Health Bureau, an agency of the Department of Health and Human Services, for training in the emerging discipline.

In November 2002, the American Board of Pediatrics offered the first exam for certification in the field, but Schonfeld wasn't immediately eligible to take it, despite his obvious familiarity with the topic. He, along with other members of the subspecialty board, had to take a different test—one that they hadn't written themselves.

—Anne Thompson

In gleaming anatomy lab, more room to work and a new way of teaching

When the 100 students of the Class of 2007 donned their scrubs and rubber gloves on September 5, they became the first group to study anatomy in the new labs at the Anlyan Center for Medical Research and Education. As first-timers they had no point of comparison for the brand-new, shining, stainless steel facilities. But to anyone who has ever set foot in the old dissection rooms, one change was obvious.

"I'm working without a mask," said Lawrence J. Rizzolo, PH.D., associate professor of surgery and course director. He was, of course, referring to the strong odor of formaldehyde—or lack of it—in the new lab. Each station has a vent that draws odors out, and that drew a word of caution from William B. Stewart, PH.D., associate professor of surgery and chief of the anatomy section. "The last thing you ask yourself is, 'Did I turn the vent off?' Because if the vent is on 24 hours a day, your cadaver will be sucked dry," he said.

Rizzolo delighted in another difference—more space. "I can walk between tables," he said.

The extra space and absence of strong odors are more than mere creature comforts. They've led to a change in the study of anatomy. "Students often come back to work extra hours," Rizzolo said. "In the old lab your eyes would get itchy and your throat would get scratchy. The odor made you sick to your stomach if you stayed a long time."

The tables are bigger and there are more of them—40 as opposed to 32.

That means each dissecting station has four instead of five students. (Although only 25 tables are needed for medical students, others are used by the Physician Associate Program, residency programs and other institutions, such as Quinnipiac University, which don't have their own anatomy facilities.) Computer terminals, which were being installed at each station during the fall, will allow students to refer to online resources while they are dissecting. "If a question comes up at the dissection table, the instructor can just say, 'Let's look at the computer resource,' and make a point you can't make if the computers are 10 steps away," Rizzolo said.

Perhaps the biggest change for the first-year anatomy course has been the creation of what the faculty call "learning societies" within the class. Each is made up of 20 students and a mentor. "The idea is for these groups to develop a sense of community and share each other's work," Rizzolo said. "In the old labs, where everyone was standing on top of one another and it was hard to move around the lab, students would look at their own dissection and not look at who was next to them. ... The geography of the lab has allowed us to organize this massive number of students into manageable groups that then become a community."

—John Curtis



William Stewart, chief of the anatomy section, works with first-year students, from left, Krishan Soni, Michael Martinez, Aida Kuri and Danielle Guez, as they make their first incision into a cadaver.

Clinical-skills course prepares students for the wards and a new Step 2

Medicine became very personal for Jessica Kattan, a second-year student, shortly after she took a patient's history. "I figured he probably had the flu," Kattan said. But tests revealed Burkitt's lymphoma, a rare and aggressive form of cancer.

"The next time I saw him, he was very ill from his chemo," Kattan remembered. "Before that, this disease had just been some words in a book to me."

Kattan's experience was part of the "Doctor-Patient Encounter." Now called the "Preclinical Clerkship," it is a two-year course aimed at teaching skills that students will need to care for patients when they begin their clinical rotations. Margaret J. Bia, M.D., who has directed the course since 1999, sums up its content as the heart of "doctoring"—sensitive interactions with patients, thoughtful diagnoses and effective treatment plans.

For the past five years, Yale students have had their history and physical exam skills assessed at the nearby University of Connecticut assessment center at the end of their second year. This year, students are returning to the center at the end of their third year for an assessment of history and physical exam skills.

Students will also have to demonstrate their mastery of these skills on a new national exam that all medical students must pass in order to obtain a medical license. The exam, a new, second component of Step 2 of the United States Medical Licensing Exam (USMLE), will be required of all medical students graduating in 2005.

This emphasis on skills assessment is part of a national movement recognizing the importance of clinical skills in medical training and clinical care. According to a Harris Poll, two-thirds of Americans support the new national exam, a one-day test that strives to replicate a typical doctor's work day. Students will examine 10 standardized

patients—actors feigning symptoms and ailments—and formulate diagnoses and treatment plans.

The board that oversees the USMLE sees this as a matter of public safety, since good clinical and communication skills correlate with a lower incidence of malpractice suits, better treatment compliance and greater patient satisfaction. Slightly more than half of the medical schools in the United States now require a clinical-skills exam before graduation, yet a survey by the USMLE found that 4 percent of medical students had never taken a history or conducted a physical under the tutelage of a faculty member.

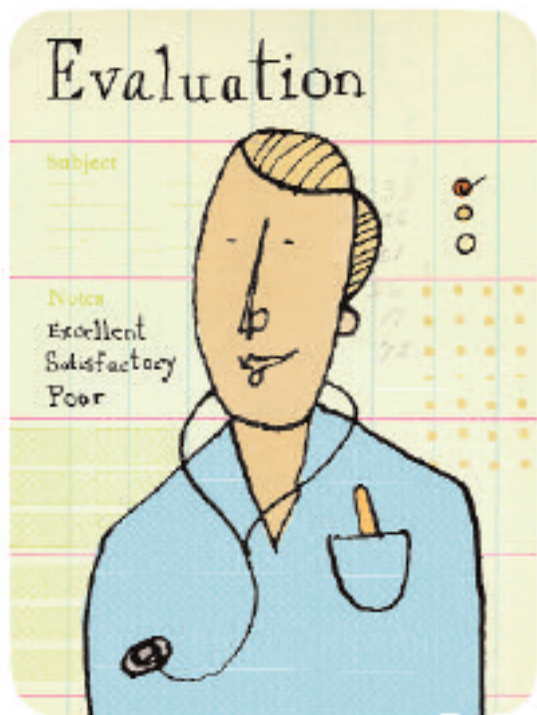
The exam is meeting resistance from the American Medical Student Association, because it will increase students' debt burdens by \$975, the cost of the exam, plus expenses to travel to testing sites—Philadelphia, Atlanta, Chicago, Los Angeles and Houston.

The new exam reflects a change from times past, when students picked up their clinical skills in large part by observing physicians. "Now we have 20-minute clinic visits, which markedly reduces the available time for students to practice and receive feedback," Bia said.

The "Preclinical Clerkship," taken in the first two years of medical school, fills that gap with weekly sessions that emphasize history taking and physical examinations. Students work with faculty to develop specific skills and meet weekly with clinical tutors who observe them taking histories and performing physical exams. Students learn communication skills—history taking, social history taking, breaking difficult news—in workshops where they practice on standardized patients before seeing real patients.

"Hopefully these developments in clinical-skills acquisition and assessment will lead to students graduating with a greater mastery of the skills they need to be compassionate, competent physicians," Bia said.

—Colleen Shaddox





HONORING AN NMR PIONEER

A June symposium, “From Molecules to Mind: Celebrating the Contributions of Robert G. Shulman to Biological NMR,” honored Robert G. Shulman, PH.D., Sterling Professor Emeritus of Molecular Biophysics and Biochemistry, for his use of nuclear magnetic resonance (NMR) to study metabolic pathways in live subjects. Shulman, a pioneer in magnetic resonance research, has used high-field NMR spectroscopy to follow chemical reactions and brain activity and to develop methods for localizing brain function. The symposium drew researchers and colleagues from around the world.

—John Curtis

For interns, a place to eat pizza and unload the stress of a frenetic first year

“Do I know enough to care for this patient?” “I feel so out of touch with the rest of the world.”

These thoughts are likely to pass through the mind of the typical intern during the first year of residency, a whirlwind time that has a component of self-doubt accompanying rapid learning and maturation. In the past, interns kept such worries to themselves. But at the Waterbury Hospital Health Center, 20 miles north of New Haven, first-year residents gather at noon each Friday to compare notes on the challenges and rigors of training.

The lunchtime talkfest is led by Seth R. Segall, PH.D., director of psychology at Waterbury Hospital, and Auguste H. Fortin VI, M.D., M.P.H., director of the psychosocial curriculum at Yale’s Primary Care Residency Program. Fortin, who said he was

“concerned that the house staff didn’t have a forum to share the feelings and the stresses of being an intern,” began holding the weekly meetings with Segall three years ago.

What is said in the room stays in the room. Over pizza and Pepsi, the interns talk about the issues that affect them on the ward—the death of a patient, the fear of an accidental needle stick, the grueling schedule that can lead to marital stress. “This is not a regular life,” said intern Juanita Smith, M.D., “so if you have other people around you who say, ‘Yes I feel that too,’ it makes you realize that your feelings are normal for the context that you are in.”

Segall starts each session with a few moments of meditation. “We’re training physicians to listen to themselves,” he said, “and I think that will help them to be more compassionate doctors.” Fortin would like to expand the program to Yale’s other primary care residency training hospitals, St. Mary’s in Waterbury and Yale-New Haven.

—Lisa Quirindongo

et cetera ...

LATE NEUROSCIENTIST HONORED

In recognition of her pioneering work on the brain’s frontal lobe and her studies of the cerebral cortex and its links to schizophrenia, the National Alliance for Research on Schizophrenia and Depression (NARSAD) has created a prize to honor Patricia S. Goldman-Rakic, PH.D., who died in July after being struck by a car. And in November, Pfizer announced that it will fund a graduate fellowship in neuroscience in honor of Goldman-Rakic, the Eugene Higgins Professor of Neurobiology. Each year, an outstanding graduate student in the Combined Program in Biological and Biomedical Sciences will receive full support for a year’s study.

NARSAD announced The Dr. Patricia S. Goldman-Rakic Memorial Prize for Cognitive Achievement in Neuroscience in October. The annual \$40,000 prize will reward “excellence in neurobiological research at the cellular, physiological, or behavioral levels that may lead to a greater understanding of major psychiatric disease.”

The first recipient of the award is Solomon H. Snyder, M.D., chair of neuroscience at Johns Hopkins and a longtime friend and collaborator of Goldman-Rakic. Snyder discovered the role nitric oxides play as a class of neurotransmitter in the brain and created techniques for understanding and manipulating brain receptors.

—John Curtis

CHAGAS DRUG LICENSED TO NONPROFIT

The nation’s first nonprofit pharmaceutical company has licensed a new class of compounds from Yale and the University of Washington that could lead to treatments for the parasitic Chagas disease, which affects between 16 and 18 million people, mostly in Latin America.

The compounds, called azoles, were developed by teams led by Andrew D. Hamilton, PH.D., deputy provost for science and technology at Yale, in collaboration with faculty at the University of Washington. Azoles inhibit production of a chemical that is necessary for the survival of the parasite *Trypanosoma cruzi* without harming human cells.

The Institute for OneWorld Health in San Francisco will have exclusive license to develop azole compounds.

—John Curtis

The surgical approach to morbid obesity

Rising demand for gastric bypass procedure keeps Yale surgeon busy and looking for reinforcements.

Americans spend \$33 billion annually on products and services they believe will help them lose weight. The investment is usually a bad one, as sustained weight loss remains an elusive goal in an increasingly supersized nation. According to the U.S. Surgeon General, 61 percent of American adults are

overweight or obese (as are 13 percent or more of children aged 6 to 19) and face a higher risk for diabetes, heart disease and other illnesses.

This may be why Robert L. Bell, M.D., HS '01, is one of the busiest surgeons on the Yale faculty. Recruited in 2002 after a fellowship at the University of Maryland, Bell brought with him a minimally invasive procedure known as laparoscopic gastric bypass, in which the surgeon uses special instruments to create a small gastric pouch, then attaches a y-shaped limb of small bowel to form the outlet

to the intestines. After surgery the patient's appetite is sated by very small amounts of food; a 50 to 80 percent loss of excess body weight is typical. The procedure is appropriate for patients who are morbidly obese—generally 100 to 400 pounds overweight—and for whom other methods of weight loss have failed.

Similar procedures were performed occasionally at Yale, as open surgery, about 15 years ago. Doing the bypass laparoscopically, while reducing complications and discomfort for patients, is relatively rare because of the elite skill level the procedure demands, said Robert Udelsman, M.D., M.B.A., chair of the Department of Surgery, who recruited Bell to Yale. Seeing someone perform the delicate operation guided only by video images amazes students and veteran surgeons alike. Bell, said Udelsman, “is of the Star Wars generation.” Speaking at grand rounds in September, Udelsman said Bell has a six-month waiting list and may soon be joined by a second surgeon. “It may be we’ll need seven bariatric surgeons,” Udelsman said. “I don’t know.” Patient interest in the procedure has soared nationally since NBC weatherman Al Roker lost more than 100 pounds following the surgery in 2002.

Pre- and postoperative care are as crucial as the surgery itself, said Bell, and are the factors that distinguish well-run programs. Each patient must be evaluated by a psychiatrist or psychologist and a dietician before being accepted as a candidate for surgery. All of Bell's patients are what he terms “professional dieters” who have gone the traditional diet and exercise route many times without being able to shed weight permanently.

But for Bell's patients, losing weight is a matter of health more than appearance. “You’re not going to be a size 2,” Bell tells them. His goal is to bring their weight down enough to reduce the health risks associated with obesity. Postoperative support is equally important. With less room to accommodate



CALEF BROWN

food, patients need to be sure that they are using the smaller gastric pouch to get adequate nutrition; otherwise protein deficiency and other complications can result.

Hunger is not a problem. “The brain is fooled into thinking that the body is in a full state,” said Bell. Levels of the appetite-stimulating hormone ghrelin, which spikes prior to a meal and dips after a meal, stay consistently low in gastric-bypass patients. This may hold some clue as to why these patients generally avoid the “yo-yo” dieting syndrome that plagues many who try to lose weight by nonsurgical means.

Acceptance of surgical treatment for obesity is growing, but societal preconceptions about obesity linger. “It truly is the last accepted form of bigotry,” Bell said. The simplistic assumption is that obese people are overweight because they are lazy and/or they eat too much, but science increasingly belies that idea. One of Bell’s colleagues is fond of giving the bariatric surgeon some advice on dealing with patients: why don’t you just tell them to eat less?

“Of course, he’s kidding,” said Bell. “Mostly.”

—Colleen Shaddox

When it comes to defining outcomes, caregivers and patients don’t always agree

Physicians often turn to a patient’s friends or family members to make a decision on medical treatment. But a Yale study has found that seriously ill elder patients and caregivers disagreed approximately 40 percent of the time over the acceptability of outcomes such as memory loss, physical impairment and chronic pain.

According to Terri R. Fried, M.D., lead author of a paper published in the *Archives of Internal Medicine* in September, this is “the first study that asked how acceptable different states of health would be as a result of treatment.” Fried, an associate professor of internal medicine (geriatrics) at the School of Medicine, said caregivers may not be representing patients’ desires.

Although approximately 60 percent of patient-caregiver pairs agreed on the acceptability of severe memory loss as an outcome, about 40 percent could not agree. An outcome of chronic pain generated 35 percent disagreement, and being bed-bound evoked 43 percent disagreement. Without treatment, patients faced further decline and death. The 193 patients in the study were over age 60 and seriously ill with cancer, congestive heart failure or chronic lung disease.

According to Fried, patients and their caregivers are often in denial about the illness and try to spare each other’s feelings. The failure to discuss difficult possibilities leaves caregivers ill-prepared to make treatment decisions for seriously ill patients.

Physicians must educate the patient about the course of the illness and the decisions that need to be made, Fried said. “Most patients do have strong views about the quality of life,” she said. “We need to translate that into choices that are useful in medical decision making, and that’s what we tried to do in the study.”

—Mary Anne Chute Lynch

et cetera ...

CLOZAPINE AND DIABETES RISK

Patients taking the antipsychotic drug clozapine have a higher-than-average chance of developing diabetes, but recent research suggests that clinicians may not be finding at-risk patients.

In a study by Michael J. Sernyak Jr., M.D., HS ’91, professor of psychiatry, a screening of 121 patients taking clozapine—none previously diagnosed with diabetes—found that 23 percent showed elevated glucose levels, a frequent precursor to diabetes. The results suggested that a patient taking clozapine should be followed closely, said Sernyak, chief of psychiatry at the VA Connecticut Healthcare System in West Haven. Sernyak said that early intervention would reduce morbidity and the high costs of the complications of diabetes. The study was funded by the Department of Veterans Affairs and reported in May in *The Journal of Clinical Psychiatry*.

—Cathy Shufro

DRUGS AND THE ADOLESCENT BRAIN

The adolescent mind that impels teenagers to dye their hair purple and go airborne on skateboards also makes them more vulnerable to drug addiction. According to an analysis by Yale researchers of more than 140 studies in the basic and clinical neurosciences, their stage of brain development is to blame. “Several lines of evidence suggest that sociocultural aspects particular to adolescent life alone do not fully account for greater drug intake,” said R. Andrew Chambers, M.D., assistant professor of psychiatry and lead author of the study published in June in *The American Journal of Psychiatry*. “And while we strongly suspect that genetic factors in individuals can lower the threshold of drug exposure required for ‘tripping the switch’ from experimental to addictive drug use,” Chambers said, “here we have a phenomenon where a neurodevelopmental stage common to virtually everyone, regardless of genetic make-up, confers enhanced neurobiological vulnerability to addiction.”

—Cathy Shufro

On tumor's surface, a telltale molecule

Yale scientists discern an abnormal sugar that gives cancer cells mobility but also gives them away.

The little white grains that sweeten our cereal at breakfast are usually all we have in mind when we speak of “sugar.” Inside the human body, though, sugar exists in many forms, most of them readily convertible to energy. Each of these contributes to everyday functioning and the maintenance of general good health. But when John M. Pawelek, PH.D., senior research scientist in dermatology, observed strangely branched oligosaccharide molecules crowded together on the surface of one particular type of cell, he knew those sugars had nothing to do with good health: the cells had all come from human metastatic tumors.

