from the editor

Esther A. Savage, Yale Medicine

Letters

You’ve come a long way, EL, in accommodating disability

To the Editor:

I was particularly pleased to read at any hus-
band’s works with a man who was denied to Yale
College many years ago because he had suffered a
wrist accident in his career year of high school and was a
paraplegic. Yale could not accom-
modate him and retracted his acceptance. As a graduate,
this story has always saddened me. Now I am heartened to
read about the advances Yale has made in accommodating
disabled, both from a physical and technological standpoint,
as well as from a humanistic one.

Thank you for your conti-
续ed efforts to make Yale
Medicine interesting and from
Natalie B. Silverstein, M.B., ’56
New York, N.Y.

A new gloss on magazine’s
design

To the Editor:

I have long enjoyed and val-
ued the copies of Yale Medi-
cine that have come to me in the mail. However, the gray paper that is used in printing the magazine makes it almost impossible to read. Is there any possibility that a matte

Change is in the air

Last year, as we began the process of fine-tuning Yale Medi-
cine’s content and design to create a more interesting and
better-organized magazine, we asked readers for their sugges-
tions. Your responses were an enormous help to us as we’ve reviewed both what we report and how we present it within these pages.

On the content side, we learned that readers want to know more about the lives of medical students today and more about what their fellow alumni are doing across the country, the con-
tinent and the globe. They are also interested in the past. By far
the greatest number of letters from readers has come in response to articles about the history of medicine at Yale—for example, the early use of penicillin that was the subject of a recent article.

As a result of the comments we received, we are shedding more light on student life and educational issues today—as well as on the school’s past. We’ve devoted extra space to sto-
ries about teaching and have started a regular historical department, which appears for the first time on page 80 of this issue. See page 80 for the first installment.

In addition, Yale Medicine will continue its focus on alumni, with 24 pages this issue devoted to alumni and reunion news. It is our goal to help classmates and old friends stay in touch and to spotlight the ways in which they are changing medicine and the wider world. Please let us know what you and your Yale School of Medicine colleagues are doing by writing to us at one of the addresses below.

On the design side, readers say they find Yale Medicine appealing, engaging and easy to navigate, both in print and on the Web at http://info.med.yale.edu/ymm. We’ve taken steps to improve the easy readability of the magazine while keeping the design lively. We’re also launching a new department, Archives, peeking into the magazine’s early issues. See page 80 for the first installment.

As it happens, the paper

Yale Medicine welcomes news and commentary. Please send letters to the editor and news items to Yale Medicine, 200 W. Main St., New Haven, CT 06520-0230, or via electronic mail to ymmyale@yale.edu, and include a daytime telephone number. Submissions may be edited for length, style and content.

How to reach us

Yale Medicine welcomes news and commentary. Please send letters to the editor and news items to Yale Medicine, 200 W. Main St., New Haven, CT 06520-230, or via electronic mail to ymmyale@yale.edu, and include a daytime telephone number. Submissions may be edited for length, style and content.
Yale's M.D./Ph.D. Program celebrates a birthday and 188 promising careers

When Donald E. Ingber graduated from Yale College in 1977, he had definite ideas about what he wanted to do in life. He was either going to write comedy and radio scripts for the television sitcom or become a neurosurgeon. However, he decided to go to medical school in the meantime, to guard against cancer.

In 1990, he and his team published a landmark paper inNature, one of the first in a continuing series of articles that has led to more than 50 publications inNature since then. Ingber's research has focused on the role of the extracellular matrix in cell signaling and cell behavior.

In 1997, Ingber enrolled in the M.D./Ph.D. Program at Yale, where he has spent seven years on the topic of angiogenesis. Ingber says that it was a mind-blowing experience to learn about the basic science of angiogenesis at Yale. He credits Yale with providing him with the tools he needs to continue to make important contributions to the field.

Ingber says that it was a mind-blowing experience to learn about the basic science of angiogenesis at Yale. He credits Yale with providing him with the tools he needs to continue to make important contributions to the field.
In a fourth-floor laboratory in the Farnam Memorial Building, G’Nee Herbert uses a pipette to prepare samples of mouse DNA for analysis. Her task is to ensure that a certain gene, theta, has been eliminated from the mouse’s genome. Working under the supervision of research technician Crystal Bussey, she prepares an array of DNA for testing. “There are so many steps,” Bussey tells Herbert. “Start from finish it will take you a solid week.”

Unlike her classmates in the lab, Herbert is not a graduate student, postdoctoral fellow or medical student. About to enter her senior year at Hill Regional Career High School, a few blocks from the medical center, she’s one of 45 students from the high school who spent three weeks this past summer living on the Yale campus while studying biology and chemistry. Herbert, 17, joined the program in its first year, three years ago, and has watched it expand from a two-week program with 11 students, “It prepares you for the next year,” Herbert says of the summer program, which is integrated into the science curriculum at Career. “You have already have a step up when you get to chemistry.”

A longstanding relationship between the two schools has for several years brought Career students to the medical school and Yale New Haven Hospital for classes and internships. The summer program, called scholar, for Science Collaborative’s Hands-On Learning and Research, allows students to sustain their interest in science and follow their passions for medicine. “The students try to solve problems such as this: A young camper has been brought to an emergency room suffering from headaches, a temperature and a rash, followed by a seizure. Students must suggest reasons for his symptoms, questions to ask his fellow campers and possible tests. As more information becomes available, students answer new sets of questions until they go to the laboratory to test samples of rat DNA. After they have gone through the labs, they come up with a final presentation of what is they think is going on with this problem,” says Lisa Carlaga-Lo, the director of multicultural affairs and scholar’s program director.

Career students who have just completed their freshman, sophomore or junior year live in Yale dormitories and study genetics, cellular and developmental biology, chemistry and biotechnology. The students also enjoy activities such as this picnic in East Rock Park in New Haven or a field trip to Branford’s Thimble Islands. In classrooms and laboratories, the students try to solve problems such as this: A young camper has been brought to an emergency room suffering from headaches, a temperature and a rash, followed by a seizure. Students must suggest reasons for his symptoms, questions to ask his fellow campers and possible tests. As more information becomes available, students answer new sets of questions until they go to the laboratory to test samples of water. “After they have gone through the labs, they come up with a final presentation of what is they think is going on with this problem,” says Lisa Carlaga-Lo, the director of multicultural affairs and scholar’s program director.

When Joseph Warshaw, M.D., returned to Yale in 1998 after a five-year stint at the University of Texas, he was already an internationally renowned expert in newborn care and development. Warshaw has been named chair of the Department of Pediatrics, he has emerged as a well-respected leader within the School of Medicine. On Aug. 1, he moved north once again to become the 15th dean of the University of Vermont College of Medicine in Burlington. As chair of the Department of Pediatrics for 12 years, Warshaw built it into one of the nation’s foremost centers for research into childhood disorders. Yale is now the leading recipient of NIH funding among medical school pediatrics departments in the country. The department has added facilities to handle the demands of the growing scientific program, including the Child Health Research Center on Congress Avenue. He also played a key role in the construction of the Yale New Haven Children’s Hospital. Over the past five years, he guided clinical academic programs for the medical school as deputy dean for clinical affairs. In that role, he oversaw major changes in the organization of the Yale Faculty Practices, worked on the 1999 affiliation agreement with the Yale New Haven Health System and enhanced several clinical programs.

Pediatrics chair Warshaw moves north to become dean

In the soap dispenser, a lurking danger

Adding antimicrobials to consumer products such as hand lotions and soaps may not add to their effectiveness and could contribute harmfully to antibiotic resistance. According to Yale pediatrician Myron Geisel, M.D., acquired resistance to antimicrobials may predispose bacteria to resistance against therapeutic antibiotics as well. Geisel chaired the American Medical Association Council on Scientific Affairs, which issued a report on antibiotics in June. Antimicrobials, which kill disease-causing bacteria, are commonly used in hospitals and other health care settings to reduce surface colonization of bacteria, but the AMA council found no evidence to support their addition to household cleansing agents. The report encouraged the FDA to expedite its regulation of antimicrobial use in consumer products.

A new showcase for art

There’s an art to medicine, and some medical practitioners are also artists in their own right. Visitors to the Yale Physicians Building can now view artwork by Yale doctors and others associated with the School of Medicine. Last June, a gallery that recently became part of the New Haven artSPACE program began showcasing work by Yale faculty and staff, and other artists from greater New Haven. Featured artwork in the inaugural show included photographs by Amy L. Friedman Meguira, M.D., and Jeffery Rabin, M.D., and paintings by Barry L. Zaret, M.D., and Robert W. Berliner Professor of Medicine and chief of the section of cardiovascular medicine. The gallery’s second show, photographs by Burim Myftiu of Kosovo, opened in September.

