A new resonance at imaging center

On malpractice front, it’s doctor vs. lawyer

Operating-room safety for dummies

A new space for science

With the opening of The Anlyan Center for Medical Research and Education, the school dedicates its largest building ever.
On the Web
info.med.yale.edu/ymm
On our website, readers can submit class notes or a change of address, check the alumni events calendar, arrange for a lifelong Yale e-mail alias through the virtual Yale Station and search our electronic archive.

ON THE COVER
The Anlyan Center for Medical Research and Education devotes more than 450,000 square feet of new space to the study of science and the training of new generations of scientists and physicians. Photographs by Frank Poole (6) and Martin Klimek (portrait).

THIS PAGE
The new building at 300 Cedar Street is now the largest facility at the medical school, dominating the skyline at the corner of Cedar Street and Congress Avenue. Photograph by Frank Poole

SUMMER 2003
CONTENTS

2 Letters
4 Chronicle
8 Rounds
16 Findings
18 Books
18 On Campus
30 Essay
40 Faculty
42 Students
46 Alumni
51 In Memoriam
52 Follow-Up
52 Archives

14 A new space for science
With the opening of The Anlyan Center for Medical Research and Education, the school dedicates its largest building ever.

20 High resolution
The opening of a new Magnetic Resonance Research Center gives Yale expanded capabilities for advancing imaging science and disease understanding. Improving epilepsy treatment is just one focus.
By Marc Wortman

26 Showdown
With Washington tackling medical malpractice, it’s doctor vs. lawyer in the court of public opinion.
By Eli Kintisch

34 A safer OR
Avoiding medical errors is one piece of the malpractice puzzle. David Gaba has spent his entire career preventing them.
By Paul Chutkow
Above and beyond the call at Commencement

On behalf of my family and myself, I want to express my gratitude to the entire staff who organized, reorganized and ran the Commencement ceremonies. Though I wasn’t there beforehand to witness the Herculean effort, my father was—and he reported that everyone worked like Trojans to preserve the celebration of the day. I don’t think I’m capable of expressing how important that was to my family, and how it left them with a sense that this school—the entire school—has an unusual and strong sense of community. I’m proud to have been a part of it, and to remain one.

The most exciting, emotional and meaningful moment of the day occurred as I and my classmates took our short walk from the I-wing of Sterling Hall of Medicine into the graduation tent. We were a little depressed as we stood dripping onto the floor of Sterling. Someone near me mentioned that we looked like a funeral procession as we shuffled silently toward the exit. As we neared the door I saw staff members standing side by side, holding umbrellas for us. I was overwhelmed by the abrupt contrast between my momentary depression and the emotions that resulted from the cheers emanating from the tent and the stage. The applause didn’t even threaten to lull, let alone pause or stop.

To the staff who made it all happen, I thank you for everything you did for our class to make the best of a difficult day. And I thank you, in particular, for helping my own family. We appreciate it deeply.

Maxwell S. Laurens, M.D. ’03
New Haven

As we went to press, the kudos were flying

Each spring the National Academy of Sciences elects new members, bestowing one of the highest honors a U.S. scientist or engineer can receive. As this issue of the magazine was in production, we learned that three Yale scientists had been tapped for membership: medical school faculty members Linda M. Bartoshuk, Ph.D., and Arthur L. Horwich, M.D., Ph.D., ’78, FW ’84, and alumnus John D. Baxter, M.D. ’66, WS ’68, professor of medicine at the University of California, San Francisco (UCSF). Bartoshuk, a professor of surgery (otolaryngology) and psychology, is an experimental psychologist and one of the world’s leading experts on the science of taste. Horwich, professor of genetics and pediatrics and a Howard Hughes Medical Institute investigator, has solved key problems in the study of protein folding, work that has clear implications for Alzheimer’s disease.

Baxter is director of UCI’s Metabolic Research Unit. In 1979, he and Howard M. Goodman, Ph.D., were the first to clone the gene for human growth hormone, which became the first genetically engineered product to receive government approval. His current work focuses on how receptors in the nucleus of a cell affect human health and disease.

On another front, judges in the CASE Circle of Excellence competition have selected Yale Medicine to receive the silver medal in the Special Interest Magazines category at the CASE International Assembly in July in Washington. Yale Medicine was awarded a silver medal last year as well by CASE, the 23,500-member Council for Advancement and Support of Education, and received the highest honor in the 2003 magazine competition sponsored by the Association of American Medical Colleges.

—The Editors

from the editor

This just in

One of the dubious pleasures of editing a magazine is taking an issue that is ready to go to print and remarking how news has broken. The pleasure is doubtful because once an article, a headline or a layout is complete in the eyes of the person who created it, there is an almost irresistible force that seems to say, “Don’t change a thing.”

But change was the modus operandi at the School of Medicine during May and June this year. The largest building ever constructed on the medical campus was dedicated in May, and news followed soon after that benefactors John Anlyan, a ’42, M ’45, and Betty Jane Anlyan had increased their gift to Yale so significantly that the entire 450,000-square-foot complex would be named in their honor. What had been a two-page follow-up to our Winter 2003 article, “The Big Move,” became this issue’s cover story (“A New Space for Science,” p. 14). We added four pages to the issue to accommodate more photos and to show the progression of the building’s construction over the past three years.

Then on June 23 came another news flash, that Dean David A. Kesler, M.D., had accepted an offer from the University of California, San Francisco, to become vice chancellor for medical affairs and dean of the UCSF School of Medicine. Appointed in 1997, Kesler presided over the medical school during a period of major change, an era capped by the opening of The Anlyan Center. Even bigger challenges await him in San Francisco, where UCSF has begun building a phased, 43-acre life sciences campus in the city’s Mission Bay district. We wish him well.

Yale President Richard C. Levin has appointed Dennis D. Spencer, M.D., B.S. ’76, as interim dean effective July 1 pending a search for a permanent successor. Spencer, who figures prominently in one of this issue’s feature stories (“High Resolution,” p. 20) and was profiled in the Fall 1998 issue of Yale Medicine, is the chair and Harvey and Kate Baxter Professor of Neurosurgery. Well follow up on this story with an interview with the new interim dean in our Autumn issue. Meanwhile, rest assured that even during the busy, lazy days of summer, there is never a dull moment on Old Campus.

Michael Fitzgousa
michael.fitzgousa@yale.edu
A new site for sore eyes

After 10 years, doctors and patients welcome the return of an eye clinic to the Hill Health Center.

When Candace Ford went for her exam at the new eye clinic in the Hill Health Center, doctors said they couldn’t test her while she was wearing her contact lenses; they wanted to see her glasses. So Ford ran home to get what she needed and was back in the examining chair within minutes.

This kind of convenience for Hill neighborhood residents, many of whom don’t own cars, is one of the many reasons health center administrators and doctors in the Department of Ophthalmology and Visual Science wanted to open an eye center in the neighborhood. The health center used to offer ophthalmology services but about 10 years ago the program died, forcing many Hill residents to travel to the medical school for their eye care. “We had a tremendous number of no-shows from the Hill, so we realized the distance patients had to travel was a barrier to access,” said Susan H. Forster, M.D., ’81, an assistant professor in the department. She and others decided the solution was to locate an eye clinic in the same place where patients go for the rest of their medical care.

Organizers applied for and received a $50,000 grant from the Community Foundation for Greater New Haven, which enabled them to set up the clinic and outfit it with state-of-the-art equipment. Hill Health Center Chief Operating Officer Gary Spinner says the eye clinic is a much-needed addition to the center. “We serve a large population with diabetes who need ongoing eye care to detect and treat the complications that can affect their vision,” he said.

Four chief residents take turns staffing the clinic, which is open one day a week. Patients are billed for their treatment, but there is a sliding-fee scale for those who don’t have medical insurance. “We all felt it would benefit a medically underserved population as well as the medical residents who rotate through here,” Spinner said. “They learn a lot about providing health care beyond the technical end of it.”

Although the clinic has been open only since January, Forster said it already served about 20 patients a day and was booked through June. The clinic provides vision tests and screening for such conditions as glaucoma, amblyopia (lazy eye) and retinopathy, which is linked to diabetes. Patients who need surgery or a diagnostic procedure are referred to Yale. Forster said the clinic’s close ties with the ophthalmology department allow patients to benefit from the expertise of Yale specialists, who have ongoing consultations about patient care with the on-site residents.

“Patients are able to have tests here, and if they need surgery they can have it here,” said Guy Jirawuthiworavong, M.D., a third-year ophthalmology resident who works in the clinic, also enjoys the intimate atmosphere. “It’s been a really great experience,” he said. “Community clinics by nature are smaller and homier. I like the family setting.”

He said the majority of his patients have a family history of glaucoma and want to get their eyes checked, or they need an annual screening for diabetes. This is just the news Forster wanted to hear. She said many people overlook preventive eye care until it’s too late. “Our goal with this center is to catch things early.”

—Jennifer Kaylin

While convenience was a major selling point for Ford when she decided to go to the eye center, she also appreciated the quiet, relaxed atmosphere. “They had the radio playing R&B; it was clean and there was only one person ahead of me,” she said, “so I was in and out real quick.”

—Guy Jirawuthiworavong, M.D.

Contract still unresolved, union strikers spend five days out in the cold

During a week of subfreezing temperatures, a heavy rain and a blizzard, thousands of Yale employees, including hundreds at the medical school, took to the streets in March to strike over contract negotiations that had stalled over wages, job security and pension benefits. The strike had clinical and technical workers from Local 34 and service and maintenance employees from Local 35 sharing picket lines with hundreds of graduate students from CGSU, the Graduate Employees & Students Organization, which is seeking union recognition from the university. The unions also support the right of hospital workers to unionize.

Over the course of the weeklong strike, the unions held rallies at Woolsey Hall, Phelps Gate and the medical school, led by supporters including the Rev. Jesse Jackson, New Haven Mayor John DeStefano Jr., U.S. Rep. Rosa DeLauro, local clergy and local and national union leaders. Disruptions at the medical school appeared to be minimal — 33 percent of Local 34 workers remained on the job.

Each side blamed the other for the impasse. Union leaders said the university had refused to budge on its offers. The university accused the unions of linking contract negotiations with CGSU’s organizing efforts and with a drive by the Service Employees International Union to organize service and other nonprofessional employees at Yale-New Haven Hospital.

The university opposes unionization of graduate students and says the hospital is a separate entity from the university and that workers there must decide whether to unionize.

In April Local 34 rejected the university’s 10-year contract proposal, and in early May graduate students rejected CGSU as their bargaining agent.

—John Curtis

Guy Jirawuthiworavong, a third-year ophthalmology resident, examined the eyes of Michael Stallings at the Hill Health Center on a Wednesday in April. A grant from the Community Foundation for Greater New Haven has allowed the center and the medical school to bring eye care to the neighborhood.
Does industry funding equal conflict of interest? Often it does, Yale authors claim

As biomedical researchers increase their dependence on industry support for research, Yale investigators say this relationship has led to “pernicious and problematic” conflicts of interest. Between 1980 and 2000, while the federal government’s share of funding fell, industry support rose from 32 percent to 62 percent. The Yale team found that business-sponsored studies are far likelier to yield results favorable to the industry than those funded by sources without a vested interest, such as the federal government. They also found that industry studies are designed to favor such results, that negative outcomes meet with delays in publication or aren’t published at all. Sometimes studies were stonewalled while the industry sought patients; at other times, some researchers were denied access to the data.

“It’s very important that all trial results, whether positive or negative, be published,” said Bekelman.

The study also found that a quarter of investigators have industry affiliations, and that two-thirds of academic institutions (including Yale) hold equity in startup firms founded upon research at those institutions. Gross said that universities must erect a “very firm firewall” to avoid conflicts of interest. Bekelman said a “balance of power” is needed. Academia and medical journals have begun to insist on more financial disclosure and access to data. But more needs to be done, Bekelman said, because without complete and unambiguous disclosure, the research ‘will not serve the needs of patients or our health system well over the long term.’

—John Dillon

A WINNING SPIRIT

When 12-year-old Millie Suggs rode her wheelchair in a Family Fun race at Disney World in January, two second-year medical students offered moral and medical support. Deborah Kaplan, who met Millie six years ago through her sister, a teacher, ran in a marathon while Michele Flagge accompanied Suggs during the 5-kilometer race. Suggs, who suffered a spinal cord injury in a car accident when she was 2, won a prize as the only wheelchair racer. Thanks to her friendship with Suggs, Kaplan wants to be a pediatric physiatrist when she graduates. “Millie has taught me so much about the human spirit,” she said.

—Jennifer Kaylin

NIH awards Yale $18 million to develop new technologies for proteomics research

The university has received an $18.2 million award from the National Institutes of Health to establish one of 10 national centers to develop proteomic technologies for the diagnosis, understanding and improved treatment of heart, lung and blood disorders.

The National Heart, Lung and Blood Institute, one of 11 institutes that comprises the NIH, awarded the center to Yale University, one of the largest proteomics research centers in the country.