“There have been 20 years of work, *in vitro* and in animal models, showing

that cancer cells tend to exhibit sugars on their outer surface that aren't present on their normal-cell counterparts, but no one had sat down and said, ‘Let's look for these sugars in human cancer cells,’” said Pawelek. When he and Tamara Handerson, M.D., of Tufts University did just that, using a Yale-designed tumor microarray, they were surprised at the near-universal results. “We've now looked at slides from perhaps 500 different human metastases and found just a handful that don't have these sugars,” said Pawelek. Handerson and Pawelek published their findings in the September 1 issue of the journal *Cancer Research*.

Normally, such oligosaccharides appear only on the surface of the immune system's white blood cells, or leukocytes, where their function is to allow the leukocytes to move on their own—as they must do in order to patrol the body and attack foreign cells effectively. In cancer cells, the same power of movement is conferred by the abnormal oligosaccharides on their surface and may play a key role in metastasis, the spread of malignant disease from one organ or part of the body to another.

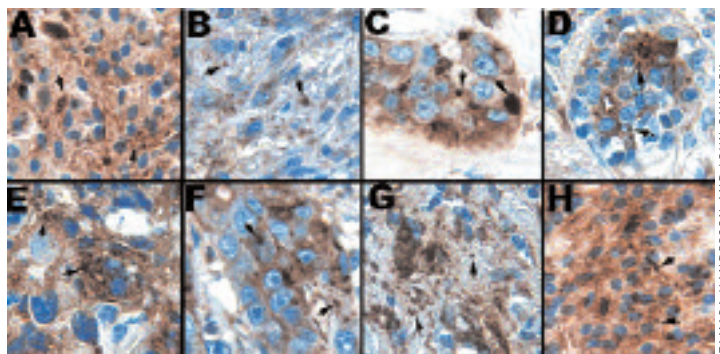
But the oligosaccharide coating on the cell surface that makes the tumor cells mobile may also make them easier to find and more vulnerable to cancer-suppressing therapy, says Pawelek. Since the branched oligosaccharides

appear almost exclusively on cancerous cells and are readily detected by a method of staining known as lectin histochemistry, the sugar coating provides a strong tool for diagnosis as well as for locating precisely the populations of cells that require treatment. Pawelek and Handerson, in collaboration with Robert L. Camp, M.D., PH.D., associate research scientist in pathology, and David L. Rimm, M.D., PH.D., associate professor of pathology, also carried out studies focusing specifically on breast cancer, in which they found that the quantity of abnormal sugar present in cells from a patient's biopsy is a reliable inverse index of the patient's odds for survival: the more oligosaccharides, the greater the likelihood that the cancer will be fatal. The index seems to work independently of the well-known risk factors: stage and type of cancer, age of patient and even the extent of metastasis. As Pawelek sees it, “This is a completely new predictor.”

At the same time, the pervasiveness of the sugar coating among cancerous cells means that any treatment that destroys tumors by attacking the oligosaccharide molecules could probably be applied to a broad range of carcinomas, from cancer of the breast, lung or colon to prostate cancer or Hodgkin's lymphoma. “What we have now is a universal target,” said Pawelek, adding, “If you have something that is characteristic of all metastases, it's really worth your while to go after it.”

While continuing to apply the tumor microarray technique to as many types of cancer as possible, the scientists are also seeking to learn more about the workings of the branched oligosaccharide structures on the surface of tumor cells. Most important, said Pawelek, “We're going to put all our efforts into exploiting these sugars for therapy, because in the end, we'd rather get rid of them than have them here to study.”

—Sandra Ackerman



Stains on a microarray of human carcinomas show the presence of sugars, which are particularly prominent in metastases.

TAMARA HANDERSON AND JOHN PAWELEK

A new class of RNA molecule may help cells decide how and when to grow

Two members of a class of tiny RNA molecules discovered only a decade ago have been shown to play a role in the timing of cell differentiation, according to a Yale researcher.

Biologist Frank J. Slack, PH.D., who four years ago discovered the microRNA *let-7*, the second microRNA known to scientists, says that understanding the function of these regulatory RNAs in the millimeter-long nematode *C. elegans* may provide insight into human biology as well.

“Because *C. elegans* shares half its genes with humans, we hope to extend to humans what we’ve learned about how microRNAs function in *C. elegans*,” said Slack, an assistant professor of molecular, cellular and developmental biology, whose findings were published in *Developmental Cell* last May.

Slack showed that these noncoding RNAs provide temporal cues that control the larval worm’s maturation. The microRNAs determine when key DNA-binding proteins are active. MicroRNAs turn off the genes that block neuronal development and cell differentiation, thus ensuring that differentiation occurs at the right time.

Although the first microRNA, *lin-4*, was not detected until 1993, microRNAs are now known to occur in the cells of many organisms, from weeds to humans. MicroRNAs are identified by their shape, initially a hairpin, and by their small size. (The ones Slack studied are 21 nucleotides long, while messenger RNAs generally exceed 1,000 nucleotides.) “They’re pretty widespread, and yet we didn’t know about them for so long. That’s why everybody is so excited,” said Slack. “The field has exploded.”

Slack was a postdoctoral fellow at Harvard in 2000 when he identified *let-7*, seven years after the discovery of *lin-4* by Victor R. Ambros, PH.D., at Dartmouth. Slack’s discovery suggested that the microRNA that Ambros had identified was not an anomaly. Since then, researchers have identified about 400 microRNAs, the products of genes encoded in the genomes of a wide range of organisms. So far, however, scientists understand how only a handful of those microRNAs function.

Researchers hope that humans may be able to harness the ability of microRNAs to turn off harmful processes, such as the development of cancer cells or the replication of disease-causing viruses. Slack speculated that such applications are a decade away.

—Cathy Shufro

et cetera ...

TOUCHED BY AN ILLUSION

Why would multiple real stimuli register as a single stimulus in the brain? A paper published September 18 in the online edition of *Science* explains this quirk of perception, known as the tactile funneling illusion.

Yale neurobiologist Anna W. Roe, PH.D., and her colleagues studied the illusion in a portion of the primary somatosensory cortex (SI) of squirrel monkeys. They found that whenever they administered a mild electrical stimulus simultaneously to two nonadjacent fingers of the animal’s hand, the SI showed two separate activation spots that corresponded to the two sites of stimulation. By contrast, when they delivered simultaneous stimuli to two adjacent fingers, the SI showed a single activation spot located midway between the two sites. The study indicates that, contrary to previous thought, a finger’s “receptive field” for sensory stimuli can sometimes extend beyond the finger itself—a notion that could someday find clinical application, for example in rehabilitation after injury or stroke.

—Sandra Ackerman

RO’S ROLE IN LUPUS

An estimated 1.5 million Americans suffer from lupus erythematosus, an autoimmune disorder that causes aching joints, fever, fatigue, numerous skin lesions and hypersensitivity to light. Many lupus patients carry in their blood an antibody against the autoantigen Ro 60-kDa. This RNA-binding protein passes unnoticed in the normal immune system but is the target of an abnormal immune response in these patients. Nevertheless, the role of Ro in lupus erythematosus has been unclear.

When Sandra L. Wolin, M.D./PH.D. ’85, associate professor of cell biology and molecular biophysics and biochemistry and a Howard Hughes Medical Institute associate investigator, and colleagues developed a knockout mouse without the gene for making the Ro protein, the mouse developed an autoimmune syndrome similar to lupus. The authors suggest that Ro may serve a quality control function by recognizing misfolded, defective RNA molecules. When Ro is absent, abnormal RNA-protein complexes may accumulate and be viewed as foreign by the immune system.

—Sandra Ackerman





Atlas of Cosmetic Surgery

edited by Michael S. Kaminer, M.D., assistant clinical professor of dermatology, Jeffrey S. Dover, M.D., associate clinical professor of dermatology, and Kenneth A. Arndt, M.D. '61, HS '62, clinical professor of dermatology

W.B. Saunders Co.
(New York) 2002; 476 pages

Experts present hands-on guidance for performing a broad range of cosmetic surgical procedures, including face lifts, laser resurfacing, blepharoplasty for the eyelids, hair transplantation, hair removal, chemical peeling, laser treatment of brown and red lesions and liposuction. Clinical photographs, combined with two-color illustrations, demonstrate how to proceed and what outcomes to expect.

Eliminating Stress, Finding Inner Peace

by Brian L. Weiss, M.D. '70

Hay House
(Carlsbad, Calif.) 2003; 100 pages

Stress kills, there's no doubt. Stress eats away at our happiness and joy, as well as our stomach lining. It raises blood pressure and directly harms our cardiovascular system. Stress depresses our immune system and allows chronic illnesses to overwhelm us, causing pain, disability and even death. This book, which includes a stress-reduction CD, will enable readers to release the acute and chronic stress we constantly carry in our bodies and our minds. It can help us remove the blocks and obstacles to inner peace and joy, and prevent and heal stress-related illness and disease.

Medicine's Brave New World: Bioengineering and the New Genetics

by Margaret O. Hyde and John F. Setaro, M.D., HS '86, associate professor of medicine

21st Century Books
(Brookfield, Conn.) 2001; 144 pages

The authors present a host of medical breakthroughs and ponder the future of many versions of genetic manipulation to support medical science. Topics include fertility advances, xenotransplantation, stem cell research, cloning, the Human Genome Project and genetic testing. There are also some notes of caution as the authors consider some of the many ethical objections to genetic research.

Help Me to Heal: A Practical Guidebook for Patients, Visitors, and Caregivers (Essential Tools, Strategies, and Resources for Healthy Hospitalizations and Home Convalescence)

by Bernie S. Siegel, M.D., HS '61, and Yosaif August

Hay House
(Carlsbad, Calif.) 2003; 200 pages

Every hospitalization, period of convalescence or visit to a patient can be an opportunity for healing. This book is a resource to help readers realize this healing potential. It provides the empowering tools, strategies and resources that will enable readers to turn their bedside environment and illness experience into a sacred space and time where healing can occur.

100 Questions & Answers About Ovarian Cancer

by Don S. Dizon, M.D., HS '98, Nadeem R. Abu-Rustum, M.D., and Andrea G. Brown

Jones and Bartlett Publishers
(Sudbury, Mass.) 2004; 160 pages

Written by a gynecologic oncologist, a gynecologic surgeon and an ovarian cancer survivor, this book offers practical answers to questions about treatment options, posttreatment quality of life and sources of support for ovarian cancer patients, family and friends.

Fishman's Manual of Pulmonary Diseases and Disorders, 3rd ed.

by Alfred P. Fishman, M.D., Jack A. Elias, M.D., professor of medicine, Jay A. Fishman, Michael A. Grippi, Larry R. Kaiser and Robert M. Senior, M.D.

McGraw-Hill Professional
(New York) 2002; 1,174 pages

This quick-reference pocket manual presents important clinical information contained in the two-volume *Fishman's Pulmonary Diseases and Disorders, 3rd ed.* For each condition, the manual covers clinical evaluation, work-up, differential diagnosis and treatment.

Take a Deep Breath: The Haiku Way to Inner Peace

by Sylvia Forges-Ryan and Edward R. Ryan, PH.D., associate clinical professor of psychology in psychiatry

Kodansha International
(New York) 2003; 129 pages

This volume provides guidance on combining the ancient forms of haiku and meditation to improve health. The authors see

haiku as the perfect form for their exercises because a few phrases can set off a chain of thoughts, which when incorporated into meditation lead to insights that can be used to enhance well-being.

Compelled by Data: John D. Thompson, Nurse, Health Services Researcher and Health Administration Educator

edited by William D. White, PH.D., former associate professor of public health

Department of Epidemiology and Public Health, Yale University
(New Haven) 2003; 199 pages

This volume celebrates the life and accomplishments of John D. Thompson, a distinguished and inspiring leader in the fields of health services research and health administration education. Thompson's career spanned more than 40 years, including over 30 years as a member of the faculty of the Department of Epidemiology and Public Health at Yale.

The descriptions above are based on information from the publishers.

SEND NOTICES OF NEW BOOKS TO Cheryl Violante, *Yale Medicine*, P.O. Box 7612, New Haven, CT 06519-0612, or via e-mail to cheryl.violante@yale.edu



MICHAEL FITZSOUSA

RUTH WESTHEIMER

At grand rounds, sex columnist comes armed with advice

In the 1960s, Masters and Johnson moved the study of sex away from the anecdotal and into the scientific realm: they observed sexual encounters in a laboratory, monitoring brain waves, heart rates and signs of arousal. “Everything that could be measured was measured,” Ruth Westheimer, ED.D., said during Department of Psychiatry grand rounds in September. “You may be wondering how they were able to find subjects willing to perform on demand. ... Fortunately for all of us, there were medical students who needed money,” she said, to much laughter.

“Dr. Ruth,” who has for decades dispensed her advice on the radio, in newspaper columns and in books, said that medical schools should include sexuality in their curricula. “Many of you will be ‘significant others’ for your patients when it comes to information about sexuality,” she said, adding that students should also have the opportunity to consider their own feelings about sex. For example, “Doctors can get aroused examining their patients. If you do, go out and get a glass of water—there’s no time to take a shower!—or take a deep breath. ... Be aware of it but don’t get upset. If you’re aware, you can go on and ask the next question.”

—Michael Fitzsousa



ANNA QUINDLEN

Stressing the human touch in health care

When Anna Quindlen told a friend with AIDS she was giving a talk at the Yale School of Nursing, the friend said, “Tell them to treat the patient, not the file.”

Quindlen, a Pulitzer Prize-winning columnist and author, did just that when she delivered the 38th annual Sybil Palmer Bellos lecture recently. She stressed the need for doctors to apply a “human touch” and credited women with pushing the health care pendulum in that direction. “We have the most astonishingly competent health care system in the world,” she said. “Now we want it to be as empathetic as it is competent.”

Quindlen spoke from experience. During her mother’s losing battle with ovarian cancer, she said, “there was no attempt on the part of her doctors to engage with her or us as people.” But times have changed as more women have entered the profession, and women, the chief health care consumers, have demanded personalized attention.

She sees parallels between journalism and health care. Newspapers diversified their content because consumers demanded it. Quindlen says her *New York Times* column focused on the “human experience” because that’s what she and readers found most satisfying. She’s optimistic that health care providers are finally realizing that’s what patients want, too.

—Jennifer Kaylin



JOHN CURTIS

HARRIET MCBRYDE JOHNSON

Fighting assumptions about the disabled, as well as bias

People assume that the nation’s estimated 50 million disabled people live lives of grim struggle, says Harriet McBryde Johnson. That’s untrue, says Johnson, a South Carolina lawyer who uses a wheelchair because of a congenital neuromuscular disease. Such assumptions about disabled people constitute prejudice akin to racism, she said in a September talk on campus. “Our lives are interesting and rich,” said Johnson, who wants disabled people to “bear witness to our pleasures.”

Johnson garnered national attention in February 2003 with an article in *The New York Times Magazine* describing her conversations with Princeton ethicist Peter Singer, who argues that it is ethical to kill severely disabled babies, an argument based, in part, on assumptions about quality of life. Johnson acknowledges that disabled lives, like nondisabled lives, include some suffering. She, for example, is dealing with a swallowing problem that sometimes makes her a “basket case. ... But I wouldn’t say I need to be euthanized; there is much more to my life than swallowing,” said Johnson. Nor does she want to be a special case, or “a little Harriet exception” to prejudice. “I believe that living our strange, peculiar lives is a contribution, and doing it openly and without shame is really a revolutionary act.”

—Cathy Shufro



DOUG HAMILTON

ALICE WATERS

On eating well, and bringing values to the table

The family meal was once the central civilizing activity in a child’s life, says Alice Waters, owner of Chez Panisse, the trendsetting restaurant in Berkeley, Calif. She acquired her own core beliefs “almost unconsciously, at the table of my family.” Nowadays, however, families no longer give priority to the “ritual of the table,” she said in September at a colloquium sponsored by the Program in Agrarian Studies.

Waters believes public schools can help restore that daily ritual by encouraging children to grow, prepare and eat their own food and by making lunch a for-credit course. In The Edible Schoolyard, a program she helped found at a Berkeley public middle school, she says students not only find that work can be a pleasure, but also learn to think seriously about food and where it comes from, and to relate to each other in a respectful and social way. Waters wants schools nationwide to follow suit, creating “a curriculum that teaches the essential values of nourishment, community and stewardship of the land.” She said funding must be found, because unhealthy food, inactivity and the destruction wrought by factory farming carry hidden costs.

Waters has already helped to transform cuisine on the Yale campus. She’s an advisor to the Berkeley College dining hall, which last fall began serving mostly seasonal, sustainably grown foods. The menu attracts more diners than the college can serve.

—Cathy Shufro

A nurturing vision

By Colleen Shaddox

The medical school's external face owes a great debt to a pioneer of American landscape design.

Inside Sterling Hall of Medicine, brain specimens from Harvey Cushing's collection share shelf space with 19th century physicians' implements, historic photographs and aging tomes on the healing arts. But the medical school's wealth of notable specimens is not confined to the great indoors.

Outside its walls, an observant visitor can spot the sycamore tree the grounds crew calls the Hippocratic

Growth, which grew from a seed that came from the birthplace of Hippocrates in Greece. Within its courtyards grows one of the only American elms to survive New Haven's Dutch elm outbreak in the 1930s. And the landscaping for the medical campus—for much of the university, in fact—is the design of Beatrix Jones Farrand, one of the first American landscape architects. Farrand studied landscapes and plants

during an apprenticeship at Harvard's Arnold Arboretum, and as a young woman made several grand tours of Europe—one with her aunt, novelist Edith Wharton—where landscape paintings and vistas of the Old World informed her sense of design.