Congress Avenue Building reaches skyward

Structural steel began arriving at the site for the Congress Avenue Building in early fall and began to transform the landscape immediately. “In the next month or a half, everyone will begin to understand how this building fits,” project leader John Beller said in early September. [The photo at left was taken November 17.] The project, one of the largest in Connecticut, remains on schedule with steel work scheduled for completion by March. The construction force, too increased to 80 with the arrival of the steel and will rise to between 150 and 200 during the coming year. By January 2002, the building should be completely enclosed. Detailed renderings of the building as well as updates on the project may be accessed at http://info.med.yale.edu/cab.
Northwestern—received money from the federal government to encourage the training of physician-scientists who would be able to leap nimbly from bench to bedside and back again. Yale joined the ranks in 1966 and is one of 38 MTSP currently funded by the National Institute of General Medical Sciences (NIGMS), according to Bert Shapiro, Ph.D., the director of the NIGMS and chief of the institute's branch of cell biology. The MTSP got to a slow start and almost vanished five years later when President Nixon impounded training funding and concerns that much of the war's training program was ineffective. “It funded a lot of residents and they weren’t going into research,” says Shapiro, who says that more than 50 percent of current NIGMS alumni remain in research. In 1974, Congress passed a new act authorizing training grants on a much smaller scale: all the previous programs disappeared and were reconstituted; MTSP was one of only a few to survive and grow. The Yale program has 81 graduates; “11 percent of whom are doing research funded research,” according to Director James D. Jamieson, M.D., Ph.D., professor of cell biology. “So the program is doing what it set out to accomplish, which was to train physician-scientists to carry out basic research that would be applicable to medicine.”

The roster of M.D./Ph.D. alumni includes Yale professors Susan J. Bazer and Michael J. Caplan, who administer the program along with Jamieson and Gerald I. Sheflin. Others on the Yale faculty include Michael P. DiGiovanni, Peter M. Glazer, Robert J. Horner, Barry M. Kasznicki, William L. Kinsey, Richard R. Pelgar, Jordan S. Roby, Marc Petrosa and Sandy L. Weill, as well as a half-dozen recent graduates who are fellows and residents at Yale. These younger graduates are much more likely to pursue careers in research because the funding provided by NIGMS has given much more slowly and it think that’s shortsighted,” says Rosenburg, now adjunct professor of genetics at Yale and a professor at Princeton. “If we’re not to dilute the information from the human genome if we’re not to have the medically trained scientists involved in the health care field, if we’re not to have them, then we’re going to do great difficulty in translating this fundamental information for the benefit of sick people.”

The solution was Bright Beginnings, a mentoring program that has matched volunteers one-on-one with 164 young mothers since inception in 1994. Medical Director John Leventhal, M.D., says it was designed to ensure that the mother and her child had timely prenatal visits and well-baby checkups, to reduce the incidence of childhood injuries and to encourage early intellectual and social stimulation.

None of the young mothers in the program, who range in age from 15 to 24, are in an extremely high-risk group. They were matched with mentors, 40 percent of whom are health care professionals or students in a health field. Most of the mentors are parents who have raised their own children. “They are people who have extra energy to give support to a young mother,” says program coordinator Lynda Johnson, M.D.

After training, the mentors sign on to guide young mothers from the last trimester of their pregnancy through the child’s first birthday. Of the 164 mentors is Courtney Marsh, a 24-year-old nursing student at Yale who plans to become a nurse midwife. Since January she has made a weekly visit and several weekly phone calls to Tasha Aaron, who gave birth to her daughter Aurora on March 11. Aaron, 23, has a background in health care—she is certified as a nurse aide and an EMT technician—and is well aware of the need for checkups. Aaron credits Marsh with “being there for me when I needed someone to talk to. She was with me when I was admitted to the hospital.”

“Having someone who is just a friend for her is a big part of it,” Marsh says of their relationship. “A lot of it is about plugging her into resources that can help her.” At their weekly meetings they may go out to lunch, visit with a midwife, fill out forms or simply talk. A recent pilot study of the program found that 39 percent of the infants had up-to-date immunizations at 12 months, compared to 88 percent of children in the hospital’s primary care population. Only 4.5 percent of teen mothers were pregnant again within one year, compared to 41 percent of the hospital’s Women’s Center teen population. Successfully matched mothers also relaxed fewer pediatric appointments and made better use of the health care system. Although Leventhal has embarked on a more detailed study involving 200 young mothers, half of whom will be assigned randomly to Bright Beginnings and half of whom will receive standard care, he is encouraged by the pilot findings. “Our ultimate goal would be to see if we could expand this program throughout Connecticut.”

—Medical Director John Leventhal

Bright Beginnings initiative helps mothers, infants at the start of life

During the first Tercentennial celebration weekend in late October, physicians and artists explored common ground during a symposium sponsored by the Program for Humanities in Medicine in conjunction with the New Haven arts organization ARTSPACE. Physicians Thomas Duffy and Weiss Beerman, along with students from the medical school, dentistry and nursing, joined artists represented in the companion exhibit “Foreign Bodies: Art, Medicine, Technology” at the unutilized (space) gallery on College Street. The exhibit, curated by Marianne Bernstein, included works by 7 artists who incorporate medical technology or imagery in their work. At left: “Yellow Microorganisms” by Evi Andre Lucavec.
For a group of first-year students, an intense week in the lab

Exposure to some of the best minds in science has long been a benefit of studying medicine at Yale. For a group of 14 first-year students last spring, that experience was intensified during a week-long immersion in bench research and discussion of the broader themes in science. "The goal was to pick a topic and convey two things—how you come up with strategies to test a hypothesis and how you see the project through its successive steps," said John N. Forrest Jr., M.D., who along with four other faculty members accompanied the students to the Mount Desert Island Biological Laboratory in Bar Harbor, Maine, in May. It was a very intense week in the lab. They worked morning noon and night. [Dean] David Keeler proposed that we give students this intense pedagogical experience and it was successful beyond any expectations."

Working with shark tissue, the students focused their investigation on the structure and function of polarized epithelial cells, examining the topic with techniques from several disciplines, including physiology, biochemistry, cell biology and molecular biology. The faculty included Forrest, director of the Office of Student Research, and colleagues Michael J. Caplan, M.D., Ph.D., Blas Fortush, M.D., and Mark S. Mooskian, Ph.D.

"It was a perfect environment for learning to take place," said Nancy R. Angoff, M.P.H., M.I.C., J.D., associate dean for student affairs, who accompanied the group. Angoff, who wrote her own medical school thesis not on basic science but on an ethics topic, took the Bar Harbor course along with the students in order to bridge some gaps in her knowledge. "I ran my first gel, did N.R.A., cloned a gene. It was just a great learning experience," said Angoff. "For the students who haven't had that introduction to laboratory techniques and how to think scientifically, I think it was especially terrific."

The school plans to repeat the course May for inter-year members of the Class of 2004.

A closer look at the medical school, from a new angle

Nearly every college and university admissions office in the country produces a glossy book introducing the school to prospective students. At Yale, choosing a different course, the medical school has joined a number of attracting ever-higher numbers of highly qualified applicants. Medical school viewbooks adopt much the same format, organizing their presentation around the three primary missions of research, patient care and medical education. This year, Yale is breaking that mold, choosing instead to examine itself in a series of vignettes that make up a typical week at the medical school.

"A closer look at the medical school: 24/7: Medicine at Yale" debuts at Yale in February. Building on 25 years of hypocycloid research at Yale, the center will draw on the talents of more than 250 research investigators in internal medicine, pediatrics, diagnostic radiology, nephrology, psychiatry, neurology and nursing, "You need to bring together people with different perspectives and different knowledge bases to tackle the problem," says Robert Sherrin, M.D., the C.N.H. Long Professor of Medicine, who will lead the new center and the president of the American Diabetes Association.

A clinical trial led by Tam Borne and Margaret Giny, M.D., will examine the effects of insulin on type 1 diabetes. Three research projects will use microarray, nuclear magnetic resonance and functional imaging to monitor the effects of hypo-glycemia on the brain. The project leaders are Sherwin, John C. Gore, M.D., and Steven Marans, left, leads the Child Development-Community Policing Program at Yale. Deputy Attorney General Eric Holder Jr. came to the medical school in May to announce the creation of a national program based on the local model.
Combination therapy, acupuncture shown effective in curbing cocaine cravings

Many heroin addicts also abuse cocaine and continue taking the drug even after they stop using heroin. Currently available medications that help them stop using heroin do little to reduce their appetite for cocaine. Yale investigators have found that combining a drug used to treat alcoholism with an experimental drug to treat heroin addiction can help users abstain from using cocaine as well. Another study showed that acupuncture in combination with a heroin treatment regimen may also effectively diminish the desire for cocaine.

Past studies have shown that buprenorphine, an experimental alternative to methadone for treating opiate addiction, is effective in reducing heroin use, but not currently used medication treatment is effective in reducing addicts’ concurrent cocaine use. When buprenorphine was combined with disulfiram—a drug for treating alcoholism marketed as Antabuse—the combination worked better than buprenorphine alone in promoting three weeks of abstinence from cocaine use in persons with dual heroin and cocaine addictions. The early-stage study of 20 addicts appeared in the Spring 2000 issue of Biological Psychiatry. Tony P. George, M.D., assistant professor of psychiatry and an investigator for the study, said, “Addiction to heroin along with cocaine abuse is a horriﬁable problem. Disulfiram can actually reduce cocaine use in these patients.”

Principal investigator Richard S. Schottenfeld, M.D., a professor of psychiatry, is now directing a trial of the drugs with a larger group of subjects and other studies of the combination treatment. He and colleagues are also working to correlate the mechanisms’ mechanism of action with the genetics of drug addiction. “Even if disulfiram proves effective, it’s not an ideal treatment,” he said. “It has all sorts of associated problems. By finding its mechanism of action, we’ll be able to design a new drug that refines its effect.”