The National Heart, Lung and Blood Institute will bring together 21 Yale faculty from 12 departments and will build on the expertise of the Howard Hughes Medical Institute Biopolymer/Keck Laboratory at Yale University, one of the largest biotechnology laboratories of its kind in academia. The Proteomics Center is headed by Kenneth R. Williams, Ph.D., director of the Yale Vascular Cell Signaling and Therapeutics Program and professor of pharmacology.

“By developing two complementary technologies in parallel, we hope to use protein profiling to identify key proteins involved in diseases of the heart, lung and blood and then develop novel reagents capable of specifically blocking the activities of those proteins,” Williams said. “The overall goal is to increase our understanding of the disease process, which should lead to more effective treatment.”

Additional information and continuing updates on progress of research carried out in the Yale-NHLBI Proteomics Center may be found at http://info.med.yale.edu/nhlbi-proteomics/.

—John Curtis

et cetera...

THE THESIS GOES DIGITAL

With a vision of electrons prevailing over paper, Charles J. Greenberg, m.l.s., m.ed., head of reference services at the Cushing/Whitney Medical Library, has launched the Yale Medicine Thesis Digital Library (YMTDL), an online collection of the theses required of all Yale medical students.

The YMTDL debuted in February at http://ymtdl.med.yale.edu. The Internet, Greenberg said, has become the “number-one way” of accessing medical research, as foot traffic falls at the library.

Greenberg’s biggest challenge has been to convince students that publishing online won’t harm their chances of publication later in a scholarly journal. Students may delay online publication for up to three years, but abstracts are automatically included on the website.

Last year 12 students agreed to provide their theses; this year Greenberg hopes to get 40. Eventually, he expects that all theses will be available online.

—John Dillon

TWO YALE EXPERTS ON BIOETHICS PANEL

As medical and ethical concerns move from the laboratory to the front page, the Bush Administration has named 11 people, including two experts with ties to Yale, to serve on a new advisory committee on federal protections for human research subjects. The panel is charged with reviewing regulations aimed at safeguarding volunteers in medical and behavioral studies.

“There’s more of a consumer interest and input into biotechics than in the past,” said Celea B. Fisher, Ph.D., director of the Center for Ethics Education at Fordham University and a visiting bioethicist in residence at Yale. Fisher is especially interested in examining protections for special populations, such as pregnant women, prisoners and children.

How federal guidelines should be applied to embryos is expected to be one of the more controversial issues the panel considers.

Mary Lake Polan, Ph.D., M.D. ’72, ’77, chair of the Department of Gynecology and Obstetrics at Stanford University School of Medicine, was also named to serve on the panel.

—Jennifer Kaylin

NIH awards Yale $18 million to develop new technologies for proteomics research

The university has received an $18.2 million award from the National Institutes of Health to establish one of 10 national centers to develop proteomic technologies for the diagnosis, understanding and improved treatment of heart, lung and blood disorders. The National Heart, Lung and Blood Institute, one of 11 institutes that comprises the NIH, awarded the center to Yale University, one of the largest proteomics research centers in the country.

The National Heart, Lung and Blood Institute will bring together 21 Yale faculty from 12 departments and will build on the expertise of the Howard Hughes Medical Institute Biopolymer/Keck Laboratory at Yale University, one of the largest biotechnology laboratories of its kind in academia. The Proteomics Center is headed by Kenneth R. Williams, Ph.D., director of the Yale Vascular Cell Signaling and Therapeutics Program and professor of pharmacology.

“By developing two complementary technologies in parallel, we hope to use protein profiling to identify key proteins involved in diseases of the heart, lung and blood and then develop novel reagents capable of specifically blocking the activities of those proteins,” Williams said. “The overall goal is to increase our understanding of the disease process, which should lead to more effective treatment.”

Additional information and continuing updates on progress of research carried out in the Yale-NHLBI Proteomics Center may be found at http://info.med.yale.edu/nhlbi-proteomics/.

—John Curtis
“Hidden” fat poses serious health risk
But exercise can take off invisible pounds and reduce risks of cancer, heart disease and diabetes.

Postmenopausal women who exercise regularly won’t necessarily see dramatic changes on their bathroom scales or in their dress sizes, but according to a new study the workouts can have a significant beneficial impact.

They can “exercise” invisible intra-abdominal body fat that wraps itself around internal organs and may pose a greater health risk than more obvious “love handles” or bulging bellies. It is dangerous, researchers say, partly because it’s invisible.

“When you look in the mirror, you don’t know how much you have,” said Melinda L. Irwin, M.P.H., Ph.D., assistant professor of epidemiology at the School of Public Health and lead author of the study published in the January 12 issue of JAMA: The Journal of the American Medical Association.

Women, who gain an average of a pound per year, tend to accumulate fat around their middles. Although thin women can have intra-abdominal fat, the researchers found they are more susceptible to health risks as they get older—especially postmenopausal women between the ages of 50 and 75. The women were assigned to one of two groups; one exercised at a moderate intensity five days a week and the other merely stretched one day a week. The researchers measured changes in weight and body fat at the start of the study and after one year.

“We’ll overall weight loss was modest for the women who exercised,” said Irwin. The study found that women who exercised moderately five times a week saw a 6 to 11 percent decrease in intra-abdominal body fat. “That would translate into a reduced risk of cardiovascular disease and cancer,” Irwin said. “The good news,” she said, “is that even if you don’t exercise every day, just getting up and moving a little bit every day can make a difference.”

The researchers found that physical activity appears to be good for weight maintenance; you keep the weight off. “Dieting hasn’t been shown to be good for weight maintenance, you gain it back, whereas if someone exercises to lose weight, they’re more likely to maintain the weight loss,” Irwin said.

Jennifer Kaylin

OVARIAN TUMORS NEED NOT CAUSE INFERTILITY
A conservative approach to the treatment of a rare form of ovarian cancer, called ovarian germ cell malignancies, allows young women to conceive afterwards, Yale scientists have found.

In a study published in the February issue of Obstetrics & Gynecology, Peter E. Schwartz, M.D., HS ’70, the John Slade Ely Professor of Obstetrics and Gynecology, followed the cases of 86 women, most of whom had undergone fertility-preserving treatment in which only the affected ovary was removed. Of 98 women who attempted to conceive, 29 became pregnant. To date, their children have shown no developmental abnormalities.

—John Curtis

A NEW CARDIAC RISK FACTOR
Women with a history of pre-eclampsia are at increased risk for cardiovascular disease, according to a study presented in February at the Society for Maternal-Fetal Medicine annual meeting in San Francisco.

“Pre-eclampsia should be added to the list of risk factors for cardiovascular disease, possibly equal to issues such as obesity, smoking and diabetes,” said Edward F. Funi, M.D., assistant professor of obstetrics and gynecology and the study’s lead author.

Pre-eclampsia, a progressive disease that occurs late in pregnancy and affects about 5 percent of women, can cause slower-than-normal fetal growth and put women at risk of lung, kidney and liver problems. High blood pressure is an early warning sign of pre-eclampsia. The study by researchers at Yale and in Israel tracked the death rates of 34,000 women who gave birth between 1964 and 1976.

—John Curtis

SEIZURES AND DRUG RESISTANCE
Researchers have shown for the first time how long it takes to establish resistance to drugs that control partial epilepsy. A multi-center study directed by Susan S. Spencer, M.D., F.W.* ’78, professor of neurology, and published in the Journal Neurology in February examined 331 patients to analyze outcomes of surgical treatment of partial epilepsy and to identify factors that predict when seizures become intractable. About 80 percent of those with partial epilepsy cannot control seizures with medications.

Researchers found that an average of about nine years passed before at least two drugs failed to control recurrent seizures. During that interval, a quarter of those in the study had remissions lasting up to a year and slightly fewer than a percent had remissions of five years or more. A younger age at the onset of seizures predicted longer seizure-free intervals. “This kind of information,” Spencer said, “leads us to explore the mechanisms by which treatment resistance develops over so many years, and prompts consideration and investigation of preventive strategies for the future.”

—John Curtis

et cetera...
A link between sugar and heart defects

Examining role of glucose in cardiac malformation, researchers look for ways to protect the infant heart.

It’s a heart-rending legacy: mothers who have uncontrolled diabetes during pregnancy are three times more likely to give birth to babies with malformed hearts than are mothers whose blood sugar levels are normal. Doctors have known that for some time, but recent work by researchers at Yale and the University of Arizona helps explain how high blood glucose levels in the mother lead to infant heart defects, and may suggest ways to prevent the problem.

“Lack of control of glucose in early pregnancy is a serious problem, because women who are pregnant don’t even know she’s pregnant at the time,” said Joseph A. Madri, Ph.D., M.D., in a recent interview with Medical News Today. “We found that higher levels of glucose, comparable to what would be found in a diabetic mother, had profound effects on the development of yolk sac cells. The glucose levels that we found are often present during the first few weeks of pregnancy.”

In an earlier work, Madri and co-workers, including Emeze Pinter, M.D., an associate research scientist in pediatrics, studied the formation of blood vessels in the yolk sac in a mouse model of maternal diabetes. “We found that higher levels of glucose, comparable to what would be found in a diabetic mother, had profound effects on the development of yolk sac cells,” said Madri. “The vasculature of the yolk sac, which is important for nutrient, gas and waste exchange in the developing embryo, was arrested when the glucose level was high.”

What’s more, glucose levels didn’t have to remain high for long to cause serious problems, the research showed. Even a brief spike could be enough to abort a pregnancy.

In a newer work, published in the December 17 issue of The Journal of Cell Biology, Madri, Pinter and co-workers focused on a slightly later stage of development, when the cardiovascular system begins to form. Normally, this is a multistep process involving the endocardial cushion, a small area in the embryonic heart with two tissue layers, the endocardium and the myocardium.

“For normal development, endocardial cells covering the cushion area have to dissociate from one another and migrate into the tissue beneath the endocardium called the cardiac jelly,” said Madri. To investigate how the process is disrupted under high-glucose conditions, the researchers used an in vitro model of endocardial cushion formation. With this model, they showed that high glucose levels inhibit dissociation and migration of the endocardial cells and that this disruption occurs during a critical window at the developmental stage when the embryo consists of 20 to 25 somites (block-like segments of tissue). Next, they explored the role of a regulatory molecule that is involved in keeping the cells in a sheet-like layer. In normal development, levels of platelet endothelial cell adhesion molecule 1 (PECAM-1) drop in the endocardial cells overlying the cushion area, allowing the endocardial cells to move apart and migrate into the cardiac jelly to form such structures as the valves and part of the walls between the chambers of the heart. But when glucose levels are elevated, PECAM-1 persists, the researchers found.

“The endocardial cells can’t dissociate from each other and migrate,” said Madri. “The result is a heart with an opening between chambers or one in which there are problems with the structure of the valves.”

Why does PECAM-1 persist when glucose levels are high? The research implicates vascular endothelial growth factor A (VEGF-A), known to be important in the development of new blood vessels and the regulation of associated processes. Typically in diabetic adults, VEGF-A levels rise along with glucose levels. But for reasons Madri, Pinter and co-workers don’t yet understand, in fetuses VEGF-A shows the opposite effect—its levels drop when glucose is high. Because VEGF-A affects the regulation of PECAM-1, low VEGF-A levels mean that PECAM-1 isn’t properly controlled, allowing it to overstay its welcome.

Now, said Madri, “we’re trying to understand how VEGF is controlled in the fetus and how that’s different than in the adult. Once we know this, perhaps we can devise methods to help the fetus to maintain the effect of excess glucose in the fetus.”

Nancy Ross-Flanigan

From the stomach to the brain: how a peptide hormone sparks appetite

In recent years neurobiologists have taken a keen interest in a peptide hormone called ghrelin. The molecule appears to be involved in activities such as growth hormone release, energy homeostasis and the functioning of the cardiovascular system. Big Pharma sees it in a potential target for diet drugs because of its role in sparking an appetite.

It is also of interest because, although it is produced by the stomach, it is found in the hypothalamus as well. Now, researchers at Yale have tracked ghrelin to a group of previously uncharacterized neurons in the brain’s appetite center.

“Ghrelin-producing cells are distributed in the hypothalamus in such a manner that they are in a perfect position to coordinate the activity of the different hypothalamic subnuclei already known to regulate daily energy balance,” said Thomas Horvath, Ph.D., D.V.M., senior author of an article in the February issue of Neuron and associate professor of obstetrics and gynecology and neurobiology.

Studies in rats and humans had already shown that ghrelin signals the brain’s appetite center when energy levels are low. Levels of ghrelin rose before and declined after meals. The mapping of the ghrelin circuit to neurons in the brain offers a new target for regulating appetite and food intake, Horvath said.

“We believe that these neurons are conveying information regarding circadian rhythm and sensory cues as well,” he said. “You could be watching a movie, see food and become hungry, or be in the kitchen and smell something and become hungry, even if your stomach is full. These brain ghrelin neurons may be those that enable these brain processes to dominate over the actual need for energy intake.”