Before coming to Yale in 1922 to start almost a quarter-century of landscape consulting, she designed gardens at Princeton and Dumbarton

The 1920s were considered boom years for the School of Medicine and in 1925 the Sterling Hall of Medicine was dedicated. Planning for the building began in 1921, and its construction was the crowning achievement of Milton Winternitz's tenure as dean.



MANUSCRIPTS & ARCHIVES, YALE UNIVERSITY LIBRARY (2)

*Study for Entrance
The Institute of Human Relations and
the Sterling Hall of Medicine
Yale University*

Beatrix Farrand's designs could be seen in the planning for the Institute of Human Relations, which was dedicated in 1931. The institute, which occupied the left portion of the remodeled Sterling Hall of Medicine (above), expanded the building and added a central façade.

ton Oaks in Washington. At Yale her first project was the Memorial Quadrangle, now Branford and Saybrook colleges. She went on to design grounds at the divinity school, the president's house, the residential colleges and the medical school.

Although many of the gardens at the medical school remain out of view to the public, Channing C. Harris, senior associate with Towers/Golde, Landscape Architects and Site Planners, and a longtime landscape consultant to Yale, said that horticulture helps to shape life on Cedar Street. On the large lawn outside Harkness dormitory students receive their white jackets in the fall, their medical degrees in the spring, and in between bask in the sunshine enjoying *pad thai* and other treats from street vendors. The narrow planting beds along the street pour color into the neighborhood, along with the honeyed fragrance of Russian olive.

Towers/Golde has done site and landscape design for new building and renovation projects, courtyards, rooftop gardens and streetscapes at Yale for 25 years. This work often involves efforts to preserve older trees and mature plantings, or recreate Farrand's original landscapes. Where possible, Harris said that he tries to be true to Farrand's philosophy, but practicality can dictate change. For example, Farrand loved climbing vines, many of which damage buildings. So the wisteria has mostly gone.

Farrand believed that the landscape was as important to university life as the classroom: "We all know that education is by no means a mere matter of books, and that the aesthetic environment contributes as much to growth as facts assembled from a printed page,"

she told the alumni weekly at Princeton in 1926.

When the roof of the Yale Animal Resources Center, then located in the B wing of the Sterling Hall of Medicine, developed leaks in 1986, the School of Medicine restored a rooftop garden in keeping with Farrand's original vision. Using historic photographs, Norman Brody, the medical school's associate director of buildings and site services, and his team of carpenters recreated original trelliswork, and roses and weeping cherries now complete the genteel scene. There is even some wisteria, a maintenance nightmare that Brody restrained himself from clipping back for two full years.

Throughout Yale, many gardens have been lost to new buildings and renovations. At the medical school new construction constantly encroaches on the flora. But great care is taken to preserve important specimens and to expand plantings wherever possible. The more venerable and fragile trees in Farrand's gardens give Brody "a white-knuckle ride every winter," he said. By and large they make it.

A number of improvements that would bring more blooms and greenery to Cedar Street between York Street and Congress Avenue are under consideration. Farrand favored spring- and fall-blooming plants, reasoning that no one would be on campus during the summer. But the new plantings would extend floral displays into the summer months in recognition that life on Cedar Street is now a 12-month affair.

Colleen Shaddox is a freelance writer in Hamden, Conn.



FROM BEATRIX FARRAND'S AMERICAN LANDSCAPES

Beatrix Farrand came to Yale in 1922 and stayed for almost 25 years. While at Yale she designed landscapes for the divinity school, residential colleges and the medical school.



JOHN CURTIS

Still standing on Harkness Lawn is a sycamore that is sometimes referred to as the Hippocratic Growth. The tree grew from seeds imported from Ephesus, the birthplace of Hippocrates in ancient Greece.



Yale's Summer Medical Education Program helps aspiring physicians to understand what's in store for them in medical school. Elvis Rodriguez (center) donned scrubs to observe a gastric bypass operation performed by Robert Bell (left).

An insider's *view*

A summer program to encourage diversity in the health professions shows college students a clearer path to becoming a doctor—by acquainting them with the art, science and culture of medicine.

By Jennifer Kaylin

Photographs by Terry Dagradi

It's nearly 1 a.m. on Sunday morning of the July 4 weekend, and the constellation of examination cubicles and work stations in the Yale-New Haven Hospital emergency department is as peaceful as a library. Patients who have already been treated rest comfortably on stretchers while awaiting rooms upstairs. Meanwhile, doctors and nurses review files, check e-mail messages and talk quietly about fireworks displays and holiday traffic. Suddenly the triage nurse gets a radio dispatch. "How many?" she asks, and then immediately activates the trauma response. Spines straighten and conversation stops as everyone in the room is ordered to gown up in sterile clothing.

Minutes later the doors fly open and a platoon of firefighters and EMTs wheel in a stretcher carrying a young man who is screaming in pain. The trauma team moves the patient to a hospital bed, cuts off his clothing and crowds around to assess his condition: "He's nonverbal." "He has blood in his mouth." "130 over 90." "Two broken teeth." "Anesthesia to trauma room STAT!" While this is going on, another victim from the same car accident is rushed in. She is even younger and is also howling in pain. "How many more?" somebody yells. "They're saying three," answers a nurse.

Standing on the periphery of this scene, but watching with the owl-eyed intensity of judges, are three college students. They are here as part of an intensive six-week summer course designed to encourage diversity in the physician workforce, in part by helping underrepresented minority students improve their chances of getting into medical schools.

"Seeing someone my own age in so much pain was kind of upsetting," Leonie Prao, a Howard University junior,



Students on the midnight shift in the Yale-New Haven Hospital emergency department watched as a car accident victim was treated.

says later that night. Upsetting, but also invaluable, as she and her fellow classmates gain exposure to real-life medical situations and decide whether they're cut out to be doctors. "I just tried to tune out the screaming and focus on what the doctors were saying," she says.

"It kind of threw me," admits Rochelle Chijioke, a Georgetown University junior. "But I'm pretty calm in stressful situations, so I don't think it's anything I couldn't handle."

Students attend this intensive course, the Summer Medical Education Program (SMEP), tuition-free and receive a small stipend to offset the income they would have earned at a summer job. The program, now offered at 11 sites around the country, was started in 1988 by The Robert Wood Johnson Foundation with the specific aim of increasing the number of medical students from underrepresented minorities, especially African-Americans, Hispanics and Native Americans. Originally called the Minority Medical Education Program (MMEP), it has since expanded to include members of other groups not thought of as minorities but which may be under-

represented in the medical profession. For example, white students from rural areas lacking in health care resources have participated, as have non-minorities from economically or educationally disadvantaged backgrounds. At one program site, organizers say, the presence of a disadvantaged white student changed the outlook of classmates who said they had assumed all white people were wealthy.

This gradual broadening of the program's focus was reinforced last June, when the U.S. Supreme Court ruled in two affirmative action cases involving the University of Michigan. The court upheld the Michigan law school's "narrowly tailored use of race in admissions decisions" because it treated all the applicants as individuals. In contrast, the university's undergraduate admissions policy, which also encouraged diversity, was rejected by the court because it took an approach that was deemed mechanistic, automatically awarding bonus points, for example, to applicants on the basis of their race or ethnicity.

The foundation and the Association of American Medical Colleges (AAMC), which administers SMEP, used the Supreme Court ruling as an occasion to reexamine the summer program's goals and operations. In December, they dropped "Minority" from the name and rechristened it the Summer Medical Education Program. The announcement on the program website said that SMEP "will no longer identify itself solely as a program for applicants from historically underrepresented racial and ethnic groups." While affirming the need for a pipeline to help these applicants enter careers in medicine, the sponsors said that "the benefits of diversity cannot be fully realized by a program that focuses narrowly on certain groups by excluding others."

A transforming experience

Since 1988, more than 10,000 students have participated in the program, and of the 5,500 who have applied to medical school, 63 percent were accepted, according to the AAMC. A 1998 study published in *JAMA: The Journal of the American Medical Association* found that among students with identical GPAs and MCAT scores, program graduates were more likely to get into medical school than others. The largest improvement was seen in the acceptance rate for African-American males.

"It definitely gives applicants a certain edge. It helps them present themselves as a much better candidate to medical schools," says Richele Jordan-Davis, director of diversity and minority affairs at Columbia University's College of Physicians and Surgeons, which has accepted graduates from Yale's program and became a program site itself three years ago.

Kevin Harris, a senior staff associate with the AAMC's division of community and minority programs, says about one in every six underrepresented minority students enrolled in U.S. medical schools is an SMEP graduate. "That's a pretty large piece of the pie, so we feel very strongly that SMEP is a good program that we hope will continue."



TOP Elvis Rodriguez, Wesley Chambers and Happy Wyche were among the SMEP students at Yale last summer.

ABOVE The program gives students a taste of the academic rigors of medical school.

SMEP combines clinical exposure—such as spending a shift in the emergency department or observing an operation or an autopsy—with course work in the biological and physical sciences. A wide-ranging lecture series, a writing and communications course, career counseling and a medical school recruitment fair are other major components of the program. The aim is not simply to give students the nuts-and-bolts information they'll need to get into medical school, but to demystify a world that to many seems as rarefied and unapproachable as Mount Olympus.

"A lot of SMEP students are working two or three jobs to pay for college. They don't come from a long family line of physicians, and they think there's no one like them at Yale," says Andre R. Matthews, a program graduate who is now in his third year at the School of Medicine. "But then they come here and see that it's less homogeneous than they thought."

Forrester A. Lee, M.D. '79, HS '83, the medical school's assistant dean for multicultural affairs and co-director of Yale's program, sees a transformation occur in many of the students. "I guarantee by the end of those six weeks, you have fundamentally altered their view of the world," he says. "This is a group who never dreamed they could come to Yale, and now they're here and succeeding, and they can honestly see themselves as medical students here."

Last summer's class of 124 students came from 76 colleges across the country. African-Americans constituted 48 percent of the class, 38 percent were Latino, and 10 percent were either Native American, Native Hawaiian or Southeast Asian. A concerted effort was made to attract more Latino students, resulting in a jump from 19 percent in 2002 to 38 percent last year.

While the program began with a focus on underrepresented minority students, others have benefited from it at Yale, as at other sites. For example, seven white students were enrolled in 2002 and two participated last year. Lee says that in most cases what binds students isn't race or ethnicity so much as coming from an educational system that failed to equip them with the necessary skills to get into medical school.

"It's a socioeconomic problem that is particularly severe in ethnic minority communities," he says. "The nurturing has largely been left to the schools because the community and the family aren't functioning well. But this is a job the schools aren't prepared to do, and they're overwhelmed. Not surprisingly, the result is kids who are not learners."

But sometimes, despite the educational disadvantages and deprivations, a kid manages to learn anyway. These are the ones the program wants to reach before they fall by the wayside—students like Elvis Rodriguez.

"This I have a passion for"

"Coming here to Yale is the first time I ever slept in a dorm," says Rodriguez, a compact 28-year-old with soft brown eyes. He and his brother and sister were raised by their mother

in the South Bronx. Public assistance was the family's main source of income, but Rodriguez, being the eldest child, helped out by working at McDonald's and as a porter at Tavern on the Green in Central Park.

"After graduation from high school, I worked full time. Then one day I got a call from my high school counselor. He wanted to talk to me about my future," Rodriguez recalls. "He told me I should go to college. I was grateful someone else cared, that someone was there to tell me, so I did."

At around the same time Rodriguez enrolled in the City College of New York, his twin sons were born, so he had to work the midnight shift as a security guard while taking courses and commuting to school in upper Manhattan. "I thought I wanted to be an architect, but I found it wasn't as appealing as I'd imagined," Rodriguez says. "Then I made friends with an emergency room doctor who suggested I volunteer at a local hospital. This exposed me to the medical field for the first time and I thought, 'Wow! This I can do. This I have a passion for.'"

Still, there was his family to support, so Rodriguez hedged his bet by getting a master's degree in secondary science education from Lehman College. That was in 2001, and he's been teaching high school biology since then. "But it's not where my heart is," he says. "In both careers you do good, but medicine is a different level of good."

Happy Wyche, another student in the program, says she's determined not to become the cultural stereotype everyone expects: "A single mother with a bunch of kids and a low-paying job." What Wyche wants to be is an obstetrician. "When we were in the maternity ward and I saw the mothers with their new babies, I was like, 'Oh, my gosh. I can see myself doing this every day.' Obstetrics inspires me."

Wyche, who at 24 has the sleek elegance of a model, lived in the Dominican Republic until she was eight. Then her mother moved the family to a low-income neighborhood in Miami. "The teachers in our school had no time to guide us. You had to teach yourself. At first I didn't speak a word of English," Wyche recalls of her early education in the United States. Eventually she enrolled at Florida State University and volunteered at a local hospital and in nursing homes. She earned a degree in business finance, married and gave birth to a son, who is now a toddler.

Her life was on the move, but still something was missing. "I got a job helping people invest their money, but I wasn't as caring and compassionate as I wanted to be. It was too cutthroat," Wyche says. So when her husband was sent to Afghanistan with the 82nd Airborne Division, she and her son moved home with her mother in Charlotte, N.C., and she began mapping her route to medical school. "People said just relax and raise your kid, but I have too much energy. I was ready to go back to school," she says.

In 1970, only 2 percent of American medical school students were members of an underrepresented minority

group, predominantly African-Americans, although they constituted 12 percent of the general population. That year, the AAMC set a goal of attaining population parity by significantly increasing minority representation in medical schools. By 1975, that initiative showed real results, with a fivefold increase in the number of African-American students—close to 1,000—enrolled in medical schools compared to 1968. But by 1974 the number leveled off at about 1,500 underrepresented minorities, or 9.4 percent, enrolling in American medical schools each year, out of a total enrollment of roughly 16,000 students.

Lee, who co-directs SMEP with Stephen J. Huot, PH.D. '81, M.D. '85, HS '87, associate professor of medicine, says that when he began his own medical studies at Yale in 1975, minority enrollment here was at its peak, with the school routinely admitting 10 to 12 minority students a year for every class of 100. "From my point of view, we had solved the problem," he says. "Things were looking good."

But the illusion of success faded as the demographics of the nation underwent seismic changes. "I don't think people realized how dramatically society was changing," Lee says. "The same goals weren't relevant anymore."

So, in 1990, with 1,470 underrepresented minority students entering first-year classes, U.S. medical schools rededicated themselves to boosting that number through a AAMC initiative called "Project 3000 by 2000." The goal was to reach 3,000 students by the year 2000. According to Lee, during the first few years, significant progress was made, peaking in 1994 with just over 2,000 minority students. Since then, the numbers have dropped to about 1,775, "leav-

ing us with a decade of zero progress," Lee says. Among the 507 medical students at Yale, 91 are members of minority and other groups underrepresented in medicine.

Yale responded to the challenge of "Project 3000 by 2000" by implementing the program along with three other programs aimed at helping improve the competitiveness of minority students applying to medical schools.

The Biomedical Science Training and Enrichment Program (BiOSTEP) is a summer research training program designed to interest undergraduates in careers in biomedical science. The Science, Technology and Research Scholars Program (STARS) assists Yale undergraduates, including women and minority students, who are pursuing majors in science or engineering. The third, Science Collaborative Hands On Learning and Research (SCHOLAR), is a partnership between the School of Medicine and New Haven's Hill Regional Career High School that prepares students for advanced academic work in biology and chemistry.

Thinking on their feet

Consistently, the most popular component of SMEP, according to Lee, is the writing and communications course. Seven instructors teach students how to tackle the logic-challenging MCAT essays. Students also spend a lot of time working on their personal essays, which can often be the tiebreaker used by admissions committees in deciding whether or not to accept a student into medical school. The third element of the communications program is the mock interview, which is intended to prepare students for another make-or-break element of the admissions process.

"Communication is not every doctor's strong suit," says writing instructor Susan Froetschel, M.P.A., who has a bachelor's degree in journalism from Penn State and a master's in public administration from Harvard. "But how effective can you be as a doctor if you can't communicate in a clear, concise, compassionate way with your patients? That's why the personal essay and the interview are so important."

During one of her classes toward the end of the program, Froetschel began the dreaded mock interviews. Students took turns sitting in the front of the room, being grilled by the instructor and then having their performance critiqued by the rest of the class. Before she began, Froetschel reminded the edgy students, "Doctors interview patients at their most vulnerable. Patients have to expose the most embarrassing, painful parts of their lives to their physicians. This interview is nothing compared to what patients will go through in front of you if you are physicians."

She asked questions that ran the gamut from "How will you know if you are a successful physician 10 years from now?" to "Will affirmative action still be necessary in 25 years?" One student who said she wanted to be an infertility specialist floundered when asked how that specialty helps society and not just the couple that wants a baby. Another



"I guarantee by the end of those six weeks, you have fundamentally altered their view of the world," says program co-director Forrester Lee.

struggled to answer a question that required knowledge of disease prevention programs. Asked about street life in the neighborhood where he grew up, a third student impressed Froetschel and classmates with the parallel he drew between gang behavior and some fraternity practices on his campus.

But the question that took everyone by surprise was when Froetschel asked one young man, “What’s your favorite ice cream?” He came up with an answer, “vanilla,” but it was clear he’d temporarily lost his footing. Later, Froetschel explained the reason for asking something so seemingly irrelevant: “I do that to fluster them. Interviewers will do that to see what happens when they encounter difficult patients. I had a student once who said an interviewer asked whether her mother had helped pick out the suit she was wearing. She got into the school, but she said she was totally jangled for the rest of the interview.”

As nerve-racking as the mock interview can be, many students say writing the personal essay is even worse. “Not good,” is how Wesley Chambers, a Morehouse College sophomore, describes the instructor’s response to his personal statement. Chambers, who hopes to join his father’s gynecological practice one day, recalls, “It was hard for me. I felt like I was saying the same old stuff. I realized I need to get some more experience so I have something to write about and can show that I’d be a good doctor.”