The acupuncture study tested 9 subjects in three groups. Among those who had needles inserted in acupuncture points of the outer ear five times a week—a protocol already widely used in addiction treatment facilities—14.7 percent tested free of cocaine at the end of the eight-week study. The second group of subjects received treatment with acupuncture needles that were inserted into four points in the ear not thought to have a therapeutic effect. Among this group, 33.3 percent of the subjects managed to remain free of cocaine during the study. Only 20 percent of the third group, who watched relaxation videos, abstained for the eight-week period. Arthur Margolin, M.D., a research scientist in psychiatry and director of the study, said, “This was one of the most stringent tests of acupuncture to understand the mechanism of acupuncture in this application.” The study was published in the August issue of Archives of Internal Medicine.

New clue to cocaine addiction

“A lot of people try drugs, but only some of them become addicted,” says David Self, M.D., an assistant professor of psychiatry at Yale. He and his colleagues have set out to discover why this is so, and their most recent study points to a possible reason for why only some people develop a habit and need treatment. They hope to find a way to help reduce the number of people who develop a drug problem. In this investigation, says Self, he is to locate this predisposition within the animal’s genes, a prospect that could lead to new ideas for early intervention and more effective treatment. The study was published in the June issue of Neuropsychopharmacology.

New clue to cocaine addiction

Drug offers hope for a brighter start for premature babies

Prematurely born babies score lower on intelligence tests than their healthy, full-term siblings and frequently require special educational services and other assistance. Concerns regarding the cause of the problems faced later in life are brought into the issue of the brain, which often occurs during premature births. Giving them an anti-inﬂammatory drug that reduces the bleeding at birth, however, has raised hope that fewer prematurely born children will suffer signiﬁcant long-term intellectual and emotional problems. Investigators in a multicenter study directed by Yale pediatric neurologist Laura R. Ment, M.D., administered the non-stereoidal drug indomethacin, which is generally used for treating adults with arthritis, to 231 very-low-birth-weight premature babies shortly after birth. In follow-up ultrasound studies, the infants who had been treated with the drug bled less and had less brain atrophy than babies treated with a placebo. In assessments at 6 and 11 years of age, they appeared to have suffered fewer long-term intellectual and emotional problems. According to Ment, approximately 25 percent of neonatal intensive care units in the country use indomethacin as the standard of care for very low-birth-weight premature infants. She hopes to see that percentage increase so that all premature babies can benefit from the drug.

The findings of the study were presented at the joint meeting of the Pediatric Academic Societies and the American Academy of Pediatrics in May. Ment said, “Almost all other studies of protective agents in the newborn period do not have long-lasting effects. This drug does, in fact, appear to protect the developing brain.”

Investigators in a multi-center study directed by Yale pediatric neurologist Laura R. Ment, M.D., administered the non-stereoidal drug indomethacin, which is generally used for treating adults with arthritis, to 231 very-low-birth-weight premature babies shortly after birth. In follow-up ultrasound studies, the infants who had been treated with the drug bled less and had less brain atrophy than babies treated with a placebo. In assessments at 6 and 11 years of age, they appeared to have suffered fewer long-term intellectual and emotional problems. According to Ment, approximately 25 percent of neonatal intensive care units in the country use indomethacin as the standard of care for very low-birth-weight premature infants. She hopes to see that percentage increase so that all premature babies can benefit from the drug.

The findings of the study were presented at the joint meeting of the Pediatric Academic Societies and the American Academy of Pediatrics in May. Ment said, “Almost all other studies of protective agents in the newborn period do not have long-lasting effects. This drug does, in fact, appear to protect the developing brain.”

Magnetic resonance images show a marked difference between the brain of an infant born prematurely, left, and one born at term. Researchers at Yale have found that a drug commonly used to prevent premature births, indomethacin, reduces brain atrophy among premature babies. Ongoing studies of brain volume in newborn infants and older preterm infants are exploring the adaptive mechanisms of the developing brain.

The findings of the study were presented at the joint meeting of the Pediatric Academic Societies and the American Academy of Pediatrics in May. Ment said, “Almost all other studies of protective agents in the newborn period do not have long-lasting effects. This drug does, in fact, appear to protect the developing brain.”

According to Ment, approximately 25 percent of neonatal intensive care units in the country use indomethacin as the standard of care for very low-birth-weight premature infants. She hopes to see that percentage increase so that all premature babies can benefit from the drug.

The findings of the study were presented at the joint meeting of the Pediatric Academic Societies and the American Academy of Pediatrics in May. Ment said, “Almost all other studies of protective agents in the newborn period do not have long-lasting effects. This drug does, in fact, appear to protect the developing brain.”

According to Ment, approximately 25 percent of neonatal intensive care units in the country use indomethacin as the standard of care for very low-birth-weight premature infants. She hopes to see that percentage increase so that all premature babies can benefit from the drug.

The findings of the study were presented at the joint meeting of the Pediatric Academic Societies and the American Academy of Pediatrics in May. Ment said, “Almost all other studies of protective agents in the newborn period do not have long-lasting effects. This drug does, in fact, appear to protect the developing brain.”

According to Ment, approximately 25 percent of neonatal intensive care units in the country use indomethacin as the standard of care for very low-birth-weight premature infants. She hopes to see that percentage increase so that all premature babies can benefit from the drug.
Stress testing may hold older persons back from healthy exercise

The standard recommendation to get a stress test before starting exercise may hinder efforts to keep older people active. According to a Yale study, a simple physical examination may be sufficient. After weighing the potential benefits and risks of exercise among persons age 75 and older, researchers concluded that current guidelines for exercise stress testing are not applicable for the vast majority of older persons interested in starting an exercise program and may instead hold them back.

Thomas M. Gill, M.D., an associate professor of medicine and geriatrics, and his collaborators reported in the July 19 issue of The Journal of the American Medical Association that, “Based on a rigorous review of the available evidence, we found that the potential risks of exercise and aging” said Gill, “particularly now that the large baby boom population, who started the exercise movement, is growing older.”

A stress test, Yale researchers have found, may discourage elderly people who wish to exercise. A complete physical exam, according to the researchers, may be sufficient to identify potential health risks for those over 75.

When it comes to diet, parents weigh in heavily with their children

A Yale study has found that children's perceptions of their parents' attitudes toward eating and weight have a big impact on their own attitudes and behaviors. According to the study, college-age women are particularly sensitive to perceived criticism from their mothers in forming their own attitudes and behaviors regarding food and weight. Similarly, male college students adopt attitudes toward eating and weight that are associated with their perceptions of their fathers' attitudes and behaviors.

A Yale study found that children's perceptions of their parents' attitudes toward eating and weight have a big impact on their own attitudes and behaviors. According to the study, college-age women are particularly sensitive to perceived criticism from their mothers in forming their own attitudes and behaviors regarding food and weight. Similarly, male college students adopt attitudes toward eating and weight that are associated with their perceptions of their fathers' attitudes and behaviors.

Screening for alcohol abuse with a few key questions

There are a variety of screening methods available for detecting alcohol problems. According to a review by Yale investigators, however, asking a few carefully worded questions during routine medical appointments may be the best way of spotting alcohol problems before they get out of hand.

The first three questions of the so-called CAGE questionnaire address the frequency and quantity of alcohol consumption. These questions were found to be the most effective in showing more recent drinking behavior and problems.

Prigerson said blood tests are not good indicators of alcohol problems because they generally only reveal markers of advanced alcohol abuse, such as liver problems. There are many people with drinking problems who are not drinking, and getting arrested for driving while intoxicated who might not show any physical problems on a blood test.

An odd silver lining in unhappy marriages

“Fraid said that ambivalent, conflicted relationships would predispose the survivor to pathology.” The researchers interviewed widows for their study, and the results highlight the importance of good parent-child communication.

For the study, which was published in the June issue of The Gerontologist, the researchers interviewed 14 people who were part of a longitudinal study on successful aging and who remained married between the initial survey and the follow-up. The researchers then compared the health care costs of the married people to the costs of widowed people. They also looked at the health care costs of widows and widowers from happy and unhappy marriages, as characterized by answers to questions posed to the survivors before one spouse died.

The researchers found that annual health care costs were $1,359 for widowed persons compared with $1,433 for those who were married. Health care costs for the surviving partners in happy marriages were $1,360, compared with $2,100 for survivors of unhappy marriages.

Prigerson said the sense of loss for the survivor in a unhappy marriage is often so profound that older widowed people are at increased risk. Prigerson said “My widowed women in the study needed mental health care, but few were receiving it.”
Yale researchers solve structure of the ribosome

Crystallography confirms a long-held notion that RNA, not protein, sparks protein synthesis on the ribosome.

In a landmark achievement, Yale researchers have determined the atomic structure of the ribosome's large subunit, paving the way for more effective drugs to fight infection. The findings, published in two separate articles covering 23 pages in the Aug. 11 issue of the journal Science, were derived in Yale laboratories led by Thomas Steitz, the Eugene Higgins Professor of Molecular Biophysics and Biochemistry and an investigator at the Howard Hughes Medical Institute, and Peter Moore, the Eugene Higgins Professor of Chemistry.

"This is like climbing Mt. Everest or running the four-minute mile," Steitz said. "We have solved the structure of the ribosome's large subunit, which is the largest unique structure determined. We have established that the ribosome is a ribozyme, an enzyme in which catalysis is done by RNA, not protein."

The ribosome is the cellular structure responsible for synthesizing protein molecules in all organisms. In addition to enhancing the understanding of protein synthesis, the research offers new clues about evolution and has significant medical implications because the ribosome is a major target for antibiotics.