One hypothesis, Horvath said, is that the system that balances food consumption, energy expenditure, body weight and fat stores may be suppressed by events such as stress or pregnancy. The neuronal system that signals satiety and visual cues would then dominate.

“We are now working to find out how ghrelin from the stomach and from the brain work together or independently to regulate appetite or food intake,” Horvath said.

—John Curtis

et cetera...

A DNA "MIMIC" TO REPAIR GENES

A peptide nucleic acid (PNA) that mimics DNA holds the promise of repairing defective genes, according to Yale radiologists and geneticists.

PNA, which replaces DNA’s phosphodiester backbone with a polyamide one, creates a strong bond with DNA, said Peter M. Glazer, M.D., Ph.D., professor and chair of the Department of Therapeutic Radiology.

“If you can bind something to the gene, maybe you can use that to change the gene,” he said. “If you change the gene to a new sequence it is permanently fixed.”

In a study published in December in the Proceedings of the National Academy of Sciences, Glazer, the senior author, described the use of PNA to introduce a specific DNA sequence into a target gene in extracts of human cervical cancer cells. The new DNA sequence corrected a mutation in the target, the authors reported.

PNA, they concluded, could serve as a tool both for research and for repairing genes implicated in hereditary diseases such as sickle cell anemia and cystic fibrosis.

—John Curtis

BOOST FOR PROTEIN, GENE STUDIES

The Center for Genomics and Proteomics, founded last year with a $300,000 investment from the university, awarded $500,000 in seed money this winter to seven groups of scientists on Science Hill and at the medical school.

“We were looking for projects which had prospects of developing into large programs,” said Sherman M. Weissman, M.D., Sterling Professor of Genetics and professor of medicine, co-director of the center.

Michael Snyder, Ph.D., the chair and Lewis B. Cullman Professor of Molecular, Cellular and Developmental Biology, is the director of the center. The funded projects will include research in lipids, Arabidopsis proteome chips, genome microarrays in C. elegans and Drosophila, a cryopreservation facility and profiling of the rice genome.

“The pilot grants are a great way to stimulate integrative and cutting-edge research projects for the center,” said Snyder.

—John Curtis
Captive of Libby Prison

by Stuart J. Pettit, m.d., 1955
Portland Press Inc. (Raleigh, N.C.) 2002

Pettie has captured a side of the Civil War that is not often portrayed: a personal perspective fighting for the Union Army during the Civil War. Charles Robinson—Petrie’s great-great-uncle—wrote home frequently to friends and family describing the battle being fought around him. He and the other men in his regiment were captured by Confederates and held in the notorious Libby Prison. These personal accounts describe a far different war than the one often portrayed by military strategists.

Genetics for Pulmonologists: The Molecular Genetic Basis of Pulmonary Diseases

by Jordan Prusin, m.d., 1972; Joel Moss, m.d., and Eli Hatchwell, sanis editor
Remarks Publishing (Lincolnveil, I.6.) 2002

This two-volume set covers the major pulmonary diseases currently in practice as well as the classical approaches that laid the foundation for the various contemporary treatment approaches. In addition, it identifies the scientific studies conducted on the efficacy of the therapies and reviews the theoretical basis of each therapy.

Chromosomal Instability and Aging: Basic Science and Clinical Implications

edited by Fuki M. Hisama, m.d., Sterling Professor of neurology, Sherman M. Weissman, m.d., Starling Professor of Genetics and professor of medicine, and George M. Martin, m.d., M.D.
Dekker Inc. (New York) 2003

Understanding the biological basis of aging is increasingly important as we anticipate the impact that a rapidly growing older population will have on the medical and social landscape. This book provides readers with background information on the biology of aging and the genetic alterations and genetic remodeling that occur with aging. It brings together expert reviews on the cellular and molecular bases of chromosomal instability and aging in human diseases and animal models, cellular senescence, telomeric regulations, and oxidative stress.

The descriptions above are based on information from the publishers.

SEND NOTICES OF NEW BOOKS TO Cheryl Violante, III, Madonna, P.O. Box 7612, New Haven, CT 06539-0612, via email to cheryl.violante@yale.edu

Julia Greenstein
From pigs, the possibility of replacement tissue

With donor organs unavailable for most of the 80,000 people awaiting transplants in the United States, scientists are working to overcome the two biggest hurdles to xenotransplantation—immune rejection and infection. A Massachusetts company, Immerge BioTherapeutics, in collaboration with researchers around the country, has eliminated a gene in a cloned "knockout" pig that produces a key enzyme in the rejection process. The company has also identified swine that do not produce porcine endogenous retroviruses, which has been found to infect human cells in vitro.

The list of pigs transplants continues to grow, Julia L. Greenstein, M.D., president and CEO of Immerge, said in a January talk sponsored by the Interdepartmental Program in Vascular Biology and Transplantation. "For the most part the donor list has remained incredibly static. We need to be able to do something else to address the patients who are on the waiting list and are never going to get organ transplants."

John Curtis

Tomas Largen
An advocate for access, for all

As a child Tomas Largen lived a visit to a "crippler center" in his native Sweden. "I remember seeing all those people sitting in wheelchairs doing nothing," said Largen, secretary general of Rehabilitation International, a network of more than 250 organizations in 90 countries devoted to promoting the rights of the disabled.

But over the years attitudes toward people with disabilities have changed. Largen said at a talk at the School of Public Health in January, "The 19th-century notion of institutionalizing them fell by the wayside as people with disabilities became more independent and capable of negotiating the outside world. "Today we talk about disability rights and an inclusive society," Largen said.

To that end Rehabilitation International is promoting a UN Convention on the Rights of People with Disabilities as well as community-based rehabilitation (CR), which provides cost-effective programs in developing countries where at least three-quarters of those with disabilities live. "The CR concept is that two-thirds of the rehabilitation work can be done at the local level, with local staff. It does not have to be very costly."}

John Curtis

Daniel Sulmasy
In medicine, a spiritual crisis

Medical science has, in the last century and a half, permitted miracles unimaginable in the day of Hippocrates, says Daniel P. Sulmasy, M.D., Ph.D., a Francisian friar and director of the Bioethics Institute of New York Medical College. Yet, he says, physicians are among the most dissatisfied of professionals. The science and economics of healing, he told an audience at the Program for Humanities in Medicine Lecture Series in January, has dehumanized medicine.

"Physicians are being paid by the minute—what is the answer?" he asked. "Those are spiritual questions."

Instead, Sulmasy said at a pathology grand rounds in February, identification was the main concern. "A rule of thumb" quickly emerged: any human fragment bigger than a thumb would be DNA tested. DNA testing determined the identities of more than 5,000 of the 20,000 fragments found. The medical examiners also used dental records, clothing, personal effects, tattoos and promised to identify 1,480 of the 2,792 victims. They still have hopes of someday identifying all the victims.

"Our chief has promised the families it will never be over," Mundorff said. "Even though we have done all the identification that we can, there is the information that we have, if new technologies come up in the future we can exhume and retest the unidentified pieces, if requested."
A new space for science

With the opening of The Anlyan Center for Medical Research and Education, the school dedicates its largest building ever.

**Above** Betty Jane and John Anlyan, accompanied by President Richard Levin, then-Dean David Kessler and New Haven Mayor John DeStefano Jr., cut the ribbon at the dedication of The Anlyan Center for Medical Research and Education in May.
When A. John Anlyan, b.s. ’42, m.d. ’45, arrived at the School of Medicine for first-year classes in the early 1940s, the corner of Congress Avenue and Cedar Street was home to the nursing dormitory and down the block from a few restaurants, a bar and not much else.

New Haven has changed since Anlyan’s medical school days, perhaps no part of it more than this intersection and the city block that is bounded by Congress and Howard avenues and Cedar and Gilbert streets.

When Anlyan and his wife, Betty Jane Anlyan, visited New Haven in May for the dedication of the medical school’s newest building, they saw the transformation firsthand. The new 457,000-square-foot complex occupying the block today, which combines facilities for research, education, magnetic resonance imaging and the care of laboratory mice, is the largest building ever constructed at the School of Medicine.

The Anlyans, who were early supporters of the project and had funded the building’s education wing, decided during their visit to increase the amount of their donation significantly. In recognition of their generosity, the building has been named The Anlyan Center for Medical Research and Education. As President Richard C. Levin said in thanking them for their support, “No one has done more to assure the future of these endeavors at Yale than John and Betty Anlyan. Their gift has been integral to the realization of the vision for this building.”

When A. John Anlyan, b.s. ’42, m.d. ’45, arrived at the School of Medicine for first-year classes in the early 1940s, the corner of Congress Avenue and Cedar Street was home to the nursing dormitory and down the block from a few restaurants, a bar and not much else.

New Haven has changed since Anlyan’s medical school days, perhaps no part of it more than this intersection and the city block that is bounded by Congress and Howard avenues and Cedar and Gilbert streets.

When Anlyan and his wife, Betty Jane Anlyan, visited New Haven in May for the dedication of the medical school’s newest building, they saw the transformation firsthand. The new 457,000-square-foot complex occupying the block today, which combines facilities for research, education, magnetic resonance imaging and the care of laboratory mice, is the largest building ever constructed at the School of Medicine.

The Anlyans, who were early supporters of the project and had funded the building’s education wing, decided during their visit to increase the amount of their donation significantly. In recognition of their generosity, the building has been named The Anlyan Center for Medical Research and Education. As President Richard C. Levin said in thanking them for their support, “No one has done more to assure the future of these endeavors at Yale than John and Betty Anlyan. Their gift has been integral to the realization of the vision for this building.”

A gala celebration
The building was dedicated on May 2 at a gathering of university and civic leaders, faculty members and alumni. Then-Dean David A. Kessler, m.d. [See “From the Editor,” p. 3], called the $176 million structure, which will be home to some 700 investigators, “the manifestation of Yale’s vision for scientific collaboration, the study of human biology and educational excellence.”

Joined by several hundred guests including the director of the National Institutes of Health (nih), Kessler predicted that the building would foster interdisciplinary collaborations among basic and clinical investigators and contribute to a “re-engineering of the clinical research enterprise ... that brings bench discoveries to the bedside.”

President Levin—joined on the podium by university officers, New Haven Mayor John DeStefano Jr., the Anlyans and other major donors to the project—noted that the building constitutes the largest single investment in a building in Yale’s history. In addition to thanking the Anlyans, he acknowledged the significant contribution of The Starr Foundation, a leading funder of medicine and health care worldwide, which is recognized in the naming of the C.V. Starr Atrium. Levin also thanked the W.M. Keck Foundation for helping to fund the 4-tesla magnet in the W.M. Keck High Field Magnetic Resonance Laboratory and the Howard Hughes Medical Institute (hhmi) for its ongoing support.

“Before construction there was demolition. In January 2000 a wrecking ball began tearing down a former administrative building on Congress Avenue that had once been a dormitory for nursing students. By March the site, a block bounded by Congress and Howard avenues and Cedar and Gilbert streets, had been leveled in preparation for excavation and the laying of the foundation. Crews next began pouring walls and footings. Summer brought more cranes, dump trucks and cement mixers as walls started to rise. In the fall the building’s skeleton took shape as steel workers laid beams. Project manager Reyhan Larimer and colleagues watched in March 2001 as workers “topped off” the building with its last piece of structural steel. Photographs by John Curtis
for scientists at Yale, including HHMI investigators housed in the new building.

**Big boost for science**

In his keynote address, NIH Director Elias A. Zerhouni, M.D., underscored the importance of placing basic and clinical researchers in close proximity, as is the case in the new building. “We are in revolutionary times that require a change in the way we do research,” said Zerhouni, who encouraged scientists to “break the barriers between departments” by forming large teams that are truly interdisciplinary. In the teams Zerhouni envisions, scientists will not simply contribute expertise for a study directed by a colleague in another discipline, but rather will serve as equal partners, tackling “topics that cross diseases” and transcend departmental boundaries.

Zerhouni called the life sciences “the last frontier” and urged medical schools to “make it easy on the physicians to engage in clinical research. … Young investigators need to be engaged early to enter biomedical research.”

The new building comprises six floors of laboratories, a three-story education wing for teaching anatomy and histology, a vivarium and greatly expanded facilities for magnetic resonance imaging research. The open spaces and large windows of the granite, brick and limestone building suggest a New England textile mill. The design and construction process itself was a study in effective collaboration, said architect Denise Scott Brown of the firm Venturi, Scott Brown & Associates of Philadelphia, which designed the building with Payette Associates of Boston. When architects and builders collaborate with a client like Yale, they “embark on an adventure together,” Scott Brown said, “matching wits and building on each other’s ideas.”

Kessler noted that the completion of the building is “a step along the way,” part of a plan by Yale to invest $500 million in the medical school campus over the next 10 years. “This building is a model we will use in the future to continue to transform the face of medicine at Yale.”

**A lasting influence**

Benefactor John Anlyan first came to New Haven from his native Alexandria, Egypt, in 1939 to attend Yale College and, later, the School of Medicine.