Froetschel says that by the end of the six weeks, she sees a real improvement in the quality of the essays. “Revisions? A lot of students haven’t practiced repeated revisions, but they really do pay attention to the strategies we discuss in class. They are open to criticism, and when they’re done, they really have thought out the issues.”

But SMEP isn’t just six weeks of blunt lessons and sharp critiques. The social bonds that form are equally important. A water balloon fight between students and program staff on the lawn outside the student dining hall was “one of the best times I’ve had in a very long time,” Wyche says. “There is so much love and support that is shown to us. That’s been the best part.”

Rodriguez took advantage of a personal connection he made during the program to observe a gastric bypass operation, a surgical procedure for morbidly obese patients (typically 100 to 400 pounds overweight) to limit their food intake by reducing the size of their stomachs.

Dressed in scrubs and standing next to the patient, Rodriguez was able to watch on two video monitors as Robert L. Bell, M.D., HS ’01, carefully manipulated a retractor to move the patient’s liver so he could staple across the top of her stomach and reattach the small intestine. “Every time I’m exposed to something new, it adds fuel to my fire to pursue medicine,” Rodriguez said after the procedure, his eyes flashing with excitement.

As a former student in what was then MMEP and now a program instructor, Matthews knows well the passion,

doubts, drive and insecurities students feel. “MMEP helps dispel a lot of myths about medical school,” he says.

The oldest of five children raised by a single mother on Chicago’s south side, Matthews says the program was just what he needed. “I doubted myself. I didn’t know if I could handle medical school, but MMEP serves to inspire people,” he says. “I’m not saying it’s easy, but it can be done.”

Matthews says what students need most, and what SMEP tries to provide, is a chance to have their questions answered by a wide range of people in the medical profession. “There are a lot of fears,” he says. “Everyone knows that person with the great MCAT scores who didn’t get in.” He says instructors stress that medical schools don’t just look at numbers; they look at the whole person, which is a welcome message for students who may have taken a circuitous route to medical school or who, on paper at least, may not seem like the most likely candidates.

But helping students fulfill their dreams of becoming doctors is only half the equation, says Lee. There is also the benefit to society that comes from making the medical profession more ethnically and racially diverse. “At a human, emotional level, there are three kinds of people with whom we want ethnic identification: those who provide safety, those who nourish our spiritual lives and those who take care of our health,” he says. “It’s not essential, but it helps a lot. It’s valid to seek and receive care from our own community.” **YM**

Jennifer Kaylin is a freelance writer in New Haven. Terry Dagradi is a photographer with the MedMedia Group at the School of Medicine.



Writing instructor Susan Froetschel, center, conducts mock interviews with her students so they’ll be able to handle the real thing when they apply to medical school.

fighting the good

Yale's Kelly Brownell has turned concern about obesity and the American diet into a national debate about our "toxic food environment." Not everyone is pleased.

By Peter Farley

Illustration by Christian Northeast

With the pealing bells of St. Mary's Church as counterpoint, a celebratory air prevailed in the seminar room of Kirkland Hall on a crisp autumn day last year. The psychology department's weekly noontime talks are usually given by scholars from out of town, but on this occasion the faculty was hosting one of its own, department chair Kelly D. Brownell, PH.D.

Brownell, who also serves as director of Yale's Center for Eating and Weight Disorders, is a national figure in the raging public debate over the worldwide rise in obesity. He and a former graduate student, Katherine Battle Horgen, PH.D., had just published *Food Fight*, a new book on the topic, and he was fielding four or five interview requests per day from radio, television and print journalists eager to stoke an already heated debate with the controversial policy proposals outlined in the book.

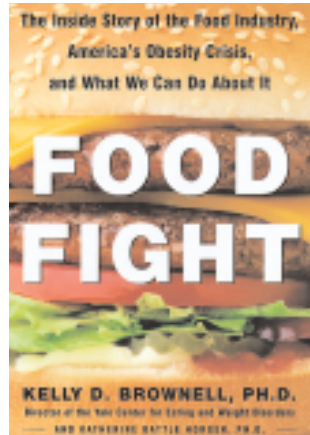
When introducing Brownell to the hometown crowd, William R. Corbin, PH.D., assistant professor of psychology at Yale, proudly called attention to his colleague's highly visible role as the media's go-to guy for commentary on America's expanding waistlines, half-seriously likening him to a "rock star."

The characterization pleased Brownell, a man who follows popular music with as much fervor as he devotes to food policy. But as he took the podium, he playfully punctured the euphoric mood by drawing on every successful author's sure-fire reality-check device: the mailbag. Holding an unsigned postcard that had arrived that morning from Baltimore, he read, "Mind your own damn business. You're motivated, like nearly all liberals, by book sales, caring less about a person's diet. What a person eats is none of your business, or teachers' or the government's. A pox on your house!"

The postcard's over-the-top language drew laughter from the sympathetic audience in Kirkland, but it also served as a reminder that emotions run high on Brownell's chosen battleground. Eating is among the most intimate of human activities, and it is invested with deep feeling. Food is a sensitive, serious business.

Oddly enough, the high emotional pitch of the obesity wars may derive from the fact that there is so much agreement on the basic facts. Some of the most alarming statistics—the 250 percent increase in obesity among American children over





the last two decades, for example—are so stark that no one (except for a few outliers like Paul Campos, J.D., a law professor at the University of Colorado, who denies the basic premise that there is an obesity epidemic) disputes them.

Since there are only a few plausible interpretations of these facts, and since there are billions of dollars at stake in the debate's outcome, opponents have tended to take battle stations based in broader ideologies and to man them unwaveringly.

Brownell is perhaps the best-known proponent of the view that the recent upsurge in obesity is the result of a “toxic food environment” created and promoted by the food industry. According to Brownell, we are biologically hard-wired to crave fats, sugars and salts, and to eat far greater amounts of them than we need. During the past 20 years, he says, this propensity has combined with the emergence of new “eating opportunities” to cause an epidemic of obesity.

“Twenty years ago, who would have even thought of having lunch at a gas station?” Brownell asked the crowd at Kirkland as he prodded his laptop to pump out slide after PowerPoint slide illustrating the gargantuan portions, four-digit calorie counts and slick, kid-centered marketing that are the coin of the fast-food realm.

Since he was on friendly turf, Brownell mostly let the images and statistics speak for themselves. A photo of a new Dunkin’ Donuts outlet in a corner of his local supermarket was followed by a close-up of a shopping cart that had been painstakingly retrofitted with a Dunkin’ Donuts cup holder, and one could almost see his listeners register the intended message: *now we eat while we shop for food*. Brownell’s calm, patient marshaling of the evidence was punctuated by chuckles and gasps of recognition, as if these features of contemporary American life were so ever-present that they had become the visual equivalent of background noise, and were being seen by his audience with fresh eyes.

In *Food Fight*, Brownell and Horgen call for taxes on certain foods, for government oversight of food advertising (especially that directed toward children) and for better nutrition education and consumer information to counteract what they see as an incessant, virtually irresistible drone of marketing buzz bankrolled by the food industry. When his arguments are laid out in full as they were during his talk at Yale, Brownell’s conclusions are themselves almost irresistible, but most Americans have only heard him speak in *Nightline*-sized sound bites.

In that form, his views are easy to caricature. Brownell’s critics paint him as a “Big Brother” figure hellbent on government intrusion into private life, a puritanical killjoy on a crusade to legislate pleasure out of existence, a soft-headed liberal out to shield gluttons from their own irresponsibility at society’s expense.

The feverish emotion of the obesity debate sometimes leads to personal attacks as well, and Brownell has felt their

sting. On a website hosted by a group calling itself the Center for Consumer Freedom (CCF), for example, one finds a Yale publicity photo juxtaposed with a recent shot of an obviously overweight Brownell. A caption reads, “Would you take advice on good diets and nutrition from this man?” Noting that the “trimmer” Brownell is featured on *Food Fight*’s dust jacket, the site’s anonymous authors accuse him and his publishers of a “truth-in-advertising scam.”

But as I sat with Brownell in the quiet sanctuary of his office after the lecture, it was hard to imagine that he could inspire such invective. It was the heavier version of Brownell who had addressed his department colleagues that day, and he freely admitted to me that his weight “goes up and down.” Without apparent irony, he attributed his condition to frequent snacking, stress and a lack of exercise during the writing of *Food Fight*. His weight gain was “not a permanent state,” he said, dismissing the CCF website as an ad hominem distraction from the serious issues at hand.

Like most academics, Brownell has set up his office to reflect his professional preoccupations, but the décor has an unmistakable touch of whimsy. A framed Warholesque print of the 7-Eleven “X-treme Gulp” soft-drink container adorns one wall, while bizarre artifacts of junk food culture, including a baby-bottle-sized Mountain Dew container fitted with a nipple, are displayed on a side table, the way an anthropologist might showcase a tribal mask.

In the seminar room, Brownell had steered clear of polemics in favor of a deliberate, thorough line of reasoning, and he was much the same in private. Still boyish and sandy-haired at 52, Brownell calmly made his case in soft, measured speech inflected with the vowels of his Indiana childhood. He was considerably more animated when the talk turned to his avocation, bluegrass music, and to his beloved collection of acoustic guitars. (Fittingly, one favorite is an antique Gibson model called the “Jumbo.”) The overall impression Brownell left was of that rarest specimen in American public discourse: the open-minded true believer.

“Kelly is reasonable and gentlemanly,” says Gene Grabowski, who had occasion to spar with Brownell frequently when he served as chief lobbyist for the Grocery Manufacturers of America, the world’s largest food-industry organization. “One gets the feeling when dealing with him that he does want to learn, and he wants you to learn as well.” In a recent editorial in *The Washington Times*, Michael Fumento, a senior fellow at the Hudson Institute, wrote; “While I once considered Mr. Brownell a radical, the fatter we grow the less radical he seems.”

The vociferous condemnations of Brownell may be more a reaction to his perceived influence than to his stated views, which are far more nuanced and moderate than those held by many in the anti-obesity camp. He does support government regulation of food advertising to children, the disclosure of calorie counts on fast-food menus and the

removal of soft-drink machines from public schools. However, he opposes filing lawsuits against the food industry on behalf of obese plaintiffs, a strategy that is beginning to take hold nationwide. Although he has been ridiculed as the mastermind behind proposals for a punitive “Twinkie tax” on snack food, Brownell is against levying such taxes at levels that would discourage consumption. Instead he supports a small tax—say, a penny a can on soft drinks—that would be earmarked to fund government-sponsored nutrition education and advertising.

According to Brownell, the CCF and similar organizations are fronts for the food manufacturing and restaurant industries in the guise of grass-roots consumer movements, akin to the “research councils” created by the tobacco companies when the tide of public opinion began to turn against them. (On their website the CCF states that their funding comes from “restaurants, food companies and more than 1,000 concerned individuals.”)

Brownell first went public with his views in a 1994 op-ed piece in *The New York Times*, years before obesity was much on the public’s mind. That article prompted blistering attacks, but Brownell said that he has seen a sea change in public opinion since then, one that has picked up steam exponentially during the last five years. Though he acquired a thick skin from almost a decade of hostile interviews, Brownell said that he’s now growing used to a more tolerant and supportive reception, even in the bare-knuckle arena of talk radio.

Having been in the food policy game for so many years, Brownell surveys today’s battles with a long view. He approvingly cited a recent decision by the city of Los Angeles to remove soft-drink machines from all the city’s public schools, a decision that he said was unimaginable in 1994. “The anti-tobacco movement took 40 years to mature. This movement has made similar progress in 40 months.”

Brownell has lately been finishing his talks with an optimistic aphorism from Gandhi, which he delivered at Yale from his preferred vantage point at the calm center of the maelstrom: “First they ignore you. Then they laugh at you. Then they fight you. Then you win.” **YM**

Peter Farley is a freelance science writer based in Boston. Christian Northeast is an illustrator in Cobourg, Ontario.



Closing the gender gap

Once an exclusively male bastion, surgery is beginning to resemble the rest of academic medicine as more women join its faculty ranks.

Stories by Cathy Shufro

Photographs by Terry Dagradi

When Barbara K. Kinder, M.D. '71, HS '77, trained at Yale three decades ago, surgical residents were just that: resident surgeons who virtually lived at the hospital. They worked grueling 128-hour weeks, and overnight call alternated with “short” days that ended at 10 p.m. or later. This went on for five years. If the residents of that era ever felt worn down or resentful, or if they ever longed for a schedule change to attend a wedding or hit the ski slopes, they kept it to themselves.

“In my day, nobody complained about *anything*. Nobody ever uttered a word,” says Kinder, an endocrine specialist who is now the William H. Carmalt Professor of Surgery. “We basically did as we were told and kept our eye on the goal: getting excellent surgical training and finishing the residency.” In fact, the odds were good that a resident who began training at Yale would *not* finish here. After the second year, the Yale group was cut from 12 residents to four. In those days, it was

“survival of the fittest, a Darwinian approach to surgical training,” says Kinder, who in 1977 was one of the first two women to complete the general surgery training at Yale.

Things have changed. For one thing, the hours of training are much shorter. In July 2003, new rules limited residents’ time on duty to 80 hours per week, and effectively changed the way surgeons learn their craft from an immersion experience to one that is more diffuse. The new limits are in part a response to lawsuits claiming medical errors from fatigue, but they also reflect changes in societal attitudes about family life. Across all medical disciplines, women, in particular, have pushed for greater flexibility, making it somewhat easier for physicians to combine career and family.

Early in her career, Kinder sensed that Yale was committed to making room for the increasing number of women choosing to become doctors. (Her enthusiasm for the school was

📷 Lynne Henderson Kelley

Vascular surgeon Lynne Henderson Kelley, M.D., had just finished her training in Boston when she went to France to hone her skills in new, less-invasive techniques for treating

patients with clogged or weakened blood vessels. To perform these surgeries, Kelley wears a heavy lead protective suit and works beside interventional radiologists who sup-

ply her with X-ray vision as she operates. “Every day there’s something to learn and see,” says Kelley. [More on our website, info.med.yale.edu/yymm]

such that she turned down a chance for a job at another high-powered program.) Yale's commitment led to the establishment in 1975 of the Office for Women in Medicine. Through informal get-togethers and by matching students with mentors, the office fosters ties among female students, residents and faculty members. "Over the years," says Director Merle Waxman, M.A., associate dean for academic development, "there's been a strong base built here, a strong support center."

The above-average number of women on the surgery faculty attracts more women in turn. Women applying for faculty positions interview with both male and female surgeons, including high-ranking women like Kinder. Candidates for residency get a similar picture. First-year resident Lemi Luu, M.D., says she chose Yale from among other competitive programs in part because the department's chair, Robert Udelsman, M.D., M.B.A., emphasized the strong presence of women on the faculty.

"That gave me a certain impression about the program, that it was forward-thinking," says Luu, who graduated from

Emory School of Medicine. "I felt that having an opportunity to interact with other female surgery attendings and to use them as role models was very important in my training and development."

The numbers do suggest that Yale has made significant headway toward increasing the proportion of female surgeons on its faculty. According to an analysis of 2002 faculty roster data by the Association of American Medical Colleges (AAMC), Yale ranked 14th out of 126 medical schools in the percentage of women among its surgeons. (For complete information, see our website, info.med.yale.edu/yymm.) The analysis showed that 17 percent of full-time faculty members holding M.D. degrees in Yale's Department of Surgery were female, compared with a national average of 11.2 percent, as of December 31, 2002. (Of 52 Yale faculty members with medical degrees who perform surgery, 9 were women.) The numbers are likely to climb as more women choose surgery; at Yale, about 30 percent of residents in general surgery have been women over the past decade, according to

Barbara Kinder [cover]

"The changes that have taken place mirror social changes."

Barbara K. Kinder, M.D. '71, HS '77, says that when she trained in surgery at Yale in the mid-1970s, the attending surgeons—all of them men—never questioned her aptitude. Chief surgeons William F. Collins Jr., M.D. '47 and later C. Elton Cahow, M.D., "were both men who thought women could do anything. It was a matter-of-fact thing for them, not any kind of a crusade. Their attitude was, 'Why couldn't they do it?'"

Nonetheless, the culture of surgery has changed, shifting from a military model to one that accommodates give-and-take. "The changes that have taken place mirror social changes," says Kinder, an endocrine surgeon and senior faculty member. Women have brought "a very different management style, a consensus-building style. I think men have become more this way, too. ... The throwing of instruments doesn't happen any more."

Kinder and fellow resident Mary Alice Helikson, M.D., HS '77, who is now a pediatric surgeon in Oregon, were the first two women

to complete general surgery training at Yale. Kinder says she tolerated five years without playing tennis, spending time with friends or reading anything except medical journals because, "I rotated into surgery and fell in love with it. It was an epiphany."

As for the long hours, "I think by and large everyone functioned pretty well doing the 128-hour workweek. On the other hand, I don't think it made for a rich life outside of medicine," Kinder says, and she laughs.

Today, women and men alike want to take part in family life. "I think that's probably healthy," says Kinder, whose daughter, Caitlin, was born in 1985 when Kinder was 40. Once she became a mother, Kinder says, career became less important. "Could I be doing some more things in surgery nationally? Yes, I probably could, but that's been my choice. From the day she was born, my daughter has been my first priority."

Kinder has reservations about the reduction in residents' hours. "The 80-hour

workweek necessarily diffuses the sense of responsibility that a surgeon-in-training has for his or her patient," she says. As an attending surgeon, Kinder feels responsible for her patients even when she leaves the hospital. "If it's a weekend or a night, I expect to hear about my patient," says Kinder. If younger surgeons "don't learn it by living it, I'm not sure they'll have the same sense of that contract with the patient. Maybe we overdid it."

Kinder says surgeons of her generation are disenchanted and are retiring, on average, at age 58. (She is 59.) "I'm incredibly frustrated with medicine. We need national health care. Interspersed between the physician and patient are layers and layers of bureaucracy and nonsense."