Many antibiotics cure diseases by selectively inhibiting the protein-synthesizing activity of large ribosomal subunits in disease-causing bacteria, while leaving human ribosomes alone. Unfortunately, over the years, many bacteria have become resistant to these agents, and the possibility exists that the devastating bacterial diseases that were brought under control by antibiotics in the 1940s and 1950s will once again become scourges.

"Now that we know the structure of the large ribosomal subunit," Steitz said, "we can determine its exact structure with antibiotics bound to it." The same methods of "structure-based drug design" that led to the development of UV-protein inhibitors for AIDS can now be used on the ribosomes.

"The information that emerges should enable pharmaceutical companies to design new inhibitors of ribosome function that can be used to combat bacterial diseases that have become resistant to older antibiotics," Moore said.

Although the ribosome is microscopic, it is gigantic in molecular terms. The larger of its two subunits is about 39 times larger than the average enzyme. Its function is to read the genetic information encoded in messenger RNA and generate the protein molecules specified by the mRNA molecules. The proteins made by an organism's ribosomes are responsible for virtually all of its properties, including how it looks and behaves.

The structure of the ribosome's large subunit was determined using X-ray crystallography, a technique that can produce three-dimensional images at resolutions so high that individual atoms can be positioned. The 2.00 angstroms of RNA in the large ribosomal subunit form a compact, complexly folded structure, and its 16 proteins, or subunits, are marked by a helix.

Enzymes composed entirely of protein promote virtually all chemical reactions that occur in living organisms. One of the most remarkable findings to emerge from this research is that the protein synthesis reaction that occurs on the ribosome came from the two-thirds of its mass that is RNA, not from the one-third that is protein.

"It was suspected for many years that the RNA of the ribosome was the enzymatic component. We now know that for certain," Steitz said. "This means that in the very early days of evolution, protein synthesis evolved using RNA molecules because there were no protein molecules."

Yale scientists have determined the structure of the ribosome's large subunit, a finding that offers new clues to evolution and could increase understanding of protein synthesis and lead to the discovery of new drugs. The image at left shows the crystal structure of the large ribosomal subunit in its natural state, a bacterium found in the Dead Sea.
A genetic cause for hypertension during pregnancy

Blood pressure normally dips slightly during pregnancy but, as every obstetrician knows, a spike in pressure can lead to a serious and potentially life-threatening complication. The reasons for this type of hypertension, which occurs in about 1 percent of pregnancies, remain mysterious but research by a Yale team has shed the first light on a likely molecular cause.

Working with a family predisposed to a rare form of hypertension, David Geller, M.D., M.S., and colleagues identified a mutation in a protein in kidney cells that normally regulates salt balance. The protein, known as the mineralocorticoid receptor, is normally activated by the steroid aldosterone. The Yale scientists found that, in patients with the mutation, it is also activated by the hormone progesterone. “The consequence is that when women with this mutation become pregnant, the 100-fold rise in progesterone activates the receptor, causing increased salt balance and a marked increase in blood pressure,” said the paper’s senior author, Richard P. Lifton, M.D., Ph.D., a Howard Hughes Medical Institute investigator and professor of genetics, medicine, and molecular biophysics and biochemistry.

Hypertension during pregnancy can lead to pre-eclampsia, which may be fatal to mother, fetus or both. The team’s findings were reported in the July 7 issue of Science.

“Our findings demonstrate that a normal hormone of pregnancy can have abnormal effects that can cause hypertension to women,” said Lifton. This raises the possibility that more common forms of pregnancy-related hypertension may be attributable to similar mechanisms,” Lifton said. This information, he said, will motivate careful examination of the possibility that progesterone is acting to promote increased salt balance in other forms of pregnancy-related hypertension and may lead to clinical trials of salt restriction in selected groups of women whose blood pressure rises with pregnancy.

The paper was dedicated to the memory of the late Paul B. Sigler, M.D., who died in January 2000, and a message about the importance of the political process to women’s health. In the past, some disputes were not very exciting to those who funded research because they only affected women. “That’s changing now,” said Ferrara, the first woman nominated for vice president by a major party when she ran with Democrat Walter Mondale in 1984. She was the keynote speaker at “Confronting Gender,” sponsored by Women’s Health Research at Yale, a day-long event that attracted more than 200 people to New Haven’s Lawn Club for lectures and presentations by Yale investigators. Noting that women make up more than half the population — and they vote — Ferrara said, “We are different biologically. Policies that don’t take this into account are not only unacceptable, they’re undemocratic.”

Facial recognition is impaired in autism

The developmental disorder autism interferes with social functioning — even with the recognition of faces, as a functional magnetic resonance imaging study now shows in detail. The study, which appeared in April in the Archives of General Psychiatry, was the work of a Yale research team headed by Robert T. Schultz, M.D., an associate professor at the Yale Child Study Center.

A decade of investigation has established that people with autism have more difficulty than unaffected individuals in recognizing faces. Instead, they rely on perceptual processes typically used to recognize non-face objects. The Yale study confirms these observations in terms of brain activation patterns. When a person with autism views a face, his or her brain reacts differently from the brain of a normal person. Instead of bursting into activity at a site called the fusiform gyrus, which normally responds preferentially to faces, individuals with autism display increased activity in the inferior temporal gyrus, which normally responds post-strongly to objects. In addition, people with autism tend to process faces by focusing on a few salient features rather than on the overall configuration, as if they were processing an object.

These findings are linked to a riddle. Could this abnormal brain activity be a cause of autism, or the result of a long-standing distortion in social interactions that date back to early childhood? “With our data, it is not possible to know,” says Schultz, but he and many of his fellow researchers look forward to finding out.

A toolbox for drug abuse treatment

Drug abuse has been linked to 75 risk factors, including individual, family and societal issues, according to Alan Leshner, Ph.D., director of the National Institute on Drug Abuse (NIDA). Yet most drug abusers, he said, fall into one of two categories.
When New Haven’s first hospital opened in 1833, it was the product of years of political wrangling and a fund-raising campaign that swept up Yale’s small medical faculty, who needed a place both to teach clinical medicine and to build their reputations and private practices. But the State Hospital, as it was known at first, also had trouble finding enough patients to fill its 75 beds. Wealthy and middle-class New Haven residents could afford to be seen at home by their private physicians, and hospital care in the early 1800s offered few benefits over home care. Demand from patients was so low that, for the first few years, the fledgling hospital on York Street rented out rooms.

That picture changed dramatically with the onset of the Civil War, according to a recent exhibit on New Haven’s Hospitals at the Cushing/Whitney Medical Library. In 1862, the directors of the State Hospital leased the building to the U.S. government to be used as a military hospital. Through 1865, 25,340 soldiers were treated at the hospital, with only 185 deaths. During those war years, the hospital was known as the Knight U.S. Army General Hospital, after Jonathan Knight, a founding professor at the Medical Institution of Yale College and a leading surgeon in the state. As patients poured into hospitals up and down the East Coast during the Civil War, doctors began to see that most deaths came not from bullets on the battlefield but from the result of infectious diseases including typhoid and malaria. When the Knight Hospital was directed by the military to increase its number of beds to 1,000, it did so by building pavilions. This would allow doctors to segregate patients into wards to prevent the spread of disease.

While medical practices at the time were rudimentary, conditions at the hospital, and the personnel there, were vastly superior to those at the front. In general, wounded limbs were amputated with an instrument that resembled a hacksaw to halt the spread of infection. The operation was quick, generally taking no more than 15 minutes. An author in the Knight Hospital Record, explaining what sick and wounded soldiers have to suffer while on route from the battlefield, reported that “the surgeon, unaided and assigned to a ‘bed’ on the nearest grapple, here we are surrounded by suffering in all its phases, and scenes most revolting. Bare wounds are on all sides, some of which are of the deep kind, from exposure and lack of attention.” The report went on to describe the amputation table, “where the surgeons cut off limbs with as much composure as a butcher would saw a leg of mutton for your dinner table, where legs and arms, feet and hands, toes and fingers, are haphazardly thrown together in one conglomerated mass.”

The name of the hospital was changed to New Haven Hospital in 1884. It grew significantly in the late 19th century along with other hospitals as cities burgeoned with the influx of immigration and industrialization and as improved medical care, including aseptic surgery and general anesthesia, began to attract middle-class and wealthy patients. In 1872, two wings were added. In 1883, a separate dormitory was built for the affiliated Connecticut Training School for Nurses, founded in 1880. In 1884, New Haven Hospital merged with Grace Hospital, a homeopathic facility chartered in 1889, to become Grace-New Haven Community Hospital. The York Street building known as the Memorial Unit opened in 1895 and, 12 years later, after a new affiliation with Yale University, the hospital became Yale-New Haven Hospital.

The exhibit, which was on display from May to September, can be viewed at info.med.yale.edu/library/exhibits/hospitals.

Pem McNerney is a writer and editor and the founder of Content Creation Co. in Madison, Conn.
For years, health professionals and students at Yale have worked with their neighbors in the community in partnerships that provide benefits to all. These photographs, prepared for Yale’s Tercentennial, tell that story.

Text and photographs by John Curtis
during her first two years of medical school, Karen Thomas spent a few hours each Wednesday evening at Yale-New Haven Children’s Hospital, cuddling infants whose parents couldn’t be there with them. “It was, very literally, a way for me to lay my hands on a patient and ... talking, and playing with the children I thought I could help give each of them something that every patient needs—a little TLC.”