He trained in surgery at the University of Chicago Clinics and at Ohio State University while earning a master’s degree in enzyme chemistry. After returning to Yale as an instructor for two years and serving at Sloan-Kettering Institute in New York as a Damon Runyon fellow, Anlyan and his wife set out for California in 1954. For the next half-century, the couple devoted themselves to life in San Francisco, to his career as a cancer surgeon—and to Yale.
By Marc Wortman

A quarter-century of progress

1979
Robert Shulman joins faculty
Robert G. Shulman, Ph.D., who had pioneered usage of nuclear magnetic resonance spectroscopy (mrs) in combination with carbon isotope to follow cellular metabolic pathways, joins Yale’s Department of Molecular Biology and Biophysics from Bell Labs.

1982

mrs brain studies
The first proton and carbon mrs studies of the brain are performed at Yale, demonstrating the technology’s potential to explore brain metabolism.

1986

mri opens
With its first magnet for human subjects, the School of Medicine opens the Magnetic Resonance Center (mrc) in Fitkin Memorial Pavilion basement. Shulman directs the research portion and Richard H. Greenman, M.D., chair of diagnostic radiology, directs the clinical portion. The mrc’s two original magnets are still in use.

1987

mri group formed
Draconic radiology faculty launch research program aimed at the development of new approaches to magnetic resonance imaging (mri) and improving the understanding of contrast mechanisms in mri.

1988

crossing to humans
The first mri scans of a human brain demonstrate that information similar to that gleaned from previous animal studies could be obtained from the human brain.

1990

glycogen synthesis in diabetes
mrs studies show that metabolic impairment of muscle glycogen synthesis leads to elevated post-meal blood glucose in non-insulin-dependent type 2 diabetes. This is the first use of mrs (and of noninvasive imaging in general) to establish a fundamental mechanism in the etiology of a disease, and it paved the way to many pioneering studies of mechanisms of diabetes.

1991

mri for brain function
Lactate, a substance sensitive to increased activity in the human brain, is shown to increase during visual stimulation. This first use of mri (imaging or spectroscopy) to study brain function leads to a major application of mri and mrs in use today.

The opening of a new Magnetic Resonance Research Center gives Yale expanded capabilities for advancing imaging science and disease understanding. Improving epilepsy treatment is just one focus.

A quarter-century of progress

High resolution

The first use of mri, by Marc Wortman

A new window, new insights

Spencer, director of the Epilepsy Surgery Program at Yale and chair of the Department of Neurosurgery, already relies on mri studies to help guide him when he operates. The possibilities for developing treatment methods that, according to Spencer, “will put me out of business” depend on studies under way at Yale’s Magnetic Resonance Research Center (mrrc). Already one of the world’s leading scientific research programs of its kind, the mrrc received a major boost last winter with the opening of its new home in the 450,000-square-foot Anlyan Center for Medical Research and Education.

New windows, new insights

Spencer, director of the Epilepsy Surgery Program at Yale and chair of the Department of Neurosurgery, already relies on mri studies to help guide him when he operates. The possibilities for developing treatment methods that, according to Spencer, “will put me out of business” depend on studies under way at Yale’s Magnetic Resonance Research Center (mrrc). Already one of the world’s leading scientific research programs of its kind, the mrrc received a major boost last winter with the opening of its new home in the 450,000-square-foot Anlyan Center for Medical Research and Education.

A quarter-century of progress

Robert Shulman joins faculty
Robert G. Shulman, Ph.D., who had pioneered usage of nuclear magnetic resonance spectroscopy (mrs) in combination with carbon isotope to follow cellular metabolic pathways, joins Yale’s Department of Molecular Biology and Biophysics from Bell Labs.

The opening of a new Magnetic Resonance Research Center gives Yale expanded capabilities for advancing imaging science and disease understanding. Improving epilepsy treatment is just one focus.

A quarter-century of progress

High resolution

The first use of mri, by Marc Wortman

A new window, new insights

Spencer, director of the Epilepsy Surgery Program at Yale and chair of the Department of Neurosurgery, already relies on mri studies to help guide him when he operates. The possibilities for developing treatment methods that, according to Spencer, “will put me out of business” depend on studies under way at Yale’s Magnetic Resonance Research Center (mrrc). Already one of the world’s leading scientific research programs of its kind, the mrrc received a major boost last winter with the opening of its new home in the 450,000-square-foot Anlyan Center for Medical Research and Education.

New windows, new insights

Spencer, director of the Epilepsy Surgery Program at Yale and chair of the Department of Neurosurgery, already relies on mri studies to help guide him when he operates. The possibilities for developing treatment methods that, according to Spencer, “will put me out of business” depend on studies under way at Yale’s Magnetic Resonance Research Center (mrrc). Already one of the world’s leading scientific research programs of its kind, the mrrc received a major boost last winter with the opening of its new home in the 450,000-square-foot Anlyan Center for Medical Research and Education.
The MRRC’s 3D-member staff, along with six multiton magnets supported by banks of computers, relocated from the Fishkin Memorial Pavilion basement to more than double the space in a two-story facility in the Arllen Center (See “The Big Move,” Winter 2003). On the upper floor of the new facility, faculty and administrative offices surround a large, light-filled open work space with computer workstations at its center. The facility has 40 networked computers dedicated to analyzing data produced by its magnets. At the computer, students and other investigators manipulate images of organs and graphically display data and develop algorithms to model the behavior of parts of atoms within cells.

For the faculty and staff, the new quarters represent the increasing importance of imaging technology to biomedical science and health care—and a big boost for morale. Director Douglas L. Rothman, Ph.D., professor of diagnostic radiology, notes that this is the first time he has had a window in his office since he came to Yale as a graduate student in 1985. More important than what he can see out the window is what the new facility will enable imaging scientists to see at the molecular level. “This,” he says, “is one of the best facilities in the world now.”

On the floor below, the MRRC houses eight magnets, including two newly purchased systems. The MRRC maintains three animal and tissue research systems, including a soon-to-be-installed 11 Tesla animal magnet, able to measure changes in the brain’s metabolism at the molecular level (a tesla, named for radio-engineering pioneer Nikola Tesla, is a measurement of the strength of a magnet’s field). The center also houses three human systems, including a new 4 tesla functional MRI (fMRI) system in the W.M. Keck High Field Magnetic Resonance Laboratory that can pinpoint functional activity in an area as small as 500 micrometers across. That is half a millimeter, about the size of the fundamental information processing units in the human brain (often referred to as cortical columns).

The state-of-the-art, 3.7 tesla human magnet was paid for in part through a $1 million grant from the W.M. Keck Foundation. There are also empty bays waiting for eventual installation of two additional magnets. All of the MRRC bays are enclosed within 22 inches—nearly 2 million pounds—of steel and copper to shield out even the most minute radio signals, which could wash out reception by the ultra-sensitive magnets, and to contain their magnetic fields. The space’s two magnets have already dramatically improved what investigators will be able to visualize. Studies of the central nervous system will benefit particularly from the magnets’ higher sensitivity. “They allow us to look at fundamental neuronal processing units, which we could not do with our previous equipment,” says Rothman. For instance, tissue that causes epileptic seizures can now be studied to determine precisely how metabolic processes critical to normal neuronal activity have malfunctioned. Information crucial to the development of new treatment methods.

Seeing deeper MRI and MRS studies in many fields at Yale, including reading and dyslexia, substance abuse, diabetes, mental illness and psychiatric disorders, are providing insights into tracking down disease mechanisms and leading to novel forms of treatment. Basic science research at the MRRC is contributing to a new understanding of fundamental physiological mechanisms such as how energy is metabolized in the brain, heart, and muscles. MRI physicists at the center have also expanded the understanding of the underlying physical principles of MRI and MRS.

The MRRC is a dual center serving the research needs of the entire university and the primary research space for seven Yale faculty. These faculty have primary or secondary appointments in the Section of Biomedical Imaging in the Department of Diagnostic Radiology, which was formed to synergize the expertise of the imaging research groups at the School of Medicine. About 30 separate grants, totaling nearly $35 million and representing 50 faculty members in 13 different departments, rely upon the MRRC. The center itself is supported by fees from those grants and $7 million in direct research grants to faculty in the Section of Biomedical Imaging. The section is linked to the Department of Biomedical Engineering, which is part of both the medical school and the Faculty of Engineering on the main campus. In 2002, the new National Institute of Biomedical Imaging and Bioengineering of the National Institutes of Health awarded its first-ever grant to the section, $13 million to develop technology to map neocortical epilepsy.

Faculty and staff at the MRRC work on their own research, advancing imaging science and also devise new ways to apply imaging technologies to biomedical problems. “We’re developing state-of-the-art magnetic resonance techniques,” says R. Todd Constable, Ph.D., associate professor of diagnostic radiology and neurosurgery and director of the fMRI group at the MRRC, “and as a function of that we’re able to provide a state-of-the-art resource for the whole university.”

MRS is a complex technological feat, combining physics, mathematics, computer sciences and biomedical science. The hauntingly clear MRI pictures result from the differing radio signals given off by protons in the atoms of tissues exposed to the intense magnetic fields. Those signals must then be interpreted by computers and translated into graphic imagery. The MRI data require extensive manipulation, particularly in experiments to be translated into readable images. Rothman says, “Studies rarely work straight out of the can.” Constable and his 20-member team provide imaging support for more than 30 faculty members directing major grant-supported investigations utilizing MRI within and outside the university. These include efforts to improve the understanding of autism with Robert Schultz, Ph.D., in the Child Study Center; studies of the role of the frontal lobe in working memory and executive processing with neuropsychologist Patrida S. Goldman-Rakic, Ph.D.; mapping of memory processing with psychologists Mari A. Johnson, Ph.D.; and experiments aimed at finding better treatments for gambling disorders with Marc N. Potenza, Ph.D., ’93, M.D., ’94, and for schizophrenia with Bruce Wegel, M.D., ’77, both in the Department of Psychiatry.

One of the most active programs utilizing MRRC resources is the Yale Center for the Study of Learning and Attention, which has pioneered the study of pathways the brain uses for reading. Co-director Sally E. Shaywitz, M.D., also directs the Connected Longitudinal Study, which is investigating the development of reading skills in children from ages 7 to 18, and in adults, and is the largest MRI study ever undertaken in children. With the resources of

1992-1993 Cognitive feats

1992-1995 Measurement of GABA

1995 Sex differences in brain

1996 Biology of epilepsy

1997 Reading and brain activity

1998 Glutamate/glutamine cycle

1999 GABA and psychiatric disorders

Cognitive feats For the first time, functional MRI (fMRI) is proven able to measure single, brief, mental events without averaging across many seconds. The paradigm is now considered standard in many fMRI applications.

Measurement of GABA Spectral editing in humans is developed and then used to demonstrate that MRS can measure the neurotransmitter gamma amino butyric acid (GABA). This opens the way to study alterations in GABA metabolism in neurological and psychiatric disease, starting the observation that the mechanism of action of many anti-epileptic drugs is through elevation of cellular GABA.

Sex differences in brain fMRI reveals that women and men use different brain regions to process language. Results demonstrate more bilateral activation in women during word processing compared to generally left-brain activity in men. Research provides direct evidence that helps to explain why less likely to lose language capabilities after strokes.

Biology of epilepsy MRS is used to show that cellular GABA levels are low in epileptic patients with poor seizure control. This and subsequent studies have established GABA levels as a significant mechanism leading to cortical hyperexcitability in epilepsy.

Reading and brain activity Phonological effects are linked to printed word identification and reading performance. Many studies in fMRI now equate brain activity with subject performance.

Glutamate/glutamine cycle First measurements of the glutamates/glutamine cycle, a direct measure of excitatory neurotransmission, are made in awake human subjects and show high rates. Results suggest that there are levels at which glutamate/glutamine cycle is a crucial to the development of new treatment methods.

GABA and psychiatric disorders MRS data show that GABA metabolism is altered in depression. Subsequent studies show alterations in panic disorder, premenstrual dysphoria and a number of additional psychiatric disorders. Findings lead to a new appreciation of the importance of inhibitory neurotransmission and anti-depressant and anti-metabolism in psychiatric disease.
Diabetes and brain energetics

Robert G. Shulman, PhD, founder and for many years director of research in the mrrc and now Sterling Professor m.d., ph.d. (no relation), Shulman showed that a defect in muscle storage of glycogen was responsible for the impairment exhibited by type 2 diabetes. That was by Rothman, Robert Shulman and others has radically changed neurosurgeon Spencer’s outlook on epilepsy and its potential treatment. Epileptic seizures are a state of electrical hyperexcitation that starts from a single site in the patient’s brain as he operates. “It looks just like a bicornader,” says. In the coming years, Spencer will use Duncan’s models of brain deformation while he operates. The two expect that, within the next five years, mri and mrs testing to identify the source of seizures and map the functional areas of the brain in combination with Duncan’s graphic models will eliminate the need for the costly, arduous and potentially hazardous intracranial surgery that Taylor undertook.