As a member of the School of Medicine admissions committee she looks for applicants "who have concerns about social justice questions. I think we ought to recruit these people. Hopefully they'll be part of solving this health care crisis."



Amy Friedman

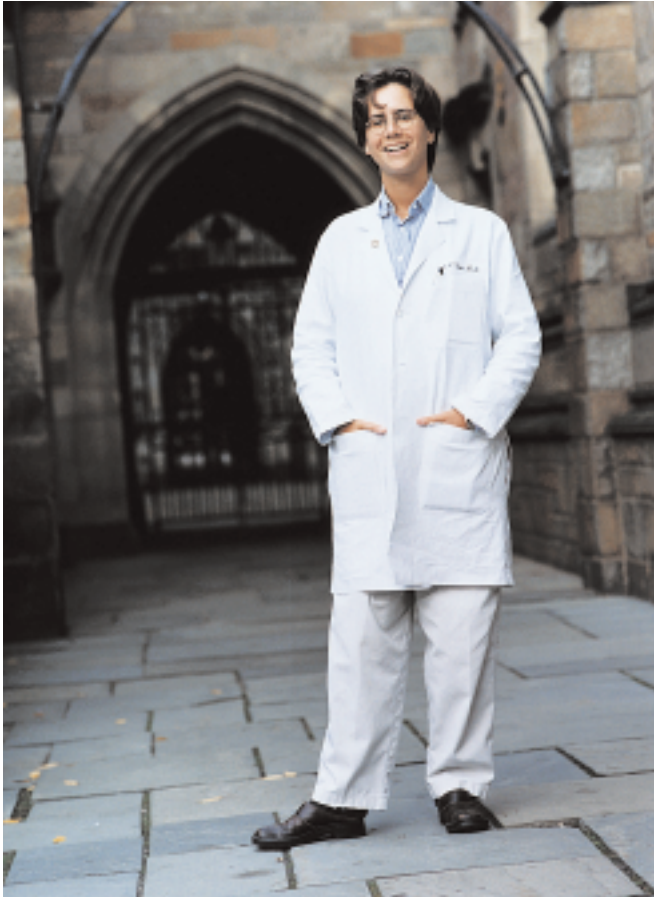
Transplant surgeon Amy L. Friedman, M.D., brings more than just professional knowledge to the bedside when she checks on a transplant patient: her own mother received a donated kidney that extended her life for 17 years. "From my own family experience," says Friedman, "I have learned the agony and the ecstasy associated with the amazing field I work in." [More on our website, info.med.yale.edu/yymm]



Sanziana Roman

She may have left behind an opera career to pursue medicine, but endocrine surgeon Sanziana A. Roman, M.D., HS '99, retains definite ideas about music. For a long, complicated case, she puts on a CD of Mozart, Brahms or the Romanian composer Enescu. For something quick like an appendectomy, disco works. And when everyone's exhausted, it's rap. "Studies have shown that surgeons operate better with music," says Roman.

While different musical themes suit different cases, one mood runs through all of surgery for Roman: the awe she feels toward the surgeon-patient relationship. [More on our website, info.med.yale.edu/yymm]



John H. Seashore, M.D. '65, HS '70, the residency program director. Nationally, 25 percent of general surgery residents are women, according to the AAMC.

Udelsman saw the relatively high percentage of women in the department as a plus when he was recruited from Johns Hopkins in June 2001. He expects that the number of women in surgery at Yale and nationally will increase. Nonetheless, he does recognize that the surgery “lifestyle” puts off some prospective surgeons; women and men alike worry that they won't have time for family and leisure if they choose the field. But he says that medical students have found the prospects less intimidating since the national Accreditation Council for Graduate Medical Education capped the workweek for residents at 80 hours. “People who in their heart of hearts wanted to be surgeons, and were dissuaded from it, are now considering surgery.”

As more women choose the field, Udelsman says, surgery programs will be forced to acknowledge “the fundamental biological difference that you can't ignore: the issues of childbearing and family. We accept the fact that residents and



Julie Ann Sosa

An abundance of mentors,
both men and women

Julie Ann Sosa, M.A., M.D., knows the value of finding a mentor. In fact, though she'd planned to go to medical school, meeting a mentor when she was a senior at Princeton almost landed her in a career as an economist.

It happened when she was editor-in-chief at the *Daily Princetonian*. Student reporters heard some earthshaking news: Princeton's president, economist William G. Bowen, was about to resign. The student paper broke the story, beating *The New York Times*. Annoyed by the premature announcement, Bowen summoned Sosa to his office to scold her—and then surprised her by offering her a summer job. Together, they wrote an award-winning book about the labor economics of academia. Sosa went on to study economics as part of a master's program at Oxford.

Despite having ultimately chosen medicine, she has carried with her the lesson that a mentor can enrich a person's life.

Mentorship is part of the reason Sosa, 37, came to Yale—to follow the department's

chair, Robert Udelsman, M.D., M.B.A., north from Johns Hopkins after completing her training there in 2002. And as an assistant professor of surgery, she serves as a potential mentor to others, from Yale undergraduates she meets as a fellow of Jonathan Edwards College to surgical residents beginning their careers.

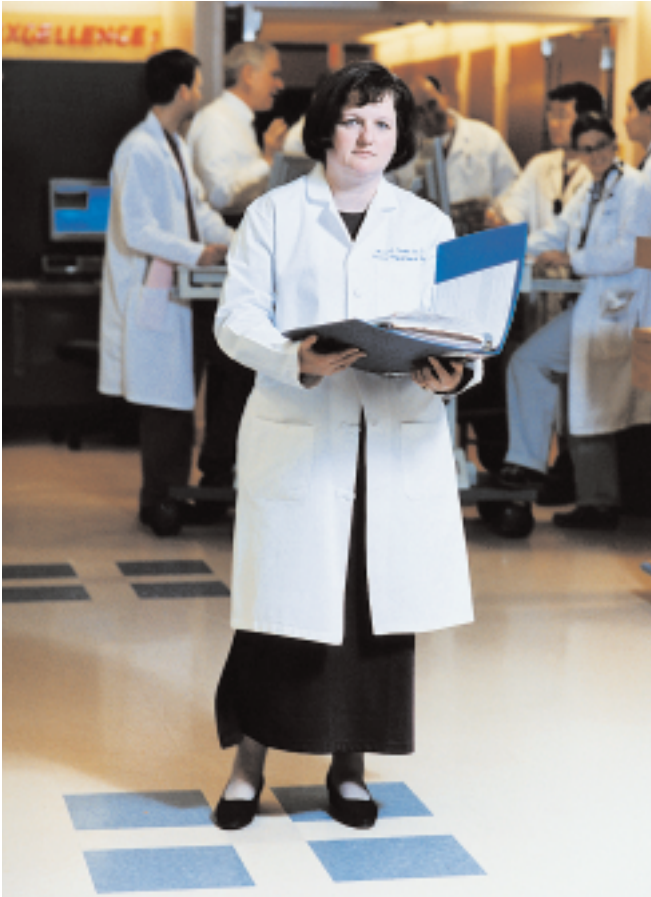
When she finished eight years of residency training at Hopkins, Sosa was only the seventh woman to complete the full general surgery residency program there. She never felt any discrimination and jokes that “everyone was uniformly punished for wanting to be a surgeon” by the grueling call schedule.

At Yale, three of the five surgeons in her section, oncologic and endocrine surgery, are women. And she says the collegiality of Yale physicians, male and female, helps her do research, since “you can't do good research in isolation. You need collaborators.” As a core faculty member for the Robert Wood Johnson Clinical Scholars Program, Sosa is working

with several colleagues to evaluate the quality of the research reported in peer-reviewed medical and surgical journals. She's also studying the use of video cameras to record what goes on in the operating room. “Most of the teaching in surgery happens in the operating room, but it's the thing we know least about,” she says. Yale suits Sosa well. “I'm extremely happy,” she says. “I'm thrilled to be here.”

But Sosa tells a story suggesting that people still picture surgeons as male. Soon after moving into her new house recently, Sosa received some letters addressed to her neighbor. When she brought the misdelivered letters next door, the neighbor looked at Sosa oddly. “You live next door?” she asked. “We'd heard a surgeon bought the house.”

Stereotypes linger, but the prospects for women in surgery seem to be gradually improving. At Hopkins, where no woman had ever headed a large clinical department, there's a new director of surgery. Her name is Julie A. Freischlag.



Heidi Lee Frankel

The emergency department serves as a socioeconomic barometer for trauma surgeon Heidi Lee Frankel, M.D. When the economy slips and community morale declines, shootings and stabbings increase, says Frankel, director of the surgical intensive care unit at Yale. As a medical student, Frankel dreaded her surgery rotation, but by the end of the month she was hooked; although she describes her life outside the OR as “tame,” she loves the intensity of caring for critically ill and injured people. [More on our website, info.med.yale.edu/yymm]

A place for women in surgery to network, compare notes

Attending a meeting of the Association of Women Surgeons (AWS) was a revelation for Vivian Gahtan, M.D. As a chief resident at the University of South Florida in 1987, Gahtan was one of only two women among two dozen general surgery residents. At the meeting, she discovered a wider world. “I had never been around 100 surgical women before,” says Gahtan, until recently an associate professor of surgery at Yale and now chief of surgery at the State University of New York-Syracuse. “For the first time, I didn’t feel quite so isolated.”

Now president of the 1,600-member organization, Gahtan says the AWS hopes to attract female medical students into surgery, to make the profession more attractive for them and to provide a structure for networking.

Gahtan believes that women constitute a largely untapped resource for the profession. Women account for about half of medical students but only 12 percent of the nation’s 32,600 general surgeons, according to statistics for 2000 from the American Medical Association. General surgery ranked third in popularity as a specialty for men, but 10th for women.

“Women are becoming a higher percentage of the total physician pool, and if you aren’t attractive to women, it’s going to be a problem,” says Gahtan. “We have to change with the times.”

One major change has been the institution of an 80-hour work-week for surgical residents. Other options that need to be explored, she says, include consolidating the standard training time for individuals in surgery subspecialties; incorporating a standard family leave policy for men and women; and considering part-time practice.

Gahtan notes that obstetrics and gynecology has adapted to the demands of the new generation: many physicians in that field practice part time, but surgeons rarely do.

AWS offers a free handbook, *Pocket Mentor*, that gives practical advice to residents. The group helps its members find mentors by gathering every fall before the annual meeting of the American College of Surgeons. Its website (www.womensurgeons.org) provides a place to ask about issues ranging from how to resolve a dispute over a call schedule to how to take a baby to a scientific meeting. “It’s networking, online,” says Gahtan. The changes advocated by the group should improve the lives of all surgeons, male and female, she adds. “The ultimate goal should be fellowship.”



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Milissa McKee

For pediatric surgeon, endless variety, “less real estate to cover”

Milissa A. McKee, M.D., M.P.H., is only half joking when she says she has attention deficit disorder. She likes variety, and she likes to finish a job and move on. That’s why pediatric surgery suits her. Pediatric surgeries are shorter than adult surgeries because “there’s less real estate to cover.”

“I like doing technically demanding surgery and I like to take care of kids,” says McKee, 31, herself the oldest of seven. “Pediatric surgery fits me particularly well.”

Pediatric surgery also offers variety. McKee gets to tackle a broad spectrum of cases, everything except cardiac and neurological problems. “That’s very unusual in surgery specialties nowadays. In other specialties, you just do endocrine, or you just do cancer, or you just do gastroenterology.”

Although it’s true that McKee can talk cogently about surgery while also plowing through a stack of paperwork and occasionally glancing at her computer screen, you have to take her claim of having attention

deficit disorder with a grain of salt—given that she managed to finish college at age 15. She got her driver’s license that year, moved one state west from her Minnesota home and earned her medical degree at the University of North Dakota at 19. Her nine years of postgraduate training included both research and clinical fellowships at Johns Hopkins and a master’s degree in public health, also at Hopkins. She came to New Haven two years ago.

At Yale, McKee has expanded the use of minimally invasive surgery for young patients. For example, she uses a crib-side procedure to treat gastroschisis, an abdominal wall defect that until fairly recently required major surgery shortly after birth. The intestines of a baby born with gastroschisis protrude outside the abdomen. McKee sidesteps major surgery by protecting the intestines in a silicone sac and, over the course of a day or two, gradually introducing them into the baby’s abdomen.

faculty members who become pregnant will have special needs that in the past have not been major issues in surgery programs, because there have not been many women.” For instance, if complications require a pregnant resident to take a few months off, how will she accrue enough cases to meet certification requirements? “I don’t have the answers,” says Udelsman.

He adds that the Yale surgery program will resolve those dilemmas to ensure that talented and dedicated women continue to choose surgery. In the final analysis, Udelsman is not interested in strong female candidates any more than strong male candidates: he just wants good surgeons. “I’m interested in having the best surgery department in the country, period.”

That focus on skill, not gender, originated in the 1970s. “There’s such a strong tradition of female surgeons, starting with Barbara Kinder,” says vascular surgeon Lynne Henderson Kelley, M.D., who joined the faculty last February. “There’s no distinction. We’re allowed to be surgeons, not women surgeons.” **YM**

Cathy Shufro is a contributing editor of *Yale Medicine*. Terry Dagradi is a photographer with the MedMedia Group at the School of Medicine.



From the beautiful to the obscure

A doctor's words can enlighten, obfuscate or amuse, a fourth-year student observes.

As someone who probably should have majored in English instead of geology, I often feel my mind oscillate between two modes of thought: the scientific and the lettered. I hear myself say “Romberg negative, no dysdiadochokinesis or pronator drift,” and the lexicophile in me stands back, marveling. They may be English, but those words are as opaque to the layman as the treasured two-inch clipping on my fridge is to me. It announces a physics lecture at Yale—“Time-Reversal Breaking and the Theory of the Gap in Underdoped Cuprates.” But when it comes to delightful obscurity, cleverness or just beauty, medical language holds its own, even against the physicists.

We have the scimitar sign, the clover-leaf skull and my personal favorite, the jumping Frenchmen of Maine syndrome. Granted, you don't see that disease every day, but its appearance in the dictionary proves that some august authority has accepted the term. We find incidentalomas on CT scans that were done to check for something else entirely. Look at a pathology textbook. It's full of phrases that make you wonder whether the microscopists were hallucinating: cells can have a starry-sky appearance, owl's eyes or Orphan Annie nuclei. Sometimes we anthropomorphize, ascribing grumpy emotions to the body. There's irritable bowel syndrome, of course, but our circulation may become embarrassed. When phago-

cytosis goes wrong—when a cell can't slimily surround and eat something—it is frustrated. On the other hand, we make some body parts sound coy: to elicit the anal wink during a physical exam is to know that all is well with the nerves to the nether regions. I can't be the only one who appreciates that.

Some of us medical students used to wonder worriedly if we should have studied classical languages, the rumor being that it would help us learn medical terminology. A groundless fear, of course—Spanish is a hundred times more useful—but medicine does have some splendid Greco-Latinate mouthfuls. Consider the mellifluous confluence of consonants in sphygmomanometer (a blood pressure cuff), syzygy (when organs fuse to each other during development) or borborygmi (the sounds of overly vigorous digestion). Less lyrical but just as vivid is the *cauda equina*—horse's tail—the bundle of nerve roots at the end of the spinal cord.

When it comes to naming new phenomena, I'm in favor of eponyms over descriptive terms. Not only are they a portable history of medicine, but people's names can be wonderful, alone or in combination. Carr-Barr-Plunkett syndrome is admittedly less descriptive than 48 xxxx syndrome, but which is more fun to say? The number-one silliest medical word must be pseudo-pseudohypoparathyroidism. It may be descriptive, but it's also a missed opportunity to name a disease after oneself, if there ever was one. (No single word that is not German should consist of 12 syllables; there are shorter poems.) I'm glad that the discoverers of Dandy-Walker syndrome and Howell-Jolly bodies weren't as self-effacing.

A fondness for abbreviation can reduce doctors' notes to a very exclusive code. I can write “NPH 8 U BID C FS Q 12 and SS as backup,” and nobody bats an eyelash. (It's a set of instructions for keeping a diabetic patient's blood sugar under control.) There are disease syndromes abbreviated LEOPARD, HELLP and POEMS, and medical trials have made an art form of the clever acronym for unwieldy descriptors like “Efficacy and Safety of Subcutaneous Enoxaparin in Non-Q-Wave Coronary Events.” ESSENCE is easier.

We need most of our jargon, as does any specialized field, but for some words there seems to be no justification other than to befuddle the layman. We don't say that the patient sweated if we can say that he diaphoresed. We never say he has a black eye when what he really has is a periorbital ecchymosis. There's only one main use for a stethoscope, and we call it auscultation. I remember watching one operation and asking “Is that all bleeding from the broken bone?” “Yes,” the resident replied, “that's hematoma from the fracture.” Still, some doctors know when to put obtuse jargon aside in favor of more colloquial terms. To my next question—“Is that part of the fracture as well?”—the senior surgeon replied, “Yup, it's bustedated.”

Jenny Blair, a fourth-year medical student, writes an award-winning monthly column for *The Hartford Courant*.

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Elaine Grant



Mary Warner



Mark Gerstein



John Krystal



Paul Lombroso



Dieter Söll



Fred Volkmar

Joseph
Woolston

Physician associate director takes on a new role with teaching, alumni as the focus

After 25 years as director of the Physician Associate Program, **Elaine E. Grant**, PA-C '74, M.P.H. '92, has stepped aside to become the program's first director of clinical development and special projects. Her new position, which took effect October 15, will encompass clinical education and alumni affairs.

Grant, an assistant dean who was among the first to graduate from the Yale program in the early 1970s, announced her move in a letter to students, faculty and colleagues. She said that over the past year, while also overseeing clinical curriculum, she came to realize that much can be done to enrich the clinical experiences of students.