Her fellow medical students, along with students at the School of Nursing, spend evenings at the Downtown Evening Soup Kitchen or the Columbus House homeless shelter, offering physical exams and checkups under the supervision of physicians and nurses. Students come to medical school laboratories from Hill Regional Career High School to learn anatomy. Public health students lead a workshop in self-esteem and conflict resolution at the New Haven Boys & Girls Club, just a few blocks from the medical school campus. The Physician Associate Program Class of 2001 spent a Saturday in June working on a Habitat for Humanity renovation project in the city’s Newhallville neighborhood.

“Being able to participate in community projects like Habitat helps put things into perspective,” says Class President Ed Hahm. “It is important for us to realize that there is so much more out there than just studying for weekly exams. Participating in community projects such as Habitat for Humanity gives us an opportunity to get involved with the community we’re learning to serve medically.”

These are just a few of the ways in which students in the health professions join with their neighbors in building healthier communities. As the University marks its 300th anniversary, it is looking not only to its own history and future, but also to its relationship with New Haven. The Tercentennial’s opening weekend in October celebrated the University’s neighbors with an open house. The photo essay that follows is adapted from a photo exhibit, “Neighbors: Working Together for a Healthy New Haven,” displayed as part of the School of Medicine’s celebration of the Tercentennial.

The photo essay documents the activities of students and health care providers who work in the communities that border the medical campus. When student involvement with the medical school’s neighbors began in its current form in the mid-1980s, activities focused on education—medical students held workshops in public schools to talk about drug abuse and AIDS. By the early 1990s students were serving as prenatal health advocates for new mothers, teaching high school students to teach their peers about AIDS, and bringing fifth-grade students to campus for interactive lessons in medical science.

The worth of partnerships with New Haven’s neighborhoods may not be felt for years, says Myron Genel, M.D., a faculty member who has worked for many years with student and community organizations. "The real rewards are going to come in 10, 15 years downstream when we can see the influence these programs have had on peoples’ lives. They are long-term investments.”

The photo essay documents the activities of students and health care providers who work in the communities that border the medical campus. When student involvement with the medical school’s neighbors began in its current form in the mid-1980s, activities focused on education—medical students held workshops in public schools to talk about drug abuse and AIDS. By the early 1990s students were serving as prenatal health advocates for new mothers, teaching high school students to teach their peers about AIDS, and bringing fifth-grade students to campus for interactive lessons in medical science.

The worth of partnerships with New Haven’s neighborhoods may not be felt for years, says Myron Genel, M.D., a faculty member who has worked for many years with student and community organizations. "The real rewards are going to come in 10, 15 years downstream when we can see the influence these programs have had on peoples’ lives. They are long-term investments.”
A day of caring

For the past two years orientation for incoming medical students has included a “Day of Caring” to support community organizations. This year about 40 students, including Nige Jones and Bena Weng, spruced up a garden at an adult day care center in Branford, Conn., bottom photo, and organized a basement library at Life Haven, a shelter for women and children in Fair Haven, below. “We had lots and lots of volumes but there was absolutely no sense to the way they were shelved,” says Barbara Weten, M.A., center, below left, program director at Life Haven. “The students moved all the books and categorized them for us. Now when the women go down they don’t have to search the whole library.”

Medical mentors

Every spring for the past six years, local high school students have given up to 10 Saturday mornings to join in a course that teaches on HIV, nutrition, drug abuse, domestic violence and other health issues. The Health Professions Recruitment and Enrichment Program, a national program with 60 chapters around the country, fosters mentorships between minority medical and high school students and encourages the younger students to go to college. The students mark the end of each course with a graduation ceremony, and top students receive scholarships for college education.
Beyond the healing arts

Nursing students took part in three projects this year that examined New Haven’s history and provided prenatal and primary care to its residents. They joined with the city’s International Festival of Arts and Ideas to connect high school students with senior citizens and artists. The Yale students first trained students from Hill Regional Career High School in the collection of oral history. The high school students, including Victoria Bonaparte, then interviewed seniors at a local elderly housing complex and, with the guidance of artists, helped them make collages that told a story about their lives. The collages were displayed at the festival this past summer.

As a President’s Fellow, nursing student Salma Mody received a stipend that allowed her to spend the summer of 2000 working with young pregnant women at The Women’s Center at Yale-New Haven Hospital. Mody, who plans a career as a nurse midwife, offered prenatal care and worked to find ways to reduce pregnancy and sexually transmitted infections among young women.

As part of an ongoing program, nursing students such as Jennifer Sargent offer basic medical care, such as blood pressure screenings, and basic hygiene supplies four nights a week at the Downtown Evening Soup Kitchen.

Painting a brighter picture

Started four years ago to encourage conflict resolution among teens, the New Haven Boys & Girls Club Volunteer Project has continued with an added focus on nutrition, personal hygiene and self-esteem. Once a month public health students lead younger students in discussions, followed by arts and crafts activities for teens and adolescents. Public health student Shoba Ekanayake, above, helped a younger student with a painting exercise.
A day of labor
Members of the Physician Associate Class of 2001 put aside their medical studies on a Saturday in June to pick up rakes, hoes and shovels for a day of manual labor, left and below right. They joined members of the New Haven chapter of Habitat for Humanity in renovating two homes in the city’s Newhallville neighborhood, where students cleaned up trash and helped prepare the garden of one home for seeding.

Opening the campus
Every spring students come to the medical school from Hill Regional Career High School, just a few blocks away, to study anatomy with faculty and students. The anatomy classes are woven into the science curriculum at the high school. Students may also advance their science studies through SCHOLAR, a summer residential program that brings them to the Yale campus for two weeks of classes in biology and chemistry. Anatomy professor Bill Stewart, with the help of medical students, led studies of the human body, below right. C’Newb Her- bert worked with research technician Crystal Bauny on DNA studies, right, while other students conducted experiments in a lab on Science Hill, far right. “We studied how to identify and clone genes and became acquainted with different types of lab equipment and how to use it,” says Tom Haggerty, 17, a senior at Career.
New Haven’s biotech boom

The medical school’s efforts to bring its intellectual property to market have given the New Haven economy a boost.

Four years ago, when staff from Yale’s Office of Cooperative Research (Ocr) went looking for scientific discoveries with commercial promise, they stopped first at the laboratory of Yung-Chi “Tommy” Cheng, Ph.D., the Henry Bronson Professor of Pharmacology. Cheng is the inventor of eight pharmaceutical compounds with enough clinical promise to interest drug companies, an astounding number for one scientist. He is a co-discover of four, one of the essential ingredients...
in the standard medication cocktails for patients with AIDS. And, the OCA staff learned, he had a portfolio of other compounds with potential for treating viral diseases such as HIV, Epstein-Barr virus and hepatitis B. “Individually,” recalls Alfred E. “Buz” Brown, M.D., director of the OCA’s medical school office, “the clinical candidates were less likely to be developed by an existing company. Putting them together as a package, though, gave them synergies that, along with [Cheng’s] technological strength, gave us great potential for building a new company.” As it happened, OCA’s staff were in the process of forming a company around Cheng’s technology when they met William Rice, Ph.D.

Rice, a former research scientist at the National Cancer Institute, had built the management team for a new drug-discovery and development company based on promising technology he had developed at NCI. But Achillion Pharmaceuticals, as the new company was called, didn’t have the clinical candidates or the pharmacological talent that Yale possessed. The Yale compounds were just the medicine Achillion needed to gain the venture capital financing necessary for its launch.

“Yale’s assets were highly complementary to what we had already built,” says Rice. “Having Yale as a partner gave us a huge lift.” Yale, too, saw Achillion as an opportunity to bring new money and business to New Haven and use its faculty, staff and network of connections to make it happen. Says E. Jonathan Soderstrom, M.D., managing director of Cooperative Research for Yale University, “Buz Brown and [Associate Director] John Swartley [M.D.] in our medical school office played a very active role in putting the business together with Bill, raising funds and bringing scientific talent and the business plan together. If it needed doing, we did it.” Rice had originally intended to base his company in Princeton, N.J., but Yale enticed the company to come to New Haven. Brown and Swartley shepherded Rice around the medical school, showed him potential laboratory locations in town, and even pointed out residential areas with schools that would be right for his young family. “They really made me want to be here,” says Rice. Together with the rice staff and Cheng, Rice sought out investors. The partnership was so successful that, according to a report by the accounting firm of PriceWaterhouseCoopers, Achillion’s more than $97.3 million in financing represents the largest amount ever raised by a startup biotechnology company. Last summer, Rice moved his family to the New Haven area and Achillion opened its doors in renovated space in a former telephone company building within sight of the School of Medicine.

The launch of Achillion is just one of a growing number of successes for the biotechnology industry in greater New Haven, virtually all of which are directly tied to the School of Medicine. Most haven’t involved the complex deal-making that was behind the Achillion startup, but each of the eight new biotechnology companies—more are on the way—launched by Yale as part of a strategy to help jump-start the New Haven economy has the potential to grow explosively. With five existing publicly traded biotech companies and four major pharmaceutical research centers in the region, New Haven has emerged as a new mecca for biotechnology entrepreneurs.

Private investment returns to New Haven

The success of the last four years is part of a strategy announced by Yale’s leadership in 1995 to use the medical school’s intellectual might to attract private investment to New Haven.