Spencer credits the scientists at mrrc with changing his view of epilepsy. “Instead of thinking of epilepsy as an electrical problem,” he says, “I now think of it as a metabolic disease. They are much more than MR physicists. They make you think about disease-related problems in a different way.”

Sally and Bennett Shaywitz have found functional differences in brain activity between groups of children with and without dyslexia. Colored areas in the images highlight locations in the brain where there is a marked difference in function in the two groups.
Showdown
With Washington tackling medical malpractice, it's doctor vs. lawyer in the Court of Public Opinion. By Eli Kintisch
also in the vanguard, this time as one of the first physicians claiming a "fiduciary duty" in the interest of his client’s estate.

to prescribe oral feeding and exercise to a comatose woman. "Every one of these was a ‘pay out. “Nevertheless, each suit cost me dearly in time lost from their home state of North Carolina. Months later a White House a major speech on malpractice last summer in Edwards' home state of North Carolina. Months later a White House official described a Washington speech by Bush on the issue as part of a ‘whack John Edwards day.’

sparring over malpractice is emblematic of a natural friction between the two professions that manifests itself in competitiveness, disagreement and, at times, even humor (apparently in proportion to the social status enjoyed by both professions; there is a reason The New Yorker magazine publishes books of lawyer and doctor cartoons, but none about civil engineers).

"There is a built-in adversarial relationship here," says Yale law professor Robert A. Burt, m.d. ‘64. "Lawyers in the malpractice area are always sniffing around for mistakes. Lawyers see themselves as protectors of patients—as well as scapegoats in the current debate—and show no signs of accepting a cap on damages. Mary E. Alexander, president of the Association of Trial Lawyers of America, sees a long struggle ahead. "We are at war," she told the group at its convention in February. m.d. ’75, a Philadelphia lawyer, not to Duff by the political struggle ahead over tort reform. "President Bush has laid the gauntlet down."

The debate also promises to be an issue in the 2004 presidential race. Vermont governor and physician Howard Dean, m.d. ’73, a Yale College graduate, has said the matter should be left to the states, and Senator John Edwards, m.d. ’90, a former trial lawyer who has represented patients, is opposed to the reforms. How seriously does the White House take the threat of the clean-cut young senator? Bush delivered a major speech on malpractice last summer in Edwards’ home state of North Carolina. Months later a White House official described a Washington speech by Bush on the issue as part of a ‘whack John Edwards day.’

sparring over malpractice is emblematic of a natural friction between the two professions that manifests itself in competitiveness, disagreement and, at times, even humor (apparently in proportion to the social status enjoyed by both professions; there is a reason The New Yorker magazine publishes books of lawyer and doctor cartoons, but none about civil engineers).

"There is a built-in adversarial relationship here," says Yale law professor Robert A. Burt, m.d. ’64. "Lawyers in the malpractice area are always sniffing around for mistakes. Doctors are adverse to any outsider pointing out errors.

Tonkens’ antipathy for attorneys reflects a growing tension in medicine, and one that has put doctors and lawyers at odds like never before. Already hurt by falling reimbursements from managed care and stung by the accompanying challenges to their professional autonomy, physicians now find themselves under assault on another front, Skyrocketing malpractice premiums are forcing doctors across the country to leave their practices; drop higher-risk specialties like neurology, obstetrics and orthopaedics; or move to states with more forgiving tort laws. Backed by President Bush and Senate Majority Leader Bill Frist, m.d., a Republi-

can from Tennessee who is the first physician to lead the Senate, they blame lawyers for their woes and have pushed for reform in Washington and dozens of state capitals. At the top of the list when Bush made his State of the Union address last winter was a proposal for a $250,000 cap on noneconomic damages in malpractice cases. That proposal passed the House of Representatives in March, but in July a Democratic filibuster squelched the bill in the Senate. Although national legislation is unlikely before the next election, Frist vowed that the issue "will be back."

Several state legislatures may follow the lead of Texas, which passed a malpractice cap in June.

has the malpractice issue hit home with doctors? Neal O. Puck, a 1976 medical school graduate, has written about the discipline of medicine, says hematologist and ethicist Thomas P. Coughlin, m.d., a Republican from New York. "The doctors want to provide access and they want to provide high-quality care, but money is going out of the system to fund transaction costs," Coughlin says, noting that, unfortunately, this is nothing new. "We had a crisis in 1972, we had a crisis in ’81, we have a crisis in ’03 and now it’s worse than ever. Now it’s a chance for doctors to get a change or bow to Mr. Edwards, to whom trial lawyers are giving large sums of money to protect their own incomes. It’s important that we get some input before the next presidential election."

At the core of the cultural divide between law and medicine are two often-conflicting world views—in particular, differing concepts of what certainty means in the courtroom. "Lawyers in particular are accustomed to the notion that certainty is demonstrable. Doctors are accustomed to the notion of probability," says Duffy, a professor of medicine and director of the Program for Humanities in Medicine. "Without truth there is no science.”

The president of the Association of Yale Alumni in Medicine, Francis R. Coughlin Jr., m.d. ’52, j.n., agrees. "For doctors it’s not simply a business matter—it’s an attack on their integrity," says Coughlin. As one who can view this debate from both sides, Coughlin sees the main problem as what legal economists call transaction costs. Litigation costs money—hourly fees for the defense lawyer, contingency fees for the plaintiff’s lawyer, settlements, expert-witness fees, court costs, the costs of acquiring records from hospitals and physicians—that is drained from the health care system. Supporting that system, he says, are three related pillars: cost, access and quality of care.

The doctors want to provide access and they want to provide high-quality care, but money is going out of the system to fund transaction costs,” Coughlin says, noting that, unfortunately, this is nothing new. “We had a crisis in 1972, we had a crisis in ’81, we have a crisis in ’03 and now it’s worse than ever. Now it’s a chance for doctors to get a change or bow to Mr. Edwards, to whom trial lawyers are giving large sums of money to protect their own incomes. It’s important that we get some input before the next presidential election.”

At the core of the cultural divide between law and medicine are two often-conflicting world views—in particular, differing concepts of what certainty means in the courtroom. "Lawyers in particular are accustomed to the notion that certainty is demonstrable. Doctors are accustomed to the notion of probability," says Duffy, a professor of medicine and director of the Program for Humanities in Medicine. "Without truth there is no science.”

The last straw Against this backdrop, the reaction of physicians to sharply rising insurance premiums has been almost visceral. In Ohio, West Virginia, New Jersey, Connecticut and elsewhere, physicians have protested on the steps of state capitals. The issue has stirred passions among Yale graduates in medicine and public health as well; more than two dozen alumni responded to an invitation from Yale Medicine to voice their opinions (See “On the Topic of Lawyers, No Shortage of Opinion,” p. 32). Many took the time to explain at length how the crisis has affected their ability to care for patients, and where they think a solution may lie.

Tonkens, the former Las Vegas internist, was one of them; another was Edwina E. Simmons, m.d. ’84, who started her own obstetrics practice in Ohio in 2001. At that time, her malpractice insurance company quoted a rate of $21,900 per year, going up to $60,000 after
According to the malpractice reform California enacted in 1975, doctors have been able to focus on patients and practice “the best medicine I’ve been able to portray doctors and lawyers as constant enemies would be misleading. While their lobbying proxies do. The two sides also clash over the contingency system. Attorneys, conversely, contend that some kind of limit on fees would only handicap wronged patients. Led by Democrats on Capitol Hill, they accuse insurance companies of price gouging—and of using malpractice business to shore up revenues in the face of other losses in a down stock market.

It’s the insurance business cycle that drives all this,” says Kleinberg. Holders of all types of insurance policies, say analysts, are affected when companies raise rates to cover deep investment losses. Trial lawyers want to pressure insurance firms by ending their longstanding exemption from antitrust laws. That, the lawyers say, would lead to more competition and lower rates.

The two sides also clash over the contingency system. Usually, malpractice attorneys aren’t paid unless they deliver a successful verdict or settlement. “The most injured patients need the least work by lawyers, get the highest awards and reward lawyers with huge profits,” says Joe Baur Jr., m.d., ’57, who was a surgical intern at Yale. “These unjustified profits are unrelated to the legal work required and to the validity of the ‘malpractice’ and rob patients of the bulk of their deserved compensation. Lesser injuries require the most work, with less profit, and these patients are not helped and are ignored by lawyers.” He would also welcome a change in the process of designating expert witnesses. “Expert-witness designation, for plaintiff and defendant, must be made the function of a medical specialty board, and not be decided by a trial judge, who is usually not capable of assessing the appropriate medical qualifications of an expert medical witness,” he says.

But attorneys defend the contingency fee system as a mechanism that prevents frivolous suits. In addition, contend lawyers, only the possible reward of a large settlement motivates attorneys to take a risk on a case they might lose. This doesn’t appease physicians like Bergwerk, who says that, “in Connecticut, of every dollar given as rewards in malpractice suits, only 42 cents goes to the patient.”

Among the Hartford marchers was Yale alumna Sally Bergwerk, a Fairfield County internist who laments the contingency fee system that governs the distribution of malpractice awards. “In Connecticut,” she says, “of every dollar given as rewards in malpractice suits, only 42 cents goes to the patient.”
Malpractice mess reflects a need to regroup
There are numerous factors that contribute to the current problems in malpractice suits and insurance.

There is no unified, cogent voice for physicians. The American Medical Association, once the most powerful lobby in Congress, was not supportive of Medicare and lost the prior uniform support of doctors. Today, the a.m.a. has little impact on legislation or thinking about medical issues. The organization of the various medical disciplines are too splintered to have an effective voice, although the American College of Surgeons has made an effort.

The image of the physician has sunk to unimaginable depths, partly because of unfulfilled expectations, partly due to actual malpractice and partly due to the depersonalization of medical care in the hmo/prepaid/group environment.

The tort lawyers are clever, successful and energetic. Their financial successes help to empower their voice in judicial appointments and in legislative action.

The advances in medicine and surgery have increased not only the horizon of treatable and preventable disease but also the risks, potential bad outcomes and severity of disease that is attacked.

Since the federal government encouraged the expansion of medical schools a few decades back, increased competition among physicians may be distracting some of them from seeking ideal patient outcomes.

Censure, reprimand and punishment of physicians for malpractice are accomplished by the competitive and antagonistic tort system, without a parallel goal of preventing further error and without any real effort to improve medical care.

It may be too late for the physicians to regain control; the hospitals have largely separated themselves from allegiance to the physicians. The hmos are likewise unhelpful and the medical schools have been passive. Perhaps an independent commission should investigate the problem and make suggestions for its solution, either through meaningful legislation or some new national system aimed at both appraising suspected instances of malpractice and correcting the flaws and circumstances that lead to poor medical outcomes.

Robert C. Wallach, M.D. ‘50
New York, N.Y.

Access to appropriate care will be impeded
I work for a self-insured corporation, so the malpractice issue doesn’t directly affect me. Our corporation does have a secondary insurer, and rates have gone up, but this hasn’t yet translated into a change in my salary. The real change has come in the specialists to whom I refer patients. The vascular surgeon we use for complicated cases had trouble getting insurance this year because he does high-risk procedures. If he can’t afford his insurance next year, my patients will get amputations instead of limb salvage. Some of my patients have lost their ob/gyns.

Richard Heston, M.D. ’51
St. Louis, Mo.

Defensive medicine, the worst offense
The high cost of liability insurance is now in the limelight, but I believe there are two additional concerns which are actually of much greater importance. One is the enormous volume of “defensive medicine” and its detrimental effects on health care affordability. The other is the terrible loss of idealism among physicians and other health professionals, even if they themselves are never or seldom sued.

Hyman L. Moldain, M.D. ’75
Studio City, Calif.

"We were all losers"
I am a local health director in West Haven, Conn., and our small malpractice insurance story is the following. We have had a semiretired urologist running our std clinic for years. A few years ago our then-governor, John Engler (a very conservative Republican) and the state legislature passed a fairly rigorous tort reform bill that greatly limited the ability of plaintiffs’ attorneys to file suits. Among the other provisions were, first, that a prospective plaintiff had to submit a notice of “intent to sue” 18 months before the actual suit could be filed. The intent to sue had to have a signed statement from an “appropriate” physician stating that he/she agreed that the standard of care had been breached. An “appropriate” (that’s my word, not in the law) physician was one in the same specialty as the prospective defendant, and the plaintiff’s expert physicians had to be in the same specialty. A family practitioner, for example, can’t testify against a neurosurgeon (although before this law, this sort of thing frequently occurred).

Malpractice suits still take place in Michigan, but their numbers are greatly reduced.

Robert N. Frank, M.D. ’66
Bloomsfield Hills, Mich.

The big question: where to impose limits?
The hottest issue in this tempest is probably the perception of “open season on physicians” and on medical care in general.

While many doctors may have been influenced in their ordering of diagnostic tests by the idea of defensive medicine, I believe the greatest damage that this produces is to the physician-patient relationship. An element of trust is gone. Is this a consequence or side effect of malpractice, or both? Why should it be socially permissible for lawyers to advertise “you may be entitled to a large cash award,” reinforcing the perception that the absence of perfection in medical care entitles them to lottery-type winnings? While I am delighted that lawmakers, who of course are generally lawyers, are making some strides in malpractice reform, the controversy continues over just where limits should be ethically imposed. We need expertise and responsible leadership on this issue.