"I am going to be interacting on a much higher level with clinical rotation faculty and educating them on the difference between medical student education and physician associate student education," Grant said. She's also trying to organize an alumni association and hopes to establish a new program of "miniresidencies" for physician associates who wish to enter new specialties or who are returning to work after an absence from the profession.

Mary L. Warner, M.M.Sc., PA-C, the program's assistant director for didactic curriculum, has been named interim director. After receiving her degree as a physician associate from Emory University in 1991, she practiced in cardiac and orthopedic surgery for nine years. She came to Yale in 2000 to oversee curriculum for the program's first-year courses. She also works at Bridgeport Hospital in emergency medicine and serves as the physician assistant member of the Connecticut Medical Examining Board.

A committee will be formed to conduct a national search for a permanent director.

—John Curtis

University names six at medical school to endowed professorships

The university has announced the following endowed professorships:

Mark B. Gerstein, PH.D., associate professor of molecular biophysics and biochemistry, has been named the Albert L. Williams Associate Professor of Biomedical Informatics. Gerstein's group does research in the emerging field of bioinformatics.

John H. Krystal, M.D. '84, professor of psychiatry, has been named the Robert L. McNeil Jr. Professor of Clinical Pharmacology. Krystal is the founding director of the Center for the Translational Neuroscience of Alcoholism and deputy director for clinical research at the Abraham Ribicoff Research Facilities at the Connecticut Mental Health Center.

Paul J. Lombroso, M.D., professor in the Child Study Center, has been named the Elizabeth Mears & House Jameson Professor of Psychiatry. A molecular biologist and child psychiatrist, Lombroso explores the molecular basis of childhood psychiatric disorders.

Dieter G. Söll, PH.D., professor of molecular biophysics and biochemistry, chemistry and biology, was named the Henry Ford II Professor of Molecular Biophysics and Biochemistry. His research focuses on genetic, molecular, biological and biochemical studies of the function of transfer RNAs.

Fred R. Volkmar, M.D., professor of psychiatry, pediatrics and psychology, has been named the Irving B. Harris Professor in the Child Study Center. Volkmar is an expert in the field of autism, Asperger's syndrome and other Pervasive Developmental Disorders.

Joseph L. Woolston, M.D., professor of pediatrics, has been named the Albert J. Solnit Professor of Child Psychiatry. Last year he was named chief of child psychiatry at the Child Study Center.

NOTES

**Joseph Craft****Margaret Hostetter****Richard Lifton****Erin Lavik****Harvey Risch****Herbert Yu****Bennett Shaywitz****Shepard Stone**

Joseph E. Craft, M.D., HS '77, professor of medicine and immunobiology and chief of the section of rheumatology, was named chair of the scientific advisory board of the Alliance for Lupus Research (ALR) in July. Craft will oversee the board, help establish and monitor its scientific goals and guide the planning of the ALR annual meeting and summit.

Marie E. Egan, M.D., associate professor of pediatrics and of cellular and molecular physiology, was elected membership secretary of the Society for Pediatric Research in May for a term of six years. The society bridges basic science and clinical research for the advancement of the health and well-being of children worldwide.

Janine Evans, M.D., associate professor of medicine (rheumatology), was named associate director for clinical affairs at the Yale Medical Group in June. She will be responsible for practice standards, HIPAA oversight, credentialing and the Office of Patient Advocacy. Evans will also play a leadership role in the development of practices at satellite offices, including the Shoreline Medical Center in Guilford.

Patrick G. Gallagher, M.D., associate professor of pediatrics (neonatology), and **Scott A. Rivkees, M.D.**, associate professor of pediatrics (endocrinology), have been named members of the American Society for Clinical Investigation, a selective group that honors outstanding achievement in biomedical research.

Margaret K. Hostetter, M.D., chair and professor of pediatrics and professor of microbial pathogen-

esis, and **Richard P. Lifton, M.D., PH.D.**, chair and Sterling Professor of Genetics and professor of medicine and molecular biophysics and biochemistry, were invited to serve on a Blue Ribbon Panel on Clinical Research at the National Institutes of Health (NIH). The panel will examine research conducted within NIH laboratories and clinics and suggest ways to collaborate with researchers outside the NIH.

Zeev N. Kain, M.D., HS '92, FW '93, anesthesiologist-in-chief at Yale-New Haven Hospital Children's Hospital and professor of anesthesiology and pediatrics and child psychiatry, has been appointed an associate editor of *Anesthesiology*, the journal of the American Society of Anesthesiologists. His renewable four-year term began January 1, 2003. He also began four-year terms in January on the editorial board of *Pediatrics*, the journal of the American Academy of Pediatrics, and as a member of the Risk Prevention and Health Behavior Study Section, Center for Scientific Review at the National Institutes of Health.

Erin Lavik, SC.D., assistant professor of biomedical engineering, was one of two Yale faculty members named to the 2003 list of world's 100 Top Young Innovators by *Technology Review*, the Massachusetts Institute of Technology's magazine of innovation. Lavik's research focuses on new approaches to repairing spinal cord injury and retinal degeneration.

Jerold R. Mande, M.P.H., lecturer in pediatrics, was named associate director for policy at the Yale Cancer Center in September. His

initial goal is to define Yale's role in the Connecticut Cancer Control Plan in conjunction with the Connecticut Cancer Partnership. Before coming to Yale, Mande served on the White House staff as an advisor to President Clinton and was senior advisor and executive assistant to the commissioner of the Food and Drug Administration.

The National Institutes of Health has awarded a \$2.1 million grant to **I. George Miller Jr., M.D.** The Method to Extend Research in Time Award provides five years of support for Miller, the John F. Enders Professor of Pediatric Infectious Diseases, professor of epidemiology and of molecular biophysics and biochemistry. In research spanning nearly 30 years, Miller has used an interdisciplinary approach to define the major properties of the Epstein-Barr virus and is now studying its pathogenicity. His laboratory also studies the gamma herpes virus, associated with Kaposi's sarcoma and body cavity lymphomas.

Harvey A. Risch, M.D., PH.D., professor of epidemiology, was awarded a \$3.65 million National Institutes of Health (NIH) grant for a five-year study of the etiology of pancreas cancer cases in Connecticut. His co-investigator on the study, **Herbert Yu, M.D., PH.D.**, associate professor of epidemiology, also received \$3.2 million from the NIH for a five-year study of mitogenic growth factors and endometrial cancer. Risch is co-investigator on Yu's study.

Philip E. Rubin, PH.D., director of the Division of Behavioral and Cognitive Sciences at the National Science Foundation,

received a Commendable Performance award in September from the Human Subjects Research Subcommittee on Science of the National Science and Technology Council for his superior leadership of all federal government departments and agencies involved in the protection of human subjects. Rubin has been chief operations officer at Haskins Laboratories since October and is returning to Yale where he is professor adjunct of surgery (otolaryngology) and a research affiliate in psychology.

Bennett A. Shaywitz, M.D., professor of pediatrics and neurology with an appointment in the Child Study Center, received a Distinguished Alumni Award from the Washington University Alumni Association in St. Louis. The award, presented at the 150th anniversary celebration in September, honors outstanding professional achievement, public service and exceptional service to the university. Shaywitz is known for taking a neurological approach to the study of dyslexia.

Shepard B. Stone, M.P.S., PA '76, HS '81, associate clinical professor of anesthesiology and a physician associate-anesthesiologist at Yale-New Haven Hospital, is also on the board of trustees of the Associates of the Cushing/Whitney Medical Library. Stone, a member of the Connecticut Army National Guard, was appointed state aviation medicine officer in March.

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Another school year, 100 new white jackets

On both sides of the podium, the start of the academic year marks a new beginning.

For the 100 students in the first-year class, the annual White Jacket Ceremony is a symbolic introduction to medicine and a welcome to Yale. This year it was also a chance for Interim Dean Dennis D. Spencer, M.D., HS '77, to introduce himself to the Class of 2007.

Spencer, who has led the medical school since July, described his own journey into medicine, which started with a boyhood spent on a farm in Iowa. Although he plowed the fields, he identified most with the local general practitioner, just back from the Korean



TERRY DAGRADI

On White Coat day members of the Class of 2007 lined up in front of the Sterling Hall of Medicine for the traditional class portrait.

War. “He wore a white coat, walked with a limp from a shrapnel injury, carried a big black bag and drove an oversized black Cadillac around the countryside, literally—and what appeared to be miraculously—saving lives, including mine, with a newly discovered antibiotic, penicillin,” Spencer said.

In high school Spencer tried, unsuccessfully, to make an EEG amplifier, and then resolved to become a physician. At Grinnell College and in medical school at Washington University in St. Louis, Spencer followed his interest in the nervous system, which led him to neurosurgery. Spencer came to Yale in 1972 to begin a five-year residency and has led neurosurgery here since 1987.

After sketching his own life, Spencer described the students. The 100 members of the Class of 2007, he said, have attended 46 colleges, earned master’s degrees at eight universities and Ph.D.s at three.

He urged the students to embrace the Yale System’s emphasis on the physician as scientist. “You must quantitatively understand the physical- and biological-science underpinnings of the evolved human by sharing the bench with our scientists and our clinics with clinical researchers,” he continued. “You must wear the white coat comfortably in both places, speak both the language of science and the language of caring.”

Margaret K. Hostetter, M.D., professor and chair of the Department of Pediatrics, told the story of a white coat she first wore as an intern in Boston and the reminders of individual patients stitched into its cloth. “Today you will wear the white coat, and you too will see life’s fabric torn, its texture raveled and its pattern rent. ... And once you’ve put it on, don’t ever take it off.”

—John Curtis

Remarks from the ceremony by Dennis Spencer appear in their entirety on our website, info.med.yale.edu/yymm.

Put authority to the test, Commencement speaker urges physician associates

In his Commencement address to the Physician Associate Class of 2003, Charles A. Morgan III, M.D., associate professor of psychiatry, offered a cautionary tale about an experiment done at Yale in the early 1960s. Stanley Milgram, Ph.D., a psychologist, wanted to test people’s acceptance of authority. Test subjects were asked to play the role of a “teacher” who would administer increasingly strong electric shocks each time a “learner” failed to answer a question correctly. Unbeknownst to the “teachers,” the learners were actors feigning a pained response to the shocks.

“No one was prepared for the results of that study,” Morgan said. With prodding from the experimenters, most subjects in the experiment were willing to administer up to 450 volts, despite the screams of the actor portraying the learner.

“Milgram believed subjects performed as they did because they had an extremely difficult time disobeying authority. Why am I telling you all this today?” Morgan asked. As they begin their careers, he continued, the 35 new physician associates will become authorities themselves and will have to maintain their habit of critical thinking, Morgan said. He encouraged them to ask, “What has someone told me, and why do I believe it?” He also suggested that they must be willing to accept new or contradictory information, admit mistakes and change a diagnosis. “Pay attention to the evidence that doesn’t conform to

your hypothesis,” he said. “You need to question authority. You need to think about what you do.”

Class President Peggy Peelman Vollstad praised her classmates for their dedication and willingness to help others: September 11, 2001, which came on the 22nd day of their studies, reminded them of why they had chosen to become physician associates. Some students immediately volunteered with the Red Cross. Others donated blood.

“It has been a long and arduous road ... to attain this privilege of being a health care provider,” she said. “I urge you to step off and reflect on why you became a physician associate.”

—John Curtis



This year's graduates in the Physician Associate Program chose psychiatry professor Charles Morgan as their Commencement speaker. His address also included a magic trick—tearing up a newspaper and then making it whole again.



Danielle Drayton



Sean Lucan



Kyeen Mesesan



Alison Norris

Danielle L. Drayton has received the 2003-2004 Schering-Plough/Leadership Alliance National Dissertation award for her work on the role of lymphotoxin/alphabeta in lymphoid organ development. This annual award recognizes PH.D. candidates in the biological sciences who have demonstrated superior scholarship and exceptional promise for success as academic scholars, scientists and teachers in biological and biomedical research. Drayton is a fourth-year immunobiology graduate student in the laboratory of Nancy H. Ruddle, PH.D. '68, the John Rodman Paul Professor of Epidemiology and Public Health and professor of microbiology and immunobiology.

Sean Lucan, a fourth-year medical student in the M.D./M.P.H. program, has received a scholarship from the Pisacano Leadership Foundation, awarded annually to outstanding students who commit to entering family practice. Applicants must show leadership skills, academic achievement, communications skills and a noteworthy level of community service. The scholarship provides educational programs, leadership training and up to \$28,000 in funding for students identified as future leaders in family practice. The money can be used to repay student loans and to travel to meetings and conferences.

Kyeen Mesesan, an M.D./PH.D. student studying microbial diseases in the Department of Epidemiology and Public Health, received a predissertation fellowship from the Yale Center for International and Area Studies that allowed her to spend five weeks in South Africa last sum-

mer. While there, she was at the HIV/AIDS Vaccine Division in the Perinatal HIV Research Unit of the Chris Hani Baragwanath Hospital in Soweto, the site of the first HIV vaccine trials in South Africa.

Mesesan evaluated the site for a dissertation project involving mathematical modeling of a partially effective HIV vaccine and the resulting policy implications for South Africa. She also developed a survey to assess sexual risk-taking behavior in vaccine trial participants, who will be monitored throughout the trials to ensure that such behavior does not increase.

Alison Norris, an M.D./PH.D. student in the Department of Epidemiology and Public Health's chronic disease division, has received two grants for HIV-related studies in Africa. With a Fulbright-Hays Doctoral Dissertation Research Abroad Grant and an International Dissertation Research Grant from Yale's Center for International and Area Studies, Norris will spend a year conducting doctoral research at the Tanganyika Planting Company, a large sugar plantation near Mt. Kilimanjaro in northern Tanzania. More than 7,000 adults live and work there, and her study aims to understand how life in a "company town" influences risk for HIV and other sexually transmitted diseases (STDs). Norris' research will describe how and why people have sex with partners who infect them with HIV, and explain who is most at risk for infection with HIV and other STDs in the plantation community. She hopes this information will suggest ways to reduce the spread of HIV.

A surgeon takes aim at bias in health care

A surgeon sees disparities in treatment and a solution in the creation of more diverse medical teams.

By Cathy Shufro

If you log onto MEDLINE and search for papers by **Augustus A. White III**, M.D., PH.D., HS '66, most citations will be what you'd expect from a prominent orthopaedic surgeon, with titles like "Effect of Screw Diameter, Insertion Technique and Bone Cement Augmentation of Pedicular Screw Fixation Strength." But among the recent articles, you'll also find one with a very different focus, "Our Humanitarian Orthopaedic Opportunity." In the March 2002 issue of *The Journal of Bone & Joint Surgery*, White addresses

topics that have increasingly preoccupied him during four decades as a surgeon: the racism that has denied equal health care to African-Americans and the healing potential of cultural sensitivity among doctors.

Unless physicians fight their conscious and unconscious biases, White says, they will widen the gap between the quality of health care provided to the privileged and what's offered to the marginalized. Infant mortality rates show that things are getting worse, says White, the Ellen and Melvin Gordon Professor of Medical Education at Harvard, where he is also a professor of orthopaedic surgery. In 2000, 14 of every 1,000 black babies died in their first year, compared with 5.7 per 1,000 white babies. That ratio of 2.5 black deaths for each white death has increased over the past 20 years, from 2.0, according to the Centers for Disease Control and Prevention. "Bias is thoroughly interwoven into the very core of Western medical culture," says White, former orthopaedic surgeon-in-chief at Boston's Beth Israel Deaconess Medical Center.

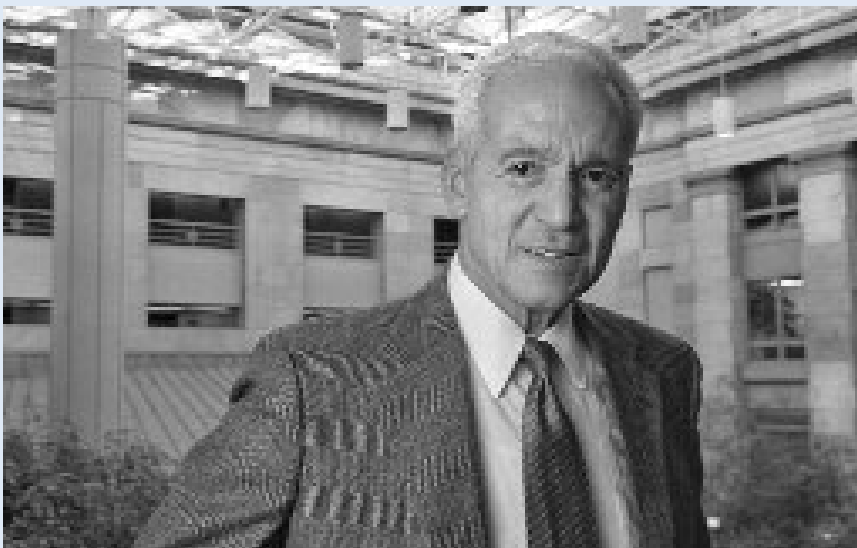
Even after adjusting for education and access to care, studies show similar gaps. African-Americans are less likely than whites to have coronary

angiography, drug therapy for HIV, kidney transplantation and even routine care. Bias even seems to influence the decisions of African-American physicians themselves. A 2001 Yale study by Jersey Chen, M.P.H. '98, M.D. '00, and Harlan M. Krumholz, M.D., professor of medicine, and others showed that after an acute myocardial infarction, white patients were significantly more likely than blacks to be given cardiac catheterization, even when the African-American patients were treated by African-American doctors. "Does anyone still have doubts about the momentum for bias in our medical heritage?" White asks.

He says that when the physician workforce represents a variety of ethnic groups, health care improves for those less likely to get good care. Physicians from minority groups are more likely to set up practices in underserved areas; simply including them on a team improves care, says White, who is African-American. "Over time, you're going to have a team that's less ethnocentric."