In the early 1990s, surrounded by a city with a declining industrial base and a reputation for poverty and crime, Yale woke up to the realization that it could not afford to look with benign indifference on its local environment. Dramatic change was needed at Yale itself if New Haven was ever to regain its former economic vitality. Guiding the transfer of Yale technology to private, for-profit companies within the region seemed the most promising way to assure that the gold and diamonds mined in Yale laboratories would be turned into jewelry close to campus. In 1995, the University tripled the OCA’s budget and staff and hired as its director Gregory Gardner, M.D., former worldwide director of external research for pharmaceutical giant Pfizer. Part of his mandate was to use promising Yale licensed technology to build new companies that would locate in New Haven. As part of a wider effort by Yale to revitalize its surroundings, the OCA entered the entrepreneurial fray with a sharp focus on helping new businesses take root in the city. Commenting in 1998 on one of the first flowerings of those efforts, a
significant new state investment in Science Park, New Haven’s once-languishing technology incubator, Yale President Richard C. Levin said, “There are few things that ... engine that will spawn companies for New Haven’s economy.”

Gardiner, Soderstrom (who was then head of the Y’s medical school office) and their staff met with University scientists, respected venture-capital investors and state business-development leaders. Instead of focusing exclusively on the licensing of its intellectual property to existing companies, Yale began to explore ways in which New Haven-based start-ups might be formed around technologies conceived in its labs. The Y worked closely with faculty whose discoveries had commercial value, wrote business plans, found investors willing to back the ventures and bring business-development expertise to the table, and located appropriate space for growing high-technology businesses. It was an unprecedented effort by Yale to use technology transfer and in-house entrepreneurs to lure private investment into its hometown, and it worked better and faster than anyone could have foreseen.

The payoff has already been evident—for New Haven and for Yale. Among the recent successes, all eight new biotechnology companies have attracted hefty infusions of outside investment, together mounting well into the tens of millions of dollars. New high-technology research and development space has been built; and, perhaps most promising of all, New Haven, a new entrepreneurial culture seems to have taken root within and outside the University to exploit the region’s economic potential. During the first eight months of 2000, the privately held and publicly traded biotechnology companies in New Haven received more than $554 million in new investments. This is a remarkable turnaround for a city that lost much of its industrial base, mostly in manufacturing, during the half-century following World War II.

An engine for employment

While it is still the new kid on the block relative to the long-established giant centers of the biotech industry around Boston, San Francisco and North Carolina’s Research Triangle, New Haven now boasts some of the most advanced and fastest-growing biotechnology companies anywhere. Close to 1,000 people are now employed by the local industry, and every company is hiring as fast as it can. “It’s incredibly exciting,” says New Haven Mayor John DeStefano Jr. “We are seeing a change occurring in New Haven that will be defining the center city for decades to come: It’s a transformation of the city’s economy every bit as dramatic as that of the mercantile transition of 1900. New Haven will emerge as one of the dozen centers of the New Economy in America, the happening as we speak.”

As for Yale’s contribution, Gardiner describes the process with this metaphor: “Complex crystals grow spontaneously once they are nucleated. Our job is to nucleate, to provide a little push and then let nature take its course.” The first two companies— Molecular Staging Inc. and polyGenomics, both possessing novel genomics technologies invented at the medical school—opened their doors in 1997. Others quickly followed. “It was like an investment that starts small but, because it grows exponentially, becomes very large,” says Gardiner, who retired in 1999 but continues to consult for his former office, teach at Yale and assist with the launch of local companies.

Without a doubt, Yale’s participation has been essential to the blossoming of the New Haven biotechnology economy. Virtually all of the area’s biotechnology companies are School of Medicine spin-offs and keep very close associations with Yale. Even for well-established companies such as CuraGen Corporation, a leading developer of drug targeting technology using genomic information that was founded in 1993, the Yale connections continue to be of value. Bonnie Gould Rothberg, M.D., 94, the company’s group leader for pharmacogenomics, says, “We’ve always been very tied into Yale. We have active research collaborations and publish papers together with Yale scientists.” Several members of CuraGen’s scientific advisory board are Yale faculty members, including its chair, Richard P. Lifton, M.D., Ph.D., the chair of the medical school’s genetics department.

Like most companies in the area, CuraGen’s executive and scientific leadership is also drawn from the medical school. The company’s founder and CEO, Jonathan Rothberg, M.D., 91, received his doctorate and did his postdoctoral work at Yale, as did several other executives. Yale may possess valuable technology and faculty with scientific know-how, but high-tech business development requires enormous, high-risk investment. Without broader support, Yale’s efforts would not have been as well received by investors. After a long and at times tortuous history with its home city, Yale leaders now speak of a partnership between the University and New Haven. Underlining the importance of that partnership, Yale created a new officer-level post, vice president and direc-
“Our job is to nucleate, to provide a little push and then let nature take its course.”

“Ultimately, our technology may allow physicians and patients to select specific treatments based on a patient’s genome.”

“A two-way street

While the economic benefits for the city and state are apparent, it is also true that development of a thriving private biotechnology economy provides significant scientific benefits for Yale’s own academic research and teaching missions—and the school’s reputation. “There are tremendous advantages in having companies here for our own resources,” says Sterling Professor of Genetics Sherman W. Weissman, M.D., who has consulted for private biotechnology companies elsewhere in the country for decades. “We do things of common interest and mutual benefit. We get analyses of our data we couldn’t otherwise afford.”

He worked closely with the CEO in the formation of PolyGenomics and Molecular Staging Inc. (PolyG), companies based on new technology to detect disease-causing gene mutations that his departmental colleague David C. Ward, M.D., and Associate Professor of Pathology Paul M. Lizardi, M.D., created. With MSI just a five-minute walk from his Boyer Center office, it’s easy to drop by to and from work, he says. “I can have a hands-on view of what’s going on there.”

For the first time, pharmacologist Cheng does not need to fly somewhere distant to guide the development of the drugs he discovered and move them into the clinic. He is chair of the scientific advisory boards of ActHillion and another biotechnology company, founded in New Haven last year, Phycnautica. The latter company brings his knowledge of mainstream Western pharmacology together with traditional Chinese herbal medicine to develop drugs for improving cancer and stroke treatments. Phycnautica also possesses bioinformatic tools he developed in collaboration with the company’s chief executive officer, Patrick Kung, Ph.D., which will be used for quality control and for discovering pharmacological uses for herbal medicines. “The companies have advantages being in New Haven,” Cheng says. “They have easy access to me for one. They can just walk over or call.

New Haven Mayor John DeStefano credits Yale and the CT for taking a leading role. “As the head of one biotech company said to me, ‘You have to be like a fighter pilot and react quickly in this business or you’ll be killed fast. Yale has been helping me to do just that.’

Recognizing the states strong base in biomedical research, government and industry leaders have also backed investment in Connecticut’s biomedical sector. Connecticut United for Research Excellence Inc. (CURE), a nonmember organization of academic and research institutions, health care organizations and private companies, has long sought to promote the sector as part of a wider effort to coordinate economic resources. Connecticut Governor John Rowland designated CURE to be the state’s “Bioeconomic Cluster” to foster growth in the industry. As part of an ongoing state legislature created a $1 million fund to underwrite the building of new laboratory space. Managed by Connecticut Innovations Inc., the fund has benefited many companies including Yale spin-offs in Science Park and in the former telephone company building at 300 George Street, across the Oak Street Connector from the medical school.

CURE president Debra K. Pacquale says, “This type of coordination and collaboration has never occurred in the state before, and that makes the environment for our efforts all the more fertile.”

Writing the “operating system” for the new medicine

As a student in the School of Medicine’s M.D./Ph.D. Program a decade ago, Gualberto Ruaño, Ph.D. ’92, M.D. ’97, expected to pursue an academic research career. Working with Kenneth K. Kidd, Ph.D., a professor of genetics and psychiatry he discovered and patented a means of coupling the amplification of genetic material with sequencing that has since proved valuable for biotechnology research and clinical medicine. “I got into the applied end of the research spectrum early, and I just went on from there,” he says. As chief executive officer of Genaissance Pharmaceuticals, a New Haven-based biotechnology firm, he licensed that same technology as part of his company’s strategy to develop new means of separating out genetic differences in the benefits and possible dangers people face in taking medications.

Raulo’s goal is to create new medicines that are custom-tailored for individual patients based on their genetic profiles. Like many biotechnology companies, Genaissance is as much an information company as it is a laboratory-based discovery engine. In renovated, former industrial loft space in New Haven’s Science Park, some 50 software developers work alongside 50 more researchers generating health care algorithms that will be used to analyze individual genomes and clinical data to come up with optimal treatment regimens. Raulo hopes to create the “operating system” for health care of the future. He says, “We foresee knowledge of each individual’s unique genome being used to predict disease susceptibility and progression as well as each individual’s response to a drug. Ultimately, our technology may allow physicians and patients to select specific treatments based on a patient’s genome.”

Genaissance combines analysis of genetic variation within diverse groups of people—largely drawn from ethnic and geographic populations—with clinical data plotting individuals’ responses to medications. The technique allows the company to generate increasingly specific databases of genetic markers that will eventually prove useful in the development, marketing and prescribing of drugs. The Genaissance name, he says, “reflects the concept of moving from medieval flatlands in imagery to the increasing awareness of depth, shape, color and individuality that took place in the Renaissance. We’re doing the same in genomics by developing an increasingly multi-dimensional understanding of disease and drug interaction.”