Marie Tsivitri, M.A., Ph.D. ’86
Stony Brook, N.Y.

Michigan’s specialty solution
The malpractice crisis here in Michigan simmered down a few years ago. Our then-governor, John Engler (a very conservative Republican) and the state legislature passed a fairly rigorous tort reform bill that greatly limited the ability of plaintiffs’ attorneys to file suits. Among the other provisions were, first, that a prospective plaintiff had to submit a notice of “intent to sue” 18 months before the actual suit could be filed. The intent to sue had to have a signed statement from an “appropriate” physician stating that he/she agreed that the standard of care had been breached. An “appropriate” (that’s my word, not in the law) physician was one in the same specialty as the prospective defendant, and the plaintiff’s expert physicians had to be in the same specialty. A family practitioner, for example, can’t testify against a neurosurgeon (although before this law, this sort of thing frequently occurred).

Malpractice suits still take place in Michigan, but their numbers are greatly reduced.

Robert N. Frank, M.D. ’66
Bloomsfield Hills, Mich.

There are numerous factors that contribute to the current problems in malpractice suits and insurance.

As the public dialogue about malpractice insurance reached a crescendo in February and physicians across the United States staged demonstrations for limits on lawsuits, we invited alumni in medicine and public health to share their opinions about the roots of the problem and its possible solutions. Readers of Yale Medicine were generous with their ideas; echoed in many of the messages is a sense among alumni that the medical schools have been passive. Perhaps an independence to the physicians. The hospitals have largely separated themselves from allegiance to the physicians. An element of trust is gone. Is this a consequence or side effect of malpractice, or both? Why should it be socially permissible for lawyers to advertise “you may be entitled to a large cash award,” reinforcing the perception that the absence of perfection in medical care entitles them to lottery-type winnings? While I am delighted that lawmakers, who of course are generally lawyers, are making some strides in malpractice reform, the controversy continues over just where limits should be ethically imposed. We need expertise and responsible leadership on this issue.

Robert C. Wallach, M.D. ’50
New York, N.Y.

On the topic of lawyers, no shortage of opinions
Are attorneys to blame for doctors’ woes? Well, yes, but there are more fundamental issues in the malpractice debate.

As the public dialogue about malpractice insurance reached a crescendo in February and physicians across the United States staged demonstrations for limits on lawsuits, we invited alumni in medicine and public health to share their opinions about the roots of the problem and its possible solutions. Readers of Yale Medicine were generous with their ideas; echoed in many of the messages is a sense among alumni that the medical schools have been passive. Perhaps an independence to the physicians. The hospitals have largely separated themselves from allegiance to the physicians. An element of trust is gone. Is this a consequence or side effect of malpractice, or both? Why should it be socially permissible for lawyers to advertise “you may be entitled to a large cash award,” reinforcing the perception that the absence of perfection in medical care entitles them to lottery-type winnings? While I am delighted that lawmakers, who of course are generally lawyers, are making some strides in malpractice reform, the controversy continues over just where limits should be ethically imposed. We need expertise and responsible leadership on this issue.

Robert C. Wallach, M.D. ’50
New York, N.Y.
A safer OR
Avoiding medical errors is one piece of the malpractice puzzle. David Gaba has been preventing them his entire career.

By Paul Chutkow
Photographs by Martin Klimek
A safer OR

David M. Gaba, M.D. ’80, was bent over the operating table, working intently on a car crash victim. The woman had suffered a broken leg, and Gaba and his surgical team were busy repairing the damage. For a time, everything went according to plan. Then, the team noticed climbing blood pressure and a dropping heart rate—an unusual combination that suggested a problem in the brain. One of the victim’s pupils began to dilate.

“It’s the left eye,” said the attending anesthesiologist. “Looks like potential trauma to the head.”

The anesthesiologist immediately called for back-up from a neurosurgeon, then moved into a set of carefully scripted emergency procedures. Hyperventilation, to reduce pressure inside the victim’s brain. A steroid, to reduce inflammation and pressure. Then a diuretic to draw water from the brain. Despite these temporizing measures, a hole would probably have to be drilled in the victim’s head to release the pressure.

As Gaba and his team worked, three video cameras monitored their every move and computers monitored the patient’s electrocardiogram, blood pressure, blood oxygen saturation, carbon dioxide output and more. After the surgery, Gaba and his team could go back through every stage of the crisis to see how they had performed—and where they could improve. In a few minutes, the crisis was over, but the patient did not exactly come through alive.

Why? This “patient” was actually a programmable polymer mannequin filled with wires and sensors—the centerpiece of an innovative crisis management training program that Gaba has developed with colleagues at the Veterans Affairs Palo Alto Health Care System and Stanford University School of Medicine. The aim of the program is to teach anesthesiology residents and more experienced practitioners how to respond in sudden and often unpredictable crises.

Training like an astronaut

“Most medical schools are very good at teaching normal medical procedures,” Gaba explained. “The point of simulation training is to expose people to events and challenging situations they have not seen before, but could see, and then use them as generic springboards to teach all the behavioral issues of crisis management, dynamic decision-making, leadership and teamwork, and the processing of information. Those things have not been traditionally taught in health care.”

Though he pretended to be a surgeon during today’s simulation, Gaba is a veteran anesthesiologist with a passion for research and advanced simulation techniques. He serves as the director of the Patient Safety Center of Inquiry, which he created at the VA facility in Palo Alto, and as a tenured professor of anesthesiology at Stanford medical school. One day a week Gaba works clinically in the real OR, and the remainder of the week he conducts research or these kinds of training sessions. He and his colleagues have refined their simulation-based training course into an effective teaching tool that is now being adopted by other hospitals and universities here and abroad, including Harvard, Penn State, UC Davis, and Yale. The key is creating lifelike situations in dynamic clinical settings like the ER, the ICU, and the OR, as with today’s car-crash victim.

“We believe that part of a doctor’s training should be comparable to that of a pilot or an astronaut. Doctors should know how to respond to medical crises—and to external crises such as equipment failures, power failures and even earthquakes.” To support their training program, Gaba and his team have published a textbook on crisis management to improve human performance—and reduce mistakes—in the operating room. “Our aim,” Gaba said, “is to apply organizational safety theory and practice to health care.”

Thanks to this innovative work, Gaba is now widely regarded as an important pioneer in the field of medical simulation and patient safety. In his book Complications, author Atul Gawande, M.D., M.P.H., credits Gaba among several figures in anesthesiology responsible for drastically cutting the rate of accidental deaths. Before reformers like Ellison C. Pierce Jr., M.D., and Jeffrey B. Cooper, Ph.D., pushed for systematic analysis of why anesthesia deaths occurred and instituted new practice standards, one or two patients died per 30,000 operations. Thanks in part to Gaba’s anesthesia simulator, the number is now one in 200,000.

Gaba’s contributions to medicine come as no surprise to his former mentors at Yale. “David was a superb medical student,” recalled Roberta L. Hines, M.D., ’77, professor and chair of anesthesiology at Yale. “He was always looking to do things in new and innovative ways.” Hines said that Gaba’s work has had a profound impact on Yale medicine and on the medical profession as a whole.

“Simulation has been a feature of NASA and the airline industry for many years, but David was certainly the first person to apply it to medicine in a rigorous way, using simulation for emergency procedures and the many repetitive things we do. At Yale, Hines said, “Simulation has become an important part of the training process across the profession, not just for resident anesthesiologists but also for nurses, paramedics and emergency room personnel.”
Despite his stature in the field, Gaba comes across not as an "eminence grise," but as a spirited, overgrown technokid with some of the cutest toys on the block. In fact, much of the inspiration for his pioneering work traces right back to his childhood in Kansas City, Mo., and his early fascination with the NASA space program, which uses simulation for training and accident prevention. "I was one of those kids who audiotaped the TV broadcasts of all the Apollo missions," Gaba said. "And Alan Shepard's historic flight was launched on my seventh birthday."

Gaba attended Northwestern University, where he studied biomedical engineering and artificial intelligence, and he created for himself a specialized field of study called "high-level information processing." He entered Yale School of Medicine in 1976 and soon was doing research on defibrillators in the lab of Norman S. Talner, M.D., Ph.D., who at the time was chief of pediatric cardiology. "The hallmark of Yale for me, and I think for most people, was the way we could learn the way we wanted to learn and investigate the things we wanted to investigate. I like the Yale System a lot and I benefited a lot from it."

After graduating in 1980, and after interning at the Yale-affiliated Waterbury Hospital nearby, Gaba moved to Stanford for a residency in anesthesiology. Soon after joining the faculty at Stanford, Gaba read a book that would set him on his path: Normal Accidents, by Charles B. Perrow, Ph.D., a professor emeritus of sociology at Yale. Perrow examined a series of accidents, including the nuclear disaster at Three Mile Island, and then analyzed the human, social and organizational errors that can lead to such accidents. Inspired, Gaba immediately decided to develop an accident prevention program for the practice of anesthesia.

By 1986, Gaba and Abe DeAnda Jr., a medical student with a background in electrical engineering, were building their first "patient simulator." With John Williams, another medical student with an engineering background, they later created a more advanced simulator, whose successors Gaba and others continue to fine-tune today. Today's wondrous models, implemented on a single computer, can simulate an array of body movements and symptoms, including heart dysrhythmias, airway swelling, bleeding, thumb twitching, eye dilation and even the presence of a fetus. They can also detect a wide variety of gases and medications and their concentrations in the "patient's" system.

"We try to replicate, as closely as we can and in a very high-level way, a real clinical environment. We focus on issues that we always expect people to be good at, but that nobody ever teaches us," Gaba's childhood heroes at NASA would surely be impressed by.

Paul Chutkow is a writer in Corte Madera, Calif.
Psychologist to lead Graduate School

As dean, Peter Salovey hopes to bridge a gap that is cultural as well as geographic.

“There’s probably no farther walk on this campus than from the Sterling Hall of Medicine to the Kline Biology Tower,” says psychologist Peter Salovey, y.m.d. ’86, the new dean of the Graduate School of Arts and Sciences. For graduate students on the medical campus, isolated from fellow students in other fields, says Salovey, “this is more than just a geographical problem: it is a cultural problem.”

In his new role as dean of the 760 faculty members and 2,300 students in the arts and sciences—that is, all students at Yale working toward an a.m., m.s. and m.t.d. degrees—Salovey hopes to bridge that divide and bring together graduate students separated by discipline as well as geography. He will rely on a large degree on the McDougal Graduate Student Center, located at the Hall of Graduate Studies on York Street about halfway between Sterling and Kline, which offers career counseling, seminars in teaching, social events and a place simply to hang out. Salovey hopes that graduate students will be increasingly likely to trek over from the medical campus to take part in the McDougal Center’s activities, and also will encourage the center to offer programs on Cedar Street.

Salovey foresees an expanded role for the McDougal Center as a sponsor of public service programs, which already offer opportunities for graduate students to meet one another and to get involved in the larger New Haven community. “We’re very interested in encouraging community volunteerism and participation in social policy and social concerns,” Salovey said. “I will be working closely with the McDougal Center fellows who already are organizing such community service experiences.”

Salovey succeeds neuroanatomist Susan Hockfield, ph.d., who in January became the first scientist appointed provost of the university. As did Hockfield, Salovey plans to keep his laboratory running, spending Fridays there. Salovey does basic research into how human emotions influence thought and action. With colleague John D. Mayer, ph.d., he developed the notion of “emotional intelligence,” the view that just as people have a wide range of intellectual abilities, they also have a repertoire of measurable emotional skills and competencies that profoundly affect their functioning.

As deputy director of the Center for Interdisciplinary Research on Aids, he investigates the effectiveness of health promotion messages in persuading people to change risky behaviors, and he has conducted similar work on health communications targeting cancer prevention behaviors. In a quasi-academic role, Salovey also plays stand-up bass for the Professors of Bluegrass.

Robert L. Bell, m.d., an assistant professor of surgery (gastroenterology) who specializes in minimally invasive and bariatric surgery, performed the first laparoscopic bypass at Yale in August 2002, a month after joining the faculty interest in gastrointestinal surgery, a technique he learned as a fellow at the University of Maryland, on the morning the last year’s Dateline NBC broadcast on weightrain AI Riker’s successful procedure.

The Yale Medical Group recently announced the following appointments: James A. Brink, m.d., professor of diagnostic radiology, has been named interim chair of diagnostic radiology. Brink, who also holds a degree in electrical engineering, was elected to membership in the Society of Computed Body Tomography and Magnetic Resonance and has twice been a member of the Godfrey Hounsfield Research Excellence in Computed Tomography. Anna Mck. Curtis, M.D., ’72, professor of diagnostic radiology, will serve as vice chair of clinical affairs and is the principal investigator of the National Institute of Mental Health. Ebert serves as director of the American Board of Psychiatry and Neurology (ABPN) and is a member of the Psychosomatics Council and vice president of the ABPN. He also serves on the residency review committee for psychiatry at the Accreditation Council on Graduate Medical Education and sits on the American Board of Medical Specialties. Ebert is recently elected to the executive council of the Association of American Medical Colleges and is a representative to the Council of Academic Societies.