White believes that awareness of cultural differences is slowly emerging. At Harvard, first-year medical students now attend an all-day discussion of cultural differences in medicine. He describes his Yale mentor, Wayne O. Southwick, M.D., professor emeritus of orthopaedics, as a leader in fostering gender and racial diversity. Southwick received the 2003 Diversity Award from the American Academy of Orthopaedic Surgeons for his commitment to achieving greater diversity in the field.

White experienced racism in medicine firsthand when he graduated from Brown University in 1957 and sought a summer hospital job. At the "white" hospital in his hometown of Memphis, he would have been restricted to a menial job. To find a job with responsibility, White had to apply to a hospital for nonwhite patients; there he was allowed to work as a surgical technician. Since then,



Augustus White says physicians must fight their conscious and unconscious biases in order to narrow the gap in health care between the privileged and the marginalized.

“the theme of diversity and the value and importance of diversity” has been “a recurrent theme in my mind, like a Bach concerto.

White is co-author, with Manohar M. Panjabi, PH.D., a Yale professor of orthopaedics and mechanical engineering, of the widely used reference *Clinical Biomechanics of the Spine* and author of the popular book *Your Aching Back: A Doctor's Guide to Relief*.

Although White no longer performs surgery, he still does consultations, writes about orthopaedics and lectures both at Harvard and at national conferences. He has won many awards, including the Bronze Star for service as an Army surgeon in Vietnam. A former Brown University corporation trustee and fellow, he was selected in 2000 as one of Brown's 100 most influential 20th-century graduates, chosen from among 75,000 alumni. When asked what honor has given him the greatest satisfaction, White replied, “What's clearly the most gratifying is the positive feedback from patients, spine fellows, professional colleagues.” He said he was reminded of his purpose when he read *The Art of Happiness: A Handbook for Living* by the Dalai Lama, adding, “Our purpose here on Earth is to be happy, and the way to be happy is to help others.” White also finds happiness listening to the music of Duke Ellington, Quincy Jones and Nina Simone at home in Weston, Mass., where he lives with his wife, Anita, and two of his three grown daughters. (The third daughter is working in Sweden, where White studied and met his wife.)

In his article on race and medical care, White asks physicians to approach every patient based on the “double F criterion”—that is, to ask themselves: “Is this the way I would treat my friend or my family?” Do this, writes White, “and we make a tremendous contribution toward the elimination of health care disparities.”

Cathy Shufro is a contributing editor of *Yale Medicine*.

For NASA veteran, alumni post offers chance to help students reach their goals

When **Howard A. Minners**, M.D. '57, M.P.H., was a boy growing up in Garden City, N.Y., his parents hoped he'd aspire to be a doctor. But Minners had other ideas. Living on Long Island near Roosevelt Field, where Charles Lindbergh launched his dramatic flight across the Atlantic Ocean, he dreamed of doing something related to aviation. Minners did succeed in combining the two aspirations, becoming a flight surgeon for the astronauts in the early days of the space program. (As a flight surgeon, Minners took a mandatory jet qualification course, but never flew solo.)

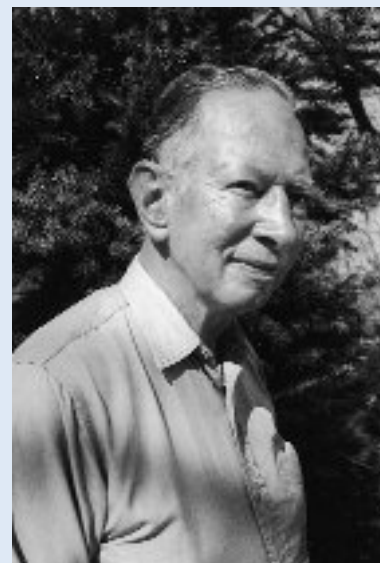
“It was a matter of being in the right place at the right time, and having the right training,” says Minners, who was recently named chair of the board of trustees of the Yale Medical School Alumni Fund. After graduating from medical school he spent a year getting a master's degree in public health at Harvard. Next came a year at the U.S. Air Force School of Aerospace Medicine in San Antonio, followed by a year of supervised residency training in aerospace medicine, eight months of which were spent with the NASA Space Task Force, then located at Langley Air Force Base in Hampton, Va.

As a flight surgeon for more than four years with NASA in Houston, Minners tended to the everyday health care of the astronauts and their families. On launch days he conducted a final medical exam and helped the astronauts suit up. He also conducted immediate postflight medical exams, often aboard an aircraft carrier.

One of his fondest memories is of John Glenn's 1962 Project Mercury flight, which had to be temporarily scrubbed for technical reasons. After lying supine in his spacecraft for nearly four hours, Glenn returned to the astronauts' quarters to remove his space suit. With yet another mission postponement, there was public concern about the astronaut's mood. “John liked music, and suddenly I heard him singing, so I harmonized with him,” Minners recalls. “With the whole world waiting, there we were singing. It was a delightfully private experience uncomplicated by all this stuff that was going on.”

But there were also stressful experiences, like the time an astronaut missed his landing site. “There's a period during spacecraft re-entry when, due to atmospheric ionization, you have no communication, so we didn't know where he was,” Minners says. “It turned out fine, but for a while we were very concerned.”

While working with the space program, Minners researched orthostatic hypotension—the lightheadedness you may experience if you get up quickly after you've been lying down—to see if it was accentuated after flight in space. In part as a result of his early work,



Howard Minners

KIRSTEN MINNERS

exercises have been developed for astronauts to perform while they're in space to maintain cardiovascular fitness.

After leaving the space program in 1966, Minners joined the U.S. Public Health Service at the National Institutes of Health, first in the Office of International Research and two years later at the National Institute of Allergy and Infectious Diseases. He worked in vaccine development, immunology and tropical medicine. He went on to become chief of the World Health Organization's research office in Geneva before serving as an assistant surgeon general and deputy director of the Public Health Service's Office of International Health. He spent the last 10 years of his career as science advisor to the head of the Agency for International Development, with oversight for agricultural, environmental, energy and natural resources research, as well as biomedicine.

Minners says his education at the School of Medicine prepared him well for a career in the sciences. He cites as an example the research he did for his medical school thesis. "Having been a chemistry major at Princeton before coming to Yale, I was trying to develop a chemical process whereby we could accurately and more simply measure urinary estrogen levels," he says. "We couldn't come up with what we were trying to do, but that in itself is part of the learning process."

As chair of the medical alumni fund, Minners wants to make the kind of education he received at Yale more affordable.

"When I learned that the scholarships we offer aren't always as competitive as at some other medical schools, I decided then and there that we need to [do more]," he says. Three years ago he established the Howard Minners Family Scholarship for medical students. "I still believe that the education you receive at Yale, and notably, under the Yale System, is better than anywhere else. But it doesn't come inexpensively."

—Jennifer Kaylin

Working on a broad canvas, physician-artist finds perfection amid life's many flaws

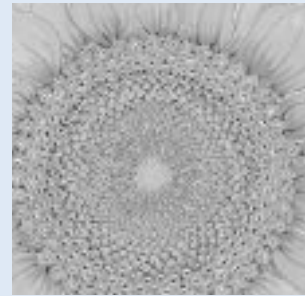
It is 5:30 a.m., and the sun hasn't yet risen on this fall day in Providence, R.I. On the third floor of an old house in the historic East Side of town, **Cheng-Chieh Chuang**, M.D. '95, holds his watercolor brush in his hand.

This is how Chuang begins each day—in his studio. The meditative focus of painting prepares him for the hectic pace of his solo family practice in Taunton, Mass., a blue-collar town just across the state line. It allows him to work as an artist, a lifelong interest and parallel career to medicine.

Painting also serves as a philosophical foundation for Chuang. When he chooses a subject for his detailed, nearly photographic watercolors—usually something from nature—he does not avoid objects that seemed flawed, like a maple leaf with a scaly patch. "All those scars are beautiful in themselves. Nothing is perfect in this world," says Chuang. He tries to retain this perspective when meeting with patients. "I try to see them as perfect beings, despite their imperfections."

For four years after his residency in family practice at Brown University, Chuang's desire to travel and paint while practicing medicine led him down an unusual path. He spent half his time on the road doing *locum tenens* work and half his time at home in Providence, painting. He lived in a dozen communities for several months each, from Maine to Alaska and from Minnesota to New Mexico, where meeting patients gave him a more nuanced view than that of a tourist. In the fall of 2002 he settled full time in Providence and has established an Internet site to display his paintings and sell prints (See <http://www.fromearthtosky.com/>).

Chuang also combines his interests by teaching a course in art and medicine to Brown medical students. They explore how art can improve their powers of observation and enrich both their



Sun Rising by Cheng-Chieh Chuang

own lives and those of their patients. Chuang wants his students to view physicians in the way that he came to see them as a child growing up in Taiwan (where his adventures sometimes ended with a trip to the doctor); not just as scientists but as "renaissance men/women."

Chuang is looking for a house near his practice in Massachusetts, where he hopes to combine his office with an art gallery and a "healing garden." Having worked much of his career in subsidized clinics in medically underserved areas, he is tempered by the realities of private practice, of having to worry about the bottom line in addition to simply providing quality care. But he's happy with the work. "Family practice constantly reminds me to be curious about everything in life, including the human condition."

And he tries to see each day as a gift. "There is so much adversity. ... But most of us go through daily life without any big problems. That in itself is a miracle. That's something we take for granted, like the air."

—Cathy Shufro

Online CME site, voted best of the Web, reflects the curiosity of its creator

In the mid-1990s, just as the Internet was starting to take off, **Harry A. Levy, M.D., M.P.H.** '82, looked at the information available online for physicians and saw a virtual desert. "Not much was going on in health care on the Internet," says Levy, 59. "I decided I could do better."

So in 1996 Levy launched the first continuing medical education (CME) site on the Web and hasn't looked back. His creation, Cyberounds (www.cyberounds.com), now has 125,000 registered users and a potential audience of more than a half-million physicians, as a result of the cooperative arrangements Levy has struck with major online publishers and professional societies. The website offers conferences in 15 disciplines, including cardiovascular medicine, geriatrics, genetics, psychiatry, rheumatology and women's health.

Each conference provides a case study, diagnostic clues and a discussion by experts, usually highlighting emerging treatments. Conferences are moderated by faculty members from medical schools around the country, and physicians who complete the work can earn CME credit from the Albert Einstein College of Medicine in New York, the program's academic partner. (Last year Einstein awarded a total of 20,000 CME credits to participants in Cyberounds courses.) As it approaches its eighth birthday, Levy's brainchild has the longest track record in the online CME field, and last June it received a Nettie award from MD Net Guide as best CME provider.

"Doctors are busy people," says Levy. "What we do for them is provide the experts to lead them through the information jungle."

Levy and his collaborators at Cyberounds have also employed a playful approach to CME (Levy calls it "medutainment"). Two years ago, they

launched "Cardio Country Club," a Web-based golf game in which physicians compete against each other and advance through an 18-hole course by correctly answering questions about the management of cardiovascular disease. More than 3,800 online learners have played the game.

An NYU medical graduate, Levy trained at New York's Mount Sinai Hospital in preventive medicine and studied public health at Yale. After starting and running several health care businesses in New York in the 1970s and 1980s, he decided he would need to make time for at least three careers. He sold his companies in 1991 and set a goal of writing five novels, then doing basic research in neuroscience.

He's now at work on his third book (his second, a mystery novel titled *Chain of Custody*, was published by Random House in 1998), is writing a screenplay and expects to be slicing brain tissue by the time he turns 65. He figures the conventional age for retirement will be a good time to begin the next chapter in his professional life, however unconventional that may seem to others. (Levy notes that his great-grandfather lived to be 110 and that both his grandfathers reached 90.) "I think I can stick to my timetable," he says, smiling. "At least I'm crossing my fingers that genetics will help me out."

As for the future of Cyberounds, he says the company will turn its attention to developing courses serving the subspecialties. "We want to drill down deeper—beyond the general category of endocrinology, for example, to have focused modules in diabetes or thyroid disease," he says. "We want to do more interactive programming, including games and decision-tree programs, courses customized to the user's individual needs and interests." Currently in the works are a triathlon game on rheumatoid arthritis and disease management software for doctors and patients.

Levy says the business (which includes a consumer site, TheDoctor



Harry Levy

WillSeeYouNow.com, and an e-scheduling site, MakeMyAppt.com) has been profitable for the past six years despite the bursting of the tech bubble. One factor in its success, he says, is that the company is doctor-driven and doctor-created, and it caters to what physicians want. "We owe our success to word-of-mouth among physicians. We haven't had to advertise and instead were able to invest in innovative programs. You grow slower, but you become more useful to the medical community."

—Michael Fitzsousa

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 yymm@yale.edu or write to Faces, Yale Medicine, P.O. Box 7612, New Haven, CT 06519-0612.

New leadership for the alumni association

The AYAM elects its first African-American president, a Brooklyn physician who makes house calls.

Hospitals horrified **Donald E. Moore**, M.D. '81, M.P.H. '81, beginning the day he visited his dying father.

"I was able to see him in the state of illness before the nurses generally do their morning care. It was very ugly," said Moore, who was 14 years old and growing up in Jamaica. His police officer father was in end-stage renal failure, the result of uncontrolled hypertension. "I remember I left the ward crying. That was the first time that it struck me that he was dying. I never thought I'd ever go back into a hospital."

Later, as a student at Pace University in Manhattan, Moore majored in sociology. When he excelled in an obligatory math and science course, his professor suggested that he consider medicine.

"I had no idea what I was getting into." And yet, he says, "There's nothing in my life that would have given me as much satisfaction as studying medicine."

In July Moore assumed the presidency of the Association of Yale Alumni in Medicine (AYAM). A new vice president and secretary were also elected, as well as two new executive committee members.

One of Moore's goals as president is to foster discussion of how managed care has harmed the doctor-patient relationship. He said a capitated plan, which pays a doctor to take care of a group with a flat per-patient payment, militates against what a physician is supposed to do: care for sick people. Instead, it encourages the doctor to seek healthy patients and see them as little as possible.

Moore, the first African-American to serve as AYAM president, also hopes to convince more minority graduates from the mid-70s through the mid-80s

to attend reunions. He can't explain why, but minority grads from that era are "a disaffected group." He would like them to renew their connections to Yale because, for most doctors, the medical school experience "is a defining characteristic of them as physicians."

The medical school will most likely choose a new dean during Moore's two-year term, to replace David A. Kessler, M.D., who left in June to become dean of the medical school at the University of California, San Francisco. Moore favors choosing "someone who loves the Yale System because of their involvement in it, either as a student or a faculty member, or someone who came, saw and loved." He and six former presidents of AYAM wrote to university President Richard C. Levin in July suggesting that the new dean should be either a faculty member or a graduate of the School of Medicine. They asked Levin to consider appointing Interim Dean Dennis D. Spencer, M.D., HS '77, permanently to the post. Spencer, who did his residency at Yale, is a longtime faculty member and former chair of the Department of Neurosurgery.

Research into basic immunology dominates the professional life of **Francis M. Lobo**, M.D. '92, AYAM vice president. An assistant professor of medicine at Yale, Lobo studies a protein messenger, the cytokine CD40 ligand, which generates normal antibody responses to infection but also mediates abnormal immunological responses, such as those that cause lupus, atherosclerosis, asthma and rejection of transplanted organs. Lobo hopes that a deeper understanding of CD40 ligand will provide opportunities to treat diseases of deficient or abnormal immunity.

In a subtle way, students at Albert Einstein College of Medicine in the Bronx are beneficiaries of the Yale System. As a member of the school's admissions committee, AYAM secretary **Christine A. Walsh**, M.D. '73, looks for applicants who show creativity and



Christine Walsh, Donald Moore and Frank Lobo were chosen at the 2003 Reunion to lead the Association of Yale Alumni in Medicine. Frank Coughlin is past president.

TERRY DAGRADI

self-motivation, qualities valued at Yale. “I think the Yale System is very successful in the type of doctor it produces,” says Walsh, a pediatric cardiologist on the full-time faculty at Einstein. Her research focuses on abnormal heart rhythms in children. She directs the Pediatric Dysrhythmia Center at the Children’s Hospital at Montefiore Medical Center in the Bronx, specializing in cardiac electrophysiology.

AYAM executive committee member **Victoria L. Holloway**, M.D. ’94, M.P.H., may influence what we find in the beauty aisles at the local pharmacy. A dermatologist, Holloway is assistant vice president for research and development at L’Oréal, the world’s largest cosmetics company. In a converted Chicago warehouse, Holloway oversees biologists, physicists and chemists working “to understand the differences across ethnicities of hair and skin.” The findings will be used to design hair and skin-care products.

Executive committee member **Robert W. Lyons**, M.D. ’64, visits his alma mater several times a month to attend conferences. He is chief of infectious diseases and epidemiology at Saint Francis Hospital and Medical Center in Hartford, professor at the University of Connecticut School of Medicine and associate clinical professor of medicine at Yale. In the past year he has led seminars for Connecticut county medical societies on SARS, bioterrorism and smallpox.

—Cathy Shufro



Maxine Singer



Laurence Boxer



David Law



Barry Solof

1940s

C. Baldwin DeWitt Jr., M.D. ’49, presented the commencement address and received an honorary doctor of science degree from Northeastern Ohio Universities College of Medicine in May. DeWitt continues to work full time as scholar-in-residence at the Accreditation Council for Graduate Medical Education in Chicago, pursuing his research on the working and learning environments of residents.

1950s

Maxine F. Singer, PH.D. ’57, retired from a 14-year tenure as president of the Carnegie Institution of Washington and in January 2003 was named chair of the board of directors of the Whitehead Institute for Biomedical Research in Cambridge, Mass. Singer, who previously served as a member of the board, has earned a strong reputation in science public policy for her studies of risks from recombinant DNA research and her support for the Human Genome Project.

1960s

Laurence A. Boxer, M.D., HS ’68, was named the Henry and Mala Dorfman Family Professor of Pediatric Hematology/Oncology at the University of Michigan. He has been director of pediatric hematology/oncology for the past 21 years.