In a sense, Genaissance is a direct outgrowth of Raulo’s time at Yale. Working with Frank H. Ruddie, Ph.D., Sterling Professor of Molecular, Cellular and Developmental Biology, who now heads Genaissance’s scientific advisory board and whose technology the company has also licensed, Raulo launched the company in April 1997. Genaissance has grown rapidly and began selling its stock to the public in August.

“Yale was a magnificent opportunity for me,” Raulo says. “One of the things that makes Yale special is exposure to leaders in different fields. I was able to capitalize on that experience. A lot of people I interacted with at Yale are now members of my company in some capacity.”
As the boundaries separating academia and industry are redrawn at Yale and other universities, questions arise about potential conflicts of interest. When money talks, will faculty focus their research on areas with the greatest possibility for commercial return? Will administrators guide appointments into research areas with the potential for more lucrative licensing? Will professors shirk their teaching duties to focus on outside business?

Underlying the questions is a concern that closer ties to the private sector have the potential to undermine universities’ academic, educational, health care and public-service missions. Yale sometimes takes an equity stake in companies started by the Office of Cooperative Research (OCR), and licensing income—driven in large part by the success of da Vinci, an anti-HIV compound discovered in Yale laboratories—has grown rapidly, totaling more than $46 million for the fiscal year ending last June 30. The money, which goes to support research and other University activities, represents more than 17 percent of Yale’s total research expenditures.

Myron Genel, M.D., a Yale professor of pediatrics and the founding chair of Connecticut United for Research Excellence Inc. (CURE), worries that Yale and other universities risk harming the traditional character of medical schools that make them so intellectually productive. “There is increasing concern that excessive emphasis on the commercial potential of academic research may damage the collegial, traditional nature of academic institutions,” says Genel.

Perhaps more significantly for the longer-term health of today’s financially strapped medical centers, will all of this commercial activity reduce the public’s willingness to support biomedical research? “What’s at stake,” Genel says, “is the public perception of academic institutions. Nationally the academic medical community is vigorously attempting to sustain public support for the missions of medical schools and teaching hospitals. I believe we must both preserve our house in order on high-profile issues such as conflicts of interest by academic investigators, or, for that matter, on the part of our institutions. It is difficult to make the case that academic medicine is for the public good on the one hand if we are perceived as for sale on the other.”

—Yale professor and CURE founder Myron Genel

The University is reviewing its conflict-of-interest policy and procedures with an eye to making them more robust and providing clearer guidance. We want to be sure that the University addresses the full range of issues that can arise.

—Vice President and General Counsel Dorothy Robinson

As a result, the University is now undertaking a review of its current policies on conflicts of interest and commitment and on human subject protection to make sure they are up to date and appropriate. Under the existing rules, all faculty members must file an annual conflict-of-interest form that is reviewed by the provost and a standing committee. Faculty are at Yale to teach and carry out research, and to avoid so-called conflicts of commitment, they are permitted to work only one out of every seven working days for an outside organization. They also cannot undertake clinical trials on behalf of a company in which they hold a significant equity stake—one that could compromise, or appear to compromise, the results of the trial.

While research findings can sometimes be scrutinized for commercial value by sponsors prior to publication—a first look in return for support—all findings remain Yale’s intellectual property to license out as it deems appropriate. Also, Yale will not accept any outside support that limits publication of research findings. “The more close ties we have with industry,” says Sarah Beckwell, Ph.D., professor of therapeutic radiology and director of the Office of Scientific Affairs, “the more potential there is for conflicts of interest. Everything needs to be looked at to make sure that our research is free of the taint of a potential conflict of interest. It not only protects the research, it protects the faculty. One of the most awful things that can happen is to have your research findings accused of being tainted because of bias.”

The topic, a hot one at nearly every university in the United States, was the subject of a National Institutes of Health conference in August, with discussion focused on the ethical questions inherent in closer ties between academia and the private sector. At Yale, according to Vice President and General Counsel Dorothy K. Robinson, “the University is reviewing its conflict-of-interest policy and procedures with an eye to making them more robust and providing clearer guidance. We want to be sure that the University addresses the full range of issues that can arise.”

Still, most agree that the new push into biotechnology development in New Haven need not undermine the core missions of the University. “We feel very comfortable,” says Bruce D. Alexander, vice president and director of New Haven and state affairs, “that we can reconcile the traditional values of the University with respect to objective scientific research and the commercial application of that research to foster new companies that will improve the quality of people’s lives and cure human diseases.”

OCR Director Jonathan Soderstrom, Ph.D., finds that Yale faculty are not overly concerned with pursuing the commercial value of their work. From the OCR’s perspective, the danger is that, if a new finding does not have patent protection prior to publication, no outside commercial entity will develop it because they will not be able to prevent competitors from copying the idea or product. “It’s not unusual for us to learn about something on Friday that’s set to be published on Monday,” he says. “We’re always in a race with the faculty because they’re not going to wait for us. They are more worried about publishing and tenure. The race here is to get the next cover of Nature and win Nobel prizes. If their desire was to get rich, they wouldn’t have come to a university like Yale. I don’t see that culture changing, and that’s a good thing.”

Sitting in his cramped pharmacology department office, every inch of his desk covered with papers, Henry Brem, Professor Yong-Chi Chu, Ph.D., does not look like a captain of one of the world’s fastest-growing, most-high-tech industries. “The financial aspect is not a driving force,” he says. “My belief is that some of those medicines will turn out to be very useful for health needs which cannot be fulfilled by current approaches. That’s my incentive for this.”

“Finding the line
Closer ties to industry raise questions about conflicts.

We feel very comfortable that we can reconcile the traditional values of the University with respect to objective scientific research and the commercial application of that research to foster new companies that will improve the quality of people’s lives and cure human diseases.”

“We feel very comfortable,” says Bruce D. Alexander, vice president and director of New Haven and state affairs, “that we can reconcile the traditional values of the University with respect to objective scientific research and the commercial application of that research to foster new companies that would improve the quality of people’s lives and cure human diseases.”

Conflict-of-interest policy

The following principles are among those that underlie the University’s policy on conflicts of interest:

• External activities should not compromise an individual’s ability to perform all the activities expected of him or her as a Yale employee.

• An individual should not receive remuneration for the conduct of his or her research or clinical activity at Yale or on other Yale activity on which he or she has an appointment in an University-related activity (such as salary).

• An individual should not conduct research or clinical activity at Yale or carry on any other Yale business under circumstances in which a reasonable person would consider that the Yale activity was distorted by the desire for or expectation of direct or indirect financial advantage.

• Yale researchers, including students and postdoctoral appointees, must not be precluded from publishing their work by agreements with external sponsors or on account of the interests of an external organization in which a faculty member or supervisor has an economic interest.

• Graduate students must not be held to non-disclosure of any aspect of their work in their meetings with individuals who are seeking to hire them as employees (e.g., dissertation advisory committees).

• Yale research facilities and research personnel should be advised of the conflict of interest research and educational purposes, except when other uses are specifically authorized by the University.

• An individual should not participate directly in the negotiation of research agreements, license agreements, equipment purchases or other arrangements between the University and an organization to which the individual has a significant economic interest.

The policy can be reviewed in its entirety at http://www.info.med.yale.edu/newresearch/conflict.html
The year 2000 brought the working-draft version of the human genome and new hopes for medicine and the understanding of human biology. Genetics Chair Richard Lifton talks about what that means for research, both at Yale and around the world.

Left: Fragments of fluorescently labeled DNA light up a sequencing gel. The colors correspond to the four bases of deoxyribonucleic acid: green for adenine, yellow for thymine, blue for guanine and red for cytosine.
“We have caught the first glimpses of our instruction book, previously known only to God,” said Collins, who received his physical chemistry from Yale in 1974 and trained as a fellow in genetics and pediatrics in the laboratories of Sherman M. Weissman, M.D., and Bernard G. Forst, M.D., in the early 1980s. Among those called on to interpret the sequence was Richard P. Lifton, M.D., Ph.D., chair of the Department of Genetics at the School of Medicine and a Howard Hughes Medical Institute investigator. (Lifton is also a member of the National Advisory Council to the National Human Genome Research Institute and of the Human Genome Sequencing Project.) “It’s an awesome accomplishment,” he told Jim Lehrer on the PBS program the day of the announcement. “And there will be a profound impact on human biology and medicine for the next century. Who are we, where are we going, and why are we so different from other organisms?”

What exactly do the sequence data tell us? There are a finite number of genes—probably 30,000 to 40,000, maybe as many as 100,000. So the inherited contribution to disease has to reside in the DNA sequences of those genes or the nearby components that regulate the expression of those genes. And so from this very open-ended problem to a bounded one, where we know all the genes and, in short order, will know all the common variations in the genes. It really becomes a matter of determining which variants in which genes contribute to the development of different human diseases.

In many ways, it’s analogous to how chemistry was before and after the development of the periodic table of elements. Imagine if you were the chemist trying to figure out the composition of a compound before you knew what all of the elements were. Now that we have the human genome sequence, it’s a matter of figuring out which genes are involved in which particular diseases.

What’s the next step for the gene mappers? The draft version of the human genome sequence permits us to begin to identify, from the 3 billion base pairs of the human genome, all of the genes encoded in that genome. We can estimate that perhaps half of all human genes are undiscovered and will be identified by combining this raw sequence with other databases.