Aldo Dueñas, m.d., the Waldemar Hounsfield Professor of Radiology, was named chair of radiology, which enables delivery of images to referring physicians for rapid interpretation. Howard R. Forman, M.D., associate professor of diagnostic radiology, will continue as director of information technology and parent of Yale New Haven Hospital to further implement the Picture Archive and Communication System, which enables delivery of images to referring physicians for rapid interpretation.

David Katz, m.d., M.P.H., 99, clinical professor of medicine, received the 2003 Edward W. Busse Research Award in the Biomedical Sciences during the 3rd Pan-American Congress of Gerontology in April in Buenos Aires. The award recognizes achievements of promising junior or midcareer scientists and is intended to encourage their continued contributions to aging research.

Jeffrey J. Levy, m.d., professor of medicine at the Yale School of Medicine, was honored for his studies of the fine structure and function of the developing olfactory system, especially local synaptic circuit organization in the olfactory bulb. These studies use the olfactory system as a model for identifying mechanisms and general principles that underlie the specificity of axon targeting and synapse formation in the nervous system.

Charles Greer, M.d., professor of psychiatry and associate professor of preventive medicine, received the 2003 Josep M. Lluís Ruddle, Ph.d., ‘68, as an associate professor before her appointment as the John Rodman Paul Professor of Epidemiology and Public Health. Her previous appointment was professor. We regret the error.

David J. Katz, m.d., M.p.h., ‘95, associate clinical professor of family health policy and administration in epidemiology and public health and director of the Yale-Griffin Prevention Research Center, began writing a column on preventive medicine for Oprah Winfrey’s magazine, O, in March after the magazine’s editor heard him speak at an American College of Preventive Medicine meeting. Katz also writes a weekly column for the New Haven Register.

In a quasi-academic role, Salovey also plays stand-up bass for the Professors of Bluegrass.

Cathy Shufro
43

The salaries also tend to be higher, which is important to students, who leave Yale carrying an average debt of $200,000. Based on the “overall sense of happiness” in Harkness Lounge and the quality of the programs the students got into, Angoff called the 2003 Match “by far the best we’ve ever had.” She credits the current class of graduates as well as Yale alumni. “If they weren’t doing well in their residencies, the hospitals wouldn’t want our current students,” she said.

—Jennifer Kaylin

The salaries also tend to be higher, which is important to students, who leave Yale carrying an average debt of $200,000. Based on the “overall sense of happiness” in Harkness Lounge and the quality of the programs the students got into, Angoff called the 2003 Match “by far the best we’ve ever had.” She credits the current class of graduates as well as Yale alumni. “If they weren’t doing well in their residencies, the hospitals wouldn’t want our current students,” she said.

—Jennifer Kaylin

2003 residency placements for Yale medical students

The Office of Student Affairs has pro-
nounced the following list, which outlines the results of the National Resident Matching Program for Yale’s medical graduates. Some names appear twice because the graduate is entering a sec-
ond year of training before beginning a residency. The transitional designation is a one-year program with few research

The crescendo of four years

On Match Day, the mood reflects a stellar list of residency placements, “by far the best we’ve ever had.”

In a scene that combined the envelope-opening excitement of the Academy Awards with the destination-determining drama of the match, more than 90 fourth-year medical students gathered at Marigolds on March 20 for Match Day, the annual ritual that decides where students will start their careers.

Day, the annual ritual that decides

“it’s nice to be able to

rapidly filling with students clutching cameras, bouquets and cell phones, the exact same time.”

through the exact same thing at the

time. “It’s nice to be able to

share this with so many people going through the exact same thing at the exact same time.”

The scene at Yale was replicated around the country as more than

14,000 U.S. medical school seniors learned which residency programs they will be entering. The National Resident Matching Program was established in 1952 to create a mechanism for filling residency slots and promote fairness in the selection process. Applicants list their program preferences, program directors indicate their choice of appli-
cants and a computer makes the matches. This year marked a record high in the number of applicants (33,956, including international medi-
cal graduates) and an all-time high in the number of residency positions offered—23,365, up 450 from last year. A record 373 couples participated in the Match as partners.

At the stroke of noon students shouted and clapped as they pushed toward the door of the dining hall like fans at a rock concert. Nimi Tsun-
mukos tore open her envelope with shaking hands. Then she let out a loud scream and fell to her knees in tears—shouting and clapping as they pushed

at the Match as partners.

Marta Rivera said Match Day was even more stressful than the day she was accepted to medical school because “it affects more than just you. Other people are involved as well.” In Rivera’s case, her parents, her fiancé and his parents all hoped she’d get into her first choice, Brigham and Women’s Hospi-
tal’s radiation oncology program. “It’s weird. This is all I’ve been talk-
ing about for the last four months,” said Andrew Cooper, who was pleased to learn he’ll be specializing in orthopaedic surgery at Jackson Memorial Hospital in Miami. “I don’t know what I’m going to talk about now.”

Richard Brecq, M.D. ’45, who was among several alumni on hand for a Match Day luncheon, said the emotional intensity of the scene in Marigolds was far different from when he was a medical student in the days before the match. “This is far more alive,” he said, gesturing toward sev-
eral students in a group hug. “Of course the war was still on, so that was a factor, but my memory is that one by one we went to our mailboxes and opened our envelopes alone.”

When the 2003 Match concluded, 94 Yale medical students knew what the next step in their career paths would be. Nancy R. Angoff, M.P.H. ’81, M.D. ’90, ’93, associate dean for student affairs, said dermatology (always a draw at Yale because of the strength of the program) and radiation oncology were popular fields among students this year, with five and four placements, respectively.

“Students think of them as lifestyle fields,” she said. “They don’t have a lot of emergencies, so their lives are a little more predictable.” A regular schedule also makes these fields more amenable to dual careers in clinical medicine and research, Angoff said.

The salaries also tend to be higher, which is important to students, who leave Yale carrying an average debt of $200,000. Based on the “overall sense of happiness” in Harkness Lounge and the quality of the programs the students got into, Angoff called the 2003 Match “by far the best we’ve ever had.” She credits the current class of graduates as well as Yale alumni. “If they weren’t doing well in their residencies, the hospitals wouldn’t want our current students,” she said.

—Jennifer Kaylin

The salaries also tend to be higher, which is important to students, who leave Yale carrying an average debt of $200,000. Based on the “overall sense of happiness” in Harkness Lounge and the quality of the programs the students got into, Angoff called the 2003 Match “by far the best we’ve ever had.” She credits the current class of graduates as well as Yale alumni. “If they weren’t doing well in their residencies, the hospitals wouldn’t want our current students,” she said.

—Jennifer Kaylin

The cresendo of four years

On Match Day, the mood reflects a stellar list of residency placements, “by far the best we’ve ever had.”

In a scene that combined the envelope-

opening excitement of the Academy Awards with the destination-determining drama of the match, more than 90 fourth-year medical students gathered at Marigolds on March 20 for Match Day, the annual ritual that decides where students will start their careers.

Day, the annual ritual that decides

“it’s nice to be able to

rapidly filling with students clutching cameras, bouquets and cell phones, the exact same time.”

through the exact same thing at the

time. “It’s nice to be able to

share this with so many people going through the exact same thing at the exact same time.”

The scene at Yale was replicated around the country as more than

14,000 U.S. medical school seniors learned which residency programs they will be entering. The National Resident Matching Program was established in 1952 to create a mechanism for filling residency slots and promote fairness in the selection process. Applicants list their program preferences, program directors indicate their choice of appli-
cants and a computer makes the matches. This year marked a record high in the number of applicants (33,956, including international medi-
cal graduates) and an all-time high in the number of residency positions offered—23,365, up 450 from last year. A record 373 couples participated in the Match as partners.

At the stroke of noon students shouted and clapped as they pushed toward the door of the dining hall like fans at a rock concert. Nimi Tsun-
mukos tore open her envelope with shaking hands. Then she let out a loud scream and fell to her knees in tears—shocked and	

ABOVE With a cell phone and a bouquet, Nimi Tsunmukos, left, and Roselia Guillon-Santana celebrated their matches. LEFT Pamina Kim gets a hug from Katherine Gorgen as they share the news of Kim’s match.
Still smokin’, still addictive
A sizzling second-year show spins the tale of a “healthy” cigarette and a fiendish plot to steal its formula.

Ever since his arrival at Yale in 1997 fresh from his battles with the tobacco industry as head of the Food and Drug Administration, Dean David A. Kessler, M.D., has provided fodder for the second-year show. In 1998 students teased him with a song called “FDA Dropout.” Another recent show featured a video of Kessler sneaking out of a bathroom to the tune of “Smokin’ To the Rescue.”

Kessler has encouraged this tradition by “buying” his way into the show each year with a donation to local charities. Included in his annual largesse are roles for Nancy A. Angoff, M.D., M.P.H., ‘91, M.D. ’90, H.S., ’93, associate dean for student affairs, and Ruth J. Katz, J.D., M.P.H., associate dean for administration.

This year Kessler portrayed himself and paid lip service to the virtues of a “healthy cigarette” developed at Yale. Then Kessler, the author of a “well-written but satirical” book on the tobacco industry, helped steal the sole copy of the cigarette’s formula. Had Big Tobacco finally bought him off? To the rescue came Gold Bond (Douglas Walled) and Agent XX (Michael Yuan), the lithe and chromosomally correct brains behind the investigation, who recovered the formula. The show netted almost $6,000 for the Boys and Girls Club of New Haven.

Christopher Severson and Patricia Diaz were among the first to enter the lounge to get their match letters.

1) Where would James Bond be without a scene in a casino? The second act of “The Spy Who Smoked Me” opened with a tap dance routine set during Casino Night.

2) When an urgent assignment pulled Gold Bond, played by Doug Walled, away from a tryst with Carrie Sokol, she consoled herself by singing “The Beeper Is Forever.”

3) Bond Girl Mihae Yun, in dark glasses, played the lethal Agent XX, who danced through “I’m Your Worst Nightmare/Voulez-Vous Kung Fu Avec Moi.”

4) The show closed with the gathering of the Class of 2005 on stage to sing “We’ve Got Yale Mad/Who Could Ask for Anything More?”

were still additive, as revealed in a disco dance-off as Kessler and Angoff struggled for the last butt. With the two deans in the grip of Saturday Night Fever, Katz (‘I bought my way into the show”) filched the last cigarette in the administrators’ stash.

To the rescue came Gold Bond (Douglas Walled) and Agent XX (Michael Yuan), the lithe and chromosomally correct brains behind the investigation, who recovered the formula. The show netted almost $6,000 for the Boys and Girls Club of New Haven.

—Cathy Shafin

1) Where would James Bond be without a scene in a casino? The second act of “The Spy Who Smoked Me” opened with a tap dance routine set during Casino Night.

2) When an urgent assignment pulled Gold Bond, played by Doug Walled, away from a tryst with Carrie Sokol, she consoled herself by singing “The Beeper Is Forever.”

3) Bond Girl Mihae Yun, in dark glasses, played the lethal Agent XX, who danced through “I’m Your Worst Nightmare/Voulez-Vous Kung Fu Avec Moi.”

4) The show closed with the gathering of the Class of 2005 on stage to sing “We’ve Got Yale Mad/Who Could Ask for Anything More?”
Back to school with Colombia's top doctor
José Patiño, an old hand in Latin American medicine and education, has a new use for the Yale System.

By John Curtis

Although he believes that Colombia already has too many medical schools, José Félix Patiño, M.D. ’52, His ’58, is leading a drive to create one more. He hopes the new school—a joint venture of the prestigious Universidad de Los Andes and the Fundación Santa Fe de Bogotá (FsF), a medical center Patiño and others founded 20 years ago thanks to the philanthropic gift and dedication of Alfonso Esguerra, M.D. ’54, and his wife, Gloria—will raise the level of medical education in Colombia. Patiño’s model for the new school is the Yale System of medical education.

“The main thing that we are taking from the Yale System is the flexibility of the curriculum and the responsibility the student has in learning, and not only what the teacher provides the student. The students have to learn how to learn and be students for the rest of their lives,” Patiño said in January during a telephone interview from his home in Bogotá, Colombia’s capital. “When I was a medical student at Yale, my fourth year was practically ad-libbed. I could do whatever I wanted because I had completed all my subjects, and that gave me the opportunity the student has in learning, and not only what the school is the Yale System of medical education.