David C. Law, M.D. ’66, wrote to say that in 1998 he and his wife Doris, “at the ripe old age of 58,” adopted two girls from the Ukraine, Anna, 4, and Ekaterina, 3. A year and a half later, they adopted Natalia, 2. The girls are

now 9, 8 and 5 and the family is doing quite well. He adds that this may be of interest to members of the class, as well as to others who might be considering adoption or starting a second family in their “senior” years.

Ghulam Rauf Roashan, M.D., M.P.H. ’67, who is semiretired and teaching and living in Fremont, Calif., was head of health planning and international health in the Ministry of Public Health in Afghanistan in the 1970s and served on the executive board of the World Health Organization. He has also worked as a journalist. Roashan now directs the online Institute for Afghan Studies and is an advisor to Development Gateway, an online research group.

1970s

Barry S. Solof, M.D. ’74, is national chair of the American Society of Addiction Medicine’s committee on Geriatric Alcoholism and Substance Use and physician-in-charge of addiction medicine for Southern California Permanente Medical Group in West Covina, Calif. Previously, Solof served as medical director of adult and adolescent chemical dependency treatment programs at Edgemont Hospital in Los Angeles and Tustin Medical Center in Orange County, Calif., and for Alternatives, a gay and lesbian program at Glendale (Calif.) Memorial Hospital. He spoke recently on the medical aspects of chemical dependency at a conference organized by Save Our Selves, a group that encourages a self-empowerment approach to recovery from drug and alcohol abuse.



Marian Hannan

David
Mandelbaum

Eduardo Marbán



Murad Alam



Joshua Rosenow

Chrysalyne
Schmults

H. Steven Sims



Dina Strachan

1980s

Marian T. Hannan, D.Sc., M.P.H. '81, assistant professor of medicine at Harvard Medical School and a senior research associate at Hebrew Rehabilitation Center for the Aged in Boston, received the 2003 Excellence in Teaching Award from the First Year Student Committee on Teaching Excellence at Harvard. Hannan is a specialist in the epidemiology of age-related musculoskeletal disorders.

Robert S.D. Higgins, M.D. '85, chair of the department of cardiovascular/thoracic surgery at Rush University in Chicago, was appointed the Mary and John Bent Chair of Cardiovascular-Thoracic Surgery in June at the quarterly meeting of the Rush-Presbyterian-St. Luke's Medical Center board of trustees.

David E. Mandelbaum, M.D., Ph.D., HS '82, former chief of the division of child neurology at the Robert Wood Johnson Medical School, was appointed chief of the division of pediatric neurology at Hasbro Children's Hospital in Providence, R.I. Mandelbaum is also professor of clinical neurosciences and pediatrics at Brown Medical School. His teaching and research have focused on childhood epilepsy and related neurodevelopmental disorders.

Eduardo Marbán, M.D. '80, Ph.D. '81, chief of cardiology at Johns Hopkins Medical Center, is the director of The Donald W. Reynolds Cardiovascular Clinical Research Center at Johns Hopkins, established under a four-year, \$24 million grant in May 2003. The multidisciplinary center will use novel biological

therapies and modern imaging techniques to try to reduce the rate of sudden cardiac death. In October, the center held an inaugural symposium to highlight the major projects that make up its research efforts.

1990s

Murad Alam, M.D. '96, has started his second year as chief of the section of cutaneous and aesthetic surgery in dermatology at Northwestern University in Chicago. Alam completed a dermatology residency at Columbia University College of Physicians and Surgeons and fellowships in laser surgery at Harvard and in Mohs micrographic surgery at the University of Texas Baylor/M.D. Anderson Cancer Center.

M. Kathleen Figaro, M.D. '96, assistant professor of medicine at the Vanderbilt Medical Center, won a Robert Wood Johnson Career Development Award for her work with underrepresented minorities and diabetes care. The four-year, \$365,000 grant was awarded in January 2003. Figaro's project is titled "Disability Expectation: Impact on Self-Care of Type 2 Diabetes."

Kathryn E. Johnson Hoffman, M.P.H. '99, and **Eric S. Hoffman, Ph.D.** '99, were married on July 5 in Webster, Mass. She is a doctoral candidate in clinical neuropsychology at the University of London. He is a research analyst for biotechnology stocks in the London offices of Bear Stearns, a New York investment bank.

Cynthia Lord, PA-C '91, program director and assistant professor at the Quinnipiac University Physician Assistant Program, was elected director-at-large to the board of the American Academy of Physician Assistants (AAPA) for a two-year term. Lord is the graduate advisor to the Student Academy of the AAPA.

Shefali Pardanani, M.D., M.P.H. '97, and **Vinod Pathy, M.D.**, were married on May 10 in New Rochelle, N.Y. They are medical residents, she in obstetrics and gynecology at the Jacobi Medical Center and he in general surgery at Montefiore Medical Center, both in the Bronx. Pardanani is also a resident at Jack D. Weiler Hospital, Albert Einstein College of Medicine in New York.

Lisa F. Price, M.D. '98, a second-year child psychiatry fellow in the department of child and adolescent psychiatry at the Massachusetts General Hospital/McLean Hospital in Boston, received the 2003 American Academy of Child and Adolescent Psychiatry Presidential Scholars Award for research. Price will explore the parent-child relationship in couples who have conceived their child with the aid of *in vitro* fertilization, assessing attachment, risk and resiliency factors.

Joshua M. Rosenow, M.D. '96, has completed his fellowship in stereotactic and functional neurosurgery at the Cleveland Clinic Foundation and works as director of functional neurosurgery at Northwestern University and Northwestern Memorial Hospital in Chicago. His practice focuses on surgery for movement disorders, epilepsy and pain. His

research interests include outcomes from surgery for movement disorders and pain and functional imaging of neurostimulation. Rosenow is also investigating novel applications of neuromodulation.

Chrysalyne D. Schmults, M.D. '98, was appointed assistant professor of dermatology at the University of Pennsylvania Health System in July. Her initial research will examine the efficacy and safety of topical, nonsurgical treatments for basal and squamous cell carcinomas. Her clinical responsibilities include Mohs surgery, an advanced surgical procedure used for recurrent skin cancers. Schmults is also an editorial reviewer for *The Journal of Drugs in Dermatology*.

H. Steven Sims, M.D. '94, HS '00, was recently named director of the Chicago Institute for Voice Care, a treatment center dedicated to the care of voice and airway disorders. Sims, who completed a research fellowship in neurology at the National Institutes of Health and a research fellowship in the care of the professional voice at Vanderbilt, relocated to Chicago after serving on the staff at the University of Nebraska.

Dina D. Strachan, M.D. '94, writes to say that she is an assistant clinical professor of dermatology at the Columbia University College of Physicians and Surgeons and has gone into a private practice in Manhattan. Strachan received a 40-Under-Forty Achievement Award from *The Network Journal* at a ceremony in June at Columbia University, where she is studying biomedical informatics part time.



**Stephanie Snitow and
Daniel Jacoby**

2000S

Daniel Jacoby, M.D. '00, and Stephanie Snitow were married on August 31 in Florham Park, N.J. Jacoby, son of Robert O. Jacoby, D.V.M., PH.D., professor and chair of comparative medicine at Yale, is a chief resident in internal medicine at Mount Sinai Hospital in New York. Snitow is a fellow in the Harvard Business School Service Leadership Program, working as the special assistant to the president of Phipps Houses, a developer of affordable housing in New York.

Elizabeth V. Harrold Ratchford, M.D. '00, and Jack Ratchford, M.Sc. '98, were married in Atlanta on May 3. She is an instructor in clinical medicine and on the faculty in the division of cardiology at Columbia Presbyterian. He graduated in May from Columbia University College of Physicians and Surgeons and will serve a preliminary year in internal medicine followed by a neurology residency at Columbia.

SEND ALUMNI NEWS TO

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**Kathryn Johnson Hoffman
and Eric Hoffman**



**Elizabeth Harrold Ratchford
and Jack Ratchford**

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AYAM Representative, Medical School Council

Francis M. Lobo, M.D. '92

Paul A. Bonner, M.P.H. '68, of Dewitt, N.Y., died on August 8 at the age of 58. He had battled diabetes for more than 40 years. Bonner worked for the Salvation Army Harbor Light Centers, as director of grants and contracts management in Washington, and as associate program director in Boston. He was also executive director of the Addiction Treatment Center of New England in Brighton, Mass.

Thomas J. Brennan, M.D. '82, died on July 11 at the age of 56, at his home in Vero Beach, Fla. Born in Richmond Hill, N.Y., Brennan graduated from the U.S. Military Academy at West Point in 1969. He was a captain in the Army and was awarded the Silver Star for Bravery. Brennan was an anesthesiologist in Dothan, Ala., until 1989, when he moved his practice to Vero Beach. He was also a member of the Indian River County Medical Society.

Paul Calabresi, M.D. '55, professor emeritus of medicine and founding faculty member of the Brown University School of Medicine, died on October 25 of cancer at the age of 73. One of the founding fathers of medical oncology and cancer clinical pharmacology at Yale, Calabresi was instrumental in shaping the field of modern chemotherapy. He developed approaches that led to the cure of such diseases as Hodgkins lymphoma. During his career Calabresi was president of the American Society of Clinical Oncology, chair of the National Cancer Advisory Board and a member of the President's Cancer Panel and the National Cancer Legislation Advisory Committee. The Paul Calabresi Lectureship has been created in his honor by the Yale School of Medicine.

Miriam McDonald Campbell, M.P.H. '33, of Chilmark, Mass., died on July 21 after a short illness and complications from a fall. In 1980 Campbell co-founded the Hospice of Martha's Vineyard, where she was admitted during her illness. Campbell taught at Smith College in Northampton, Mass.; Westbrook Junior College in Portland, Maine; and the University of Maine at Orono. She received the Health Education Award of Distinction from the New England Health Education Consortium, the Ira V. Hiscock Award from the New England Public Health Association and the Maine Maternal and Child Health Council Health Education Award.

Irving Guttenberg, M.D. '60, an otolaryngology surgeon from Rochester, N.Y., died on August 17 at the age of 69. After medical school and training, he served as a captain in the Air Force at Loring Air Force Base in Maine. Guttenberg was a clinical instructor in surgery (otolaryngology) at Yale from 1984 until his death and chief of surgery and chief of ear, nose and throat surgery at the VA Connecticut Healthcare System in West Haven and at MidState Medical Center in Meriden. He retired from private practice in 2002.

William C. Harvey, M.P.H. '65, of Tiverton, R.I., died on August 21 at the age of 71. Harvey was the owner/operator of a medical consulting firm, Hospital Executives, from which he retired in 1994. He was a hospital administrator in Rhode Island, New York and Massachusetts, and ran a home health care agency in Rhode Island.

Warren H. Knauer, M.D., HS '54, an oncologic surgeon from Naples, Fla., died on June 21 at the age of 81. Knauer was co-director of the Wuester Tumor Clinic in Elizabeth, N.J., and chair of the division of malignant and allied diseases and of the cancer committee at the Elizabeth General Medical Center. He also developed a surgical oncology program for fourth-year surgical residents, the only one of its kind in New Jersey. Knauer volunteered for 28 years for the American Cancer Society (ACS) and received the Physicians Award and the highest National/Division Bronze Medal Award from the ACS.

Myra A. Lappin, M.P.H. '71, M.D., of San Francisco, died from ovarian cancer on June 17 at the age of 57. Lappin was director of student health services at Cal State Hayward and later at San Francisco State University, where the program became a model for accessible, affordable health care for students. She promoted research in the fields of women's health and sexually transmitted infections.

Dorothy J. Lewis, M.P.H. '72, of Newtown, Conn., died on August 7 at the age of 71. Lewis was professor of dental hygiene at the University of Bridgeport. She retired in 1985, then joined the faculty at Tunxis Community College in Farmington, Conn., where she focused on community programs affecting dental care for underprivileged children in the local school systems.

Robert M. Macnab, Ph.D., professor of molecular biophysics and biochemistry at Yale, died on September 7 as a result of injuries sustained in a fall at his home. He was 63. Macnab, an expert on the bioenergetics of motility, joined the faculty at Yale in 1973 and served as chair of his department from 1992 until 1995.

George A. Nelson, M.D. '57, of Glenview, Ill., and formerly of Northbrook, Ill., died on September 3 at the age of 72. Nelson served as chief of staff at Lutheran General Hospital and during a 45-year career practiced at the Fahey Clinic and Holy Family Medical Center in Del Plaines, Ill. He also served as a flight surgeon on the aircraft carrier USS Ranger.

David A. Page, M.D. '56, of Skidaway Island, Ga., died on July 2 at the age of 75. Page was an ophthalmologist at the North Shore Medical Group in Huntington, N.Y., before retiring to Georgia in 1994. During World War II, he served in the Army occupation forces in Japan.

Robert J. Rice, M.D. '56, of Punta Gorda, Fla., died on June 13 at the age of 74. Rice owned and directed Camp Montrose in New York state for emotionally disturbed children. He also served as a consultant to the Nassau County special schools and was director of child psychiatry inpatient services at the Nassau County Medical Center.

Benjamin R. Robinson Jr., M.D. '43, died on June 15 at the University Retirement Community in Davis, Calif., at the age of 84. Robinson practiced for 30 years at the Woodland (Calif.) Clinic Medical Group and served as chief of staff of Woodland Memorial Hospital. He was a captain in the Army and was also in the National Guard Reserves.

Peter Safar, M.D., FW '50, a pioneer in emergency medicine and the development of cardiopulmonary resuscitation (CPR), died on August 3 of cancer at his home in Pittsburgh. He was 79. Safar was known as the father of modern-day CPR for developing, in the 1950s, a method of mouth-to-mouth resuscitation which he combined with chest compression. He was a founding member of the U.S. National Research Council's committee on emergency medical service, establishing guidelines for ambulance design and emergency medical technician and paramedic training. Safar established anesthesiology departments in Baltimore, Pittsburgh and Lima, Peru. He was chair of anesthesiology at the University of Pittsburgh Medical Center and established the International Resuscitation Research Center (now the Safar Center for Resuscitation Research).

Thomas E. Shaffer, M.D., HS '37, of Columbus, Ohio, died on July 31 at the age of 94. Shaffer was a clinical instructor in pediatrics at Yale until 1942 and had a private practice in New Haven and Farmington, Conn. After serving in the Army Medical Corps during World War II, he joined the faculty at the Ohio State University Medical Center. Shaffer also was director of adolescent services at Children's Hospital in Columbus, Ohio, until 1983, and he was the medical director for the Juvenile Diagnostic Center in Columbus from 1960 until 1964.

SEND OBITUARY NOTICES TO
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JOHN CURTIS

Settling down in Pittsburgh

A little over three years ago, fourth-year students Tanya Smith and Jose Prince embarked on a complicated venture and entered the residency placement process leading up to Match Day as a couple ["A Match Made in New Haven," Summer 2000]. It meant finding one desirable location that also had two desirable residency programs, in ob/gyn for Smith and surgery for Prince. They settled on Pittsburgh and matched at the University of Pittsburgh Medical Center, their top choice.

Now, three and a half years later, they're convinced they made the right decision. "It's been a really good place to do training in ob/gyn," said Tanya Prince (the couple married two years ago). "It has tremendous clinical volume so you get lots of experience. It's a great place in terms of balancing clinical research and operating experience." She's looking for a private practice position in Pittsburgh to join when her residency ends in June.

Jose Prince is temporarily trading the care of humans for the study of mice. He recently began a two- to three-year research fellowship. "I'm working on a project that looks at early molecular signaling that takes place in hemorrhagic shock," he said. After his fellowship, he must complete two more years of clinical work.

Though still earning residents' wages, the couple has been able to buy a house, a 1930 red-brick duplex in the Squirrel Hill neighborhood just a mile and a half from work. For a young couple, Pittsburgh has been a wonderful place to live. "It has a small-city feel, but it has all the good things of a big city," said Tanya Prince. City attractions include the local symphony and opera and touring Broadway shows. For outdoor enthusiasts, skiing is only 45 minutes away. Sailing and hiking are also close at hand. The only downside for the couple is the distance from family and ocean. She is from San Francisco; he's from New York City.

Nevertheless, Tanya concluded, "It was a really good choice for us." They plan to stay in Pittsburgh for the foreseeable future, but as Jose said, "You never know. We would like to be closer to our families."

—John Curtis



OCTOBER 1958

Alumni Bulletin

"Discovery of the first hormone ever isolated from the pineal gland has been reported by Dr. Aaron B. Lerner and his associates in the Section of Dermatology. The new hormone has been named Melatonin.

"The laboratory technique developed by the Yale investigators for isolating Melatonin was worked out during three years of exhaustive research. More than 250,000 beef pineal glands were supplied by the Armour Laboratories. Chemically, the new hormone belongs in the class of compounds known as hydroxyindoles. Although the function of Melatonin has not yet been determined in humans or in animals, tests in frogs reveal that it lightens the skin shade and reverses the darkening effect of other hormones."



SUMMER 1994

Yale Medicine

"At a medical school so steeped in tradition, Dean Gerard N. Burrow, M.D. '58, knows full well how difficult it is to start a new one. But with the dean's gift of a replica of John Radcliffe's gold-headed cane, the school now has another tradition.

"After my first Yale Commencement as dean last year, I realized that we were the only school within the university not to have a standard to carry," the dean explains. So he presented to the school his own gold-headed cane, a gift from his chief residents when he left Toronto General Hospital. This cane was first carried May 23 at the Yale University Commencement. ...

"The original cane was carried by John Radcliffe, an outstanding British physician. A year before he died in 1714, Dr. Radcliffe passed the cane on as a token of friendship to Dr. Richard Mead, a rising physician. The tradition of passing the cane continued until 1823, when the widow of Dr. Matthew Baillie presented the cane to the College of Physicians in London."