When Patiño traveled to New York to hear a new singer with a marvelous voice who, although well-known in Europe and Latin America, had yet to make her debut in the United States. That singer was Maria Callas. “I became interested in her life, always in search of perfection,” says Patiño. “I own every opera she recorded but three. She sang operas that had been in obscurity and brought them to light.” Two years ago Patiño’s biography of Callas, now in its second edition, was published by the late Gustaf E. Lindskog, M.D. This fall he will deliver the Distinguished Lecture of the International Society of Surgery (of which he was president) at the annual Clinical Congress of the American College of Surgeons in Chicago.

Looking back on the heady days of the 1960s, when he hobnobbed with McNamara and Rockefeller and served on a delegation that welcomed President John F. Kennedy on a state visit to Colombia, Patiño laments a change in international lending practices. “At that time the World Bank had a different philosophy than it has today. Their philosophy was that of John F. Kennedy, to help the poor,” he says. “To see how the World Bank functions today, pushing globalization without considering the local situation, is tragic.”

The Fundación’s vision of helping the poor has become reality in six low-income neighborhoods bordering its teaching hospital. The 180-bed hospital and medical center was the first in Latin America to have its full-time staff of physicians. (Typically, Patiño says, hospitals in Latin America rely on the services of physicians who work part time while maintaining private practices.) Its mission includes the education and training of physicians, as well as providing medical care. Proceeds from the center’s clinical fees subsidize services for the poor that go beyond health and medicine. “The community health program is not only a health program,” Patiño says. “It not only relates to outpatient centers, but also to community development in terms of the environment and starting people on their own small industries. It has been a tremendously effective community program.”

Several members of the Yale medical faculty have traveled to Colombia to see the foundation and its programs firsthand. Among them are former Dean Gerard N. Burrow, M.D. ’58, His ’66; former Deputy Dean Robert H. Clifford, M.D., His ’67; Yale-New Haven Hospital President Joseph A. Zaccagnino, M.H.S. ’70; and former Chief of Staff John E. Fenn, M.D. ’65, His ’66 (to whom Patiño refers as his brother). The center also brought medical students from the United States to Colombia for training periods of two months to a year. During the 1990s, several came from Yale to a hospital in a small town outside Bogotá. Concerns over security put an end to that program, however. Patiño’s desire to attack poverty comes from a long-held belief that it lies at the root of Colombia’s troubles.

Two left-wing guerrilla groups who claim to speak for the downtrodden are at war with both the government and right-wing paramilitary groups. Both the paramilitaries and the guerrillas fund their activities through alliances with drug traffickers.

“arificial hand” with insurgents, can improve the political situation. In the meantime, life goes on and he continues with his plans for the new medical school.

The new school, Patiño says, should be up and running by January 2004. Why would someone who believes there are too many medical schools want to add one more? In the 1970s, there were only eight in this country of 41 million people. Now there are 45, most of which were established in the past decade since the national government began to promote higher education by encouraging the opening of new universities. “Many of them are really of very poor quality,” Patiño says of these schools. “The great contribution we think we will make is to set higher standards in medical education and serve as a model for other medical schools in Colombia and Latin America.”

John Curtis is the associate editor of Yale Medicine.
In Lost in America, a Yale surgeon opens up memories of his father

The latest and most personal book by Sherwin B. Nuland, in The New \NY Times, March 5, ‘95, ‘96, Lost in America: A Journey With My Father, grew out of a foreword out of his need to dissect his tangled feelings of love and resentment toward his irascible immigrant father. But Nuland’s memoir of the chromium-allured adolescence he knew as a Yale undergraduate has long been out of print, and he has two young grandchildren named for that son of his first marriage, and he has two young grandchildren named for that son of his first marriage, and he has two young grandchildren. The book was tremen-

dous, and he is never one to let his discomfort about how things 

might turn out stand in the way of his need for the truth.

In July 2002, Bill reports that she witnessed the
disabled of about 1,200 people. For $53 per person, the group bought back slaves from Arab northerners who made their living as “retrievers.”

“Cathy Shufro

Ten lines a day, for 78 years

Albert Deyt Spicer, M.D., 73, who when he was 13 when he wrote his 

first entry in his diary—difficult scientist.”

Nuland’s medical training came from a very American background and has all the fervor of that Sudan soui. But I’m also this other complex, confused person.

For many people who haven’t spent a lot of time with me, “says Nuland, a Cleveland pro-

fessor of surgery at Yale, “I was some kind of a cool guy who was a doctor. But who hasn’t come from a very American background and has all things I’m not. But I’m also this other complex, confused person.

The whole idea is that each of us is a collection of inconsistencies.”

Some of Nuland’s confusion stems from growing up with a resident who was separated from his wife and children but who raged against them, frustrated by his own failures and misfor-
tunes. Nuland’s nagging aware-

ness that he needed to examine his own feelings about his father remained in “the back pocket” of his mind for several years after the 1974 publication of How We Die: Reflections on Life’s Final Chapter. The book was tremen-

dously successful, winning the National Book Award and selling a half-million copies in the United States alone. But readers pointed out something that shocked Nuland: he had inti-

mately described the illnesses of several family members without once mentioning his father.

“I didn’t understand why I’d left him out of the book,” says Nuland, who was 25 years old when he wrote the

winter interview in the office of his colonial house in Hamden, Conn. “I realized then that I don’t really know him or my father. I’ve been going to really understand him until I start writing about him.”

Nuland’s book has all the intimation of the kind of

family physician in print. In that sense, he calls Lost in America “my ultimate book.” This is a kind of therapy for everybody who reads the book, to recognize that there’s nothing wrong with being confused… Because essentially what I’m saying is “look, look where I was, and look how I gradu-
cally came out of that to have made such a rewarding life.”

—Cathy Shufro

A dinner guest

invites him to help former slaves

The night her husband brought a Sudanese guest home for dinner, Cynthia Hymes B. Bill, 70, heard a story from her husband about the day her 9-year-old son, Noah, began to cry. “That’s not right,” he said. “How can people take people?”

People who live in Sudan, who have no memories of their lives, are often shocked when they are reminded of the spot where Bell camped had been bombed, and she says stark

in her tent for three nights. “I questioned whether I would see my family again… Prayer kept me from totally freaking out.”

She believed she was cured. Her other three Boston-area women who have visited Sudan about the select place to localize it: “We’ve come to America at 19, a gar-

lion that lies south of Egypt.

According to the UN, 78% of the women in the Sudanese Red Cross, 41% would have their children delivered by a midwife.

Nuland said his books have also been significant in helping

Bell come to America at 19, a gar-

lion that lies south of Egypt.

According to estimates by unicef, 40% of the women in the Sudanese Red Cross, 41% would have their children delivered by a midwife.

Nuland’s task was to talk to the tribal elders and find out what would happen to returnees without homes. “Many of them have no place to go. Their villages have been bombed, husbands have been killed, their children are missing. Some of the people may have lost their homes in raids by mili-
tias or even, as Nuland says, by

some militia. Those militias have burned villages and killed and enslaved residents, to clear the area along the pipeline south into Sudan that brings in oil worth more than $1 million daily.

Complicating the situation is that southern rebels are fighting the Janjaweed, a government militia. The situation is that southern rebels are fighting the Janjaweed, a government militia.

Nuland concluded her trip to Sudan with a visit to a camp for displaced people. She saw women and children being housed in makeshift tents, and she was amazed at the resilience of the people.
The Ohio Rural Developmental and Behavioral Clinic Initiative, which he founded in 1987, received the 2003 Ambulatory Pediatric Association Health Care Delivery Award in May. The award recognizes innovative and effective programs that provide health care in a teaching setting, and outstanding programs or systems of health care. The program provides referrals, training in the health professions and coordination of care by public health nurses in conjunc-

Carl Andrews

Martin Robson

Frederick Sherman

Audrey Weiner

Robert Higgins

M.D., his wife, Alicia, co-founded a

Taft was a pathologist

Janeway published more

than 300 scientific papers and

many of the concepts that are

established the

was the first to describe the disorder

Choreaathetosis. And he wrote many papers on

in mental illness and neurology trials. He wrote many papers on

in mental illness and neurology trials. He wrote many papers on

In 1974, previous awards include

an honorary fellowship in the Royal Australasian College of Surgeons, the Lifetime Scientific Achievement Award from the Wound Healing Society and the Distin-

cution Award from the American Burn Association.

Frederick S. Sherman, M.D., 75, professor of pediatrics and obstetrics and gynecology at the University of Wisconsin School of Medicine and the director of Perinatal Cardiology at Magee-

2005

Jeanne A. Shifnield, M.D., 50, a resident in internal medicine at Mount Sinai Hospital in New York City, was married on February 16 to Mark D. Paltrowitz, a director of portfolio analysis with BlackRock Inc., an asset manage-

Robert D. Higgins, M.D., 85, former

chair of cardiothoracic surgery and professor of surgery at the Medical College of Virginia, Commonwealth University, in Richmond, was appointed chair of the depart-

ment of cardiovascular-thoracic surgery at Rush-Presbyterian-St. Luke's Medical Center in Chicago in January. His focus at Rush will be to enhance and advance the care of patients with diseases of the heart and lungs.

Audrey Weiner, M.D., 51, was appointed president and CEO of The Jewish Home & Hospital/LifeCare System in November. Her responsibilities include leading the system's three campuses, in Manhattan, the Bronx and Westchester, N.Y. She also assumes supervision of the Lester Eistorner Ir. Center for Geriatric Education, the Kathy and Alan C. Greenberg Center on Ethics in Geriatrics and Long-Term Care and the Center on Pharmacology/Pharmacy at the University for the Elderly.

2018

Robert S. Higgins, M.D., 85, former

chair of cardiothoracic surgery and professor of surgery at the Medical College of Virginia, Commonwealth University, in Richmond, was appointed chair of the depart-

ment of cardiovascular-thoracic surgery at Rush-Presbyterian-St. Luke's Medical Center in Chicago in January. His focus at Rush will be to enhance and advance the care of patients with diseases of the heart and lungs.

The Ohio Rural Developmental and Behavioral Clinic Initiative, which he founded in 1987, received the 2003 Ambulatory Pediatric Association Health Care Delivery Award in May. The award recognizes innovative and effective programs that provide health care in a teaching setting, and outstanding programs or systems of health care. The program provides referrals, training in the health professions and coordination of care by public health nurses in conjunction with local pediatricians. Antoinette L. Lloyd, M.D., 88, is a family physician and director of Healthy Jacksonville, part of the national Healthy People 2010 preventive medicine project for Jacksonville, Fla. She has been married for 18 years to John M. Montgomery, M.D., M.P.H. 74. Montgomery is director of health services and chief medical officer for demographics, and family medicine at the University for the Elderly.

2005

Jeanne A. Shifnield, M.D., 50, a resident in internal medicine at Mount Sinai Hospital in New York City, was married on February 16 to Mark D. Paltrowitz, a director of portfolio analysis with BlackRock Inc., an asset management company in New York.
Both adults and children can now be treated at Yale for vascular tumors of the skin, thanks to the new pulsed dye laser acquired by the School of Medicine and Yale-New Haven Hospital.

“This laser—the only one of its kind in the region—treats port-wine stains as well as other blood vessel tumors and broken blood vessels. Port-wine stains, like the purplish-red birthmark on the forehead of Soviet President Mikhail S. Gorbachev, occur in three out of every 1,000 newborns. …

“The laser unit, about the size of a small washing machine, uses fiber-optic cable to conduct the laser energy. Patients require no anesthesia for the treatment, which feels like the snap of an elastic band. In most cases, vascular tumors can be permanently removed, although several treatments may be required.”

Rolling on outa here
When warm weather beckoned this spring, genetics graduate student Matthew Weed joined fellow students studying outdoors for the first time in his six years at the School of Medicine. Weed, who is blind, used new wireless technology for his Macintosh laptop to listen to articles being read aloud and to check his e-mail—all in the semibucolic setting of the Harkness Courtyard.

Weed is close to completing the dissertation on science and public policy that was just taking shape when he was profiled by Yale Medicine three years ago [“Bringing Science Into Focus,” Summer 2000]. He is studying “what society decides to do about controversial research: how to regulate it, how to assimilate it.” Part of his analysis compares how policymakers in the United States and the United Kingdom regulate scientific research in areas such as stem cells and cloning.

“Different countries come to different policy-making decisions. Why? I’m interested in the decisions themselves and what the mechanisms and who the contributors were.”

Weed could have studied this topic in a political science department, but he says he would have missed an important element: “exposure to how scientists think about science and how physicians think about medicine.” He says researchers are very reluctant to confront the fact that the practical uses of their discoveries may frighten or repel society. Scientists fear that if potential problems are made salient, they’ll lose their freedom, says Weed.

But facing these issues is not optional, Weed argues. “No single government can stop knowledge from being created.” The challenge is “how to assimilate knowledge even if we’re uncomfortable with it.”

Weed hopes to find a job in Washington with a large corporation or a government policy-making agency. He is considering strategies for how to incorporate medical support for his diabetes into his daily life once he leaves the university, where volunteer students monitor Weed’s glucose levels and inject insulin twice daily. When he’s away from his laptop, Weed still goes inline skating (with a friend to guide him), and he plans this summer to try water skiing for the first time.

—Cathy Shufro