That will be one important step. In parallel, we will begin identifying all of the common variations that occur in these genes in human populations. Another process will be to go from the draft version of the human genome, which is 97 percent complete, to the full version of which we anticipate will come by the year 2003. Ambiguities as to the order of particular sequences within the chromosomes will then be resolved. We’ll have the whole sequence.

What we have now has been compared to a book with all the pages in order but the letters on each page scrambled. Is that unscrambling what will take place over the next few years? Yes, in some cases we have pages that are complete. In other cases there are words and letters that need to be arranged properly. However, the information that we have today is a tremendous advance for the investigation of the inherited causes of disease. Having the genome sequence provides a new tool to genetic research all over the world.

Human Genome Project Director Francis Collins and his private-sector counterpart, Craig Venter, announced in June that the sequence of the entire human genome had been deciphered, at least in working-draft form. What significance does this have for medicine? This really is a monumental achievement. The significance of it is that we can begin to see the outlines of a new future for medicine. We recognize that virtually every human disease—from cancer to heart disease, to asthma, to neuropsychiatric and other disorders—has significant inherited contributions. However, the road to identifying which components have been a narrow and twisting one. We haven’t known how many genes there are in the genome, what each gene itself is, where they are on chromosomes.

Having the human genome sequence really changes the way one thinks. We are no longer walking blindfolded through the forest not knowing how many trees there are, where they are, or when we’re going to stumble. We now have a precise map of where we’re going.

The Howard Hughes Medical Institute (HHMI) has awarded the School of Medicine $54 million over the next four years to establish the Center for Genomics in Medicine at Yale, which will support the recruitment of new faculty and provide core infrastructure to investigators throughout the school. “The goal of the center is to apply the tools coming out of the Human Genome Project and human genetic analysis to the understanding of human disease,” said Richard P. Lifton, M.D., Ph.D., the principal investigator of the grant and the center’s director. “One of its promises is that there will be a new cadre of physician-scientists who are adept at performing these types of genetic analyses and have expertise in clinical medicine.”

Yale is among 41 institutions receiving a total of $124 million over the next four years as part of HHMI’s new competition for Institutional Grants to Medical Schools. Ranging from $5.6 million to $4 million, the grants will help the schools find new ways to combine basic biomedical research and clinical treatment of patients, according to HHMI. They will also support programs in the rapidly developing field of bioinformatics. Yale was one of three institutions to receive the maximum $4 million award.

The funding has helped Yale recruit two new faculty members—information scientist Kevin White, Ph.D., and Valeria Bielek, Ph.D., both from Stanford, who are leaders in the application of microarray technology. Microarrays are chips that are adept at performing these types of genetic analyses and have expertise in clinical medicine.”

The support from HHMI will also enable the expansion of Yale’s existing research facilities. The Center for Biotechnology Resource Centers, one of the premier biotechnology resources in the country, provides core infrastructure for activities such as DNA sequencing and related analyses. With the HHMI support, the center has become one of the first core facilities nationally to implement capillary DNA sequencing, a technology used in the Human Genome Project. In addition, funds have been used to establish a core microarray facility that will make this new technology broadly available at Yale.

The support from HHMI will also enable the expansion of Yale’s existing research facilities. The Center for Biotechnology Resource Centers, one of the premier biotechnology resources in the country, provides core infrastructure for activities such as DNA sequencing and related analyses. With the HHMI support, the center has become one of the first core facilities nationally to implement capillary DNA sequencing, a technology used in the Human Genome Project. In addition, funds have been used to establish a core microarray facility that will make this new technology broadly available at Yale.

The support from HHMI will also enable the expansion of Yale’s existing research facilities. The Center for Biotechnology Resource Centers, one of the premier biotechnology resources in the country, provides core infrastructure for activities such as DNA sequencing and related analyses. With the HHMI support, the center has become one of the first core facilities nationally to implement capillary DNA sequencing, a technology used in the Human Genome Project. In addition, funds have been used to establish a core microarray facility that will make this new technology broadly available at Yale.

The support from HHMI will also enable the expansion of Yale’s existing research facilities. The Center for Biotechnology Resource Centers, one of the premier biotechnology resources in the country, provides core infrastructure for activities such as DNA sequencing and related analyses. With the HHMI support, the center has become one of the first core facilities nationally to implement capillary DNA sequencing, a technology used in the Human Genome Project. In addition, funds have been used to establish a core microarray facility that will make this new technology broadly available at Yale.
What’s an example of that? Say I’m a basic scientist, how are my prospects as an investigator different than they were perhaps a year ago?

I think there are at least three areas that will be strongly influenced by this. The first of these is genetic investigation. For the last decade, investigators have been mapping the chromosomal locations of disease genes by comparing the inheritance of chromosome segments to the inheritance of diseases in families. And many of these projects have located genes on chromosomes but have not yet been able to identify the gene in which mutations cause the disease. If you are able to refine the location of the disease gene to a big chromosome segment, then you can identify all of the genes in that interval and then test which of them have mutations that cause the disease of interest. Having the genome sequence provides a tremendous bypass to that part of the project. Now you know all of the genes that lie within this 10-megabase-pair interval. Rather than putting an army of postdocs on the project to go through the heavy lifting of identifying all of the genes of that interval, you have somebody sit down at a computer terminal and parse through the sequence to identify all of the genes in that DNA sequence. All over the world, this is providing tremendous acceleration for human genetic studies. Projects that have lain dormant for a period of years are suddenly going to be brought to completion.

A second area will be the identification of new targets for therapeutic use. For example, many drugs now in clinical use target G-protein-coupled receptors, which sit at the cell surface and are activated by proteins or small molecules; nuclear hormone receptors, which sit inside the cell and regulate transcription of genes; or ion channels and transporters that mediate passage of electrolytes in and out of tissues. Well, we’ve known about a number of these receptors, but it has been recognized that there are many more in the human genome that are ripe for discovery. Because these different types of targets share common elements, it will be relatively simple to identify all of the members of these gene families and to think about which of these might be targets for novel therapies. This is a first step, but it’s important.

A third area in which the genome data will be enormously helpful is in identifying biochemical pathways that are altered in human disease states. We will have the ability to monitor the expression of every gene in a cell and to ask how that pattern of gene expression is altered in response to disease—or in response to a particular intervention. Up to now, most scientists have been able to deal with only one or a few genes at a time, having to make good guesses as to which pathways might be involved in disease processes. Now we can ask that question on a much larger and more comprehensive scale.

The genome project has received enormous attention, it has affected financial markets, and it seems to be affecting the way the public sees disease and health. Are great breakthroughs in medicine just around the corner? In medicine we’ve done our best therapeutically when we have understood in great detail the underlying pathogenesis of disease. So I am optimistic that this greater understanding of human disease will ultimately translate into improved therapies. The timing and the pathway to achieving new treatments, however, are much harder to predict. In some cases we may readily identify new targets that are amenable to development of small molecule agonists or antagonists. In other cases we may find new proteins that can very quickly lead to the development of new therapies. An example of that would be some of the growth factors for the hematopoietic lineage that are already in clinical use. That said, it will not always be the case that understanding the biology of a disease can be translated quickly into a treatment. A good example would be sickle cell anemia, where we’ve understood the molecular basis of the disease since 1955 but have yet to have a cure for the large majority of affected patients. Similarly, the bacterium causing tuberculosis was identified over a century ago, but it took 50 years to develop a cure for this disease. One has to recognize that the road from understanding the causation of disease to having effective treatment will be quite varied. In some cases there may be rapid successes, but in others it may be a very long process and we should be prepared for that and not falsely raise the expectations of the public.

In pursuing the goal of translating basic science knowledge into clinical interventions, what strategies seem to have the most potential? The obvious key to this enterprise is increased collaboration between basic scientists and clinicians. The opportunities here are really unprecedented. When I started as a graduate student in 1975, it was very hard to think about productive projects that one could do at the interface between molecular genetics and human disease. Today, this has completely changed. There is tremendous opportunity in almost every disease area. If, 35 years ago, you were interested in diabetes, productive avenues might have included trying to identify genes that are expressed in the pancreas or in fat cells, with the hope that these might be involved in some way in the pathogenesis of diabetes—a relatively indirect approach. Now we can take the clinical problems that we’re interested in, study the disease directly with genetic approaches complemented by a monitoring of gene expression, and expect that we’re actually going to learn something fundamental about the disease pathogenesis. This is qualitatively different than what we could do a generation ago. What is needed to make that work is expertise on both the clinical side and the basic science side and bridges between them.

There certainly has never been a time in the history of medicine in which there has been a more rapid unraveling of the pathogenesis of human disease. And this is just an extraordinarily exciting time to be interested in human disease biology.

“We are no longer walking blindfolded through the forest. We now have a precise map of where we’re going.”

—Geneticist Richard Lifton
Vanderbilt professor is named physiology chair

Steven C. Hebert, m.d., one of the world’s leading authorities on the kidney’s regulation of potassium and other salts, has joined the School of Medicine as professor and chair of the Department of Molecular and Cellular Physiology.

Hebert arrived at Yale on July 1 from Vanderbilt University Medical School, where he had been the Ann and Rebecca Robinson Professor of Medicine and professor of cell biology, pharmacology, molecular physiology and biophysics. His appointment complements current strengths at Yale in several important areas of renal physiology as well as a long tradition of innovation in the field dating to the work of John Pannett Peters, m.d., here in the 1920s, ’30s and ’40s.

A long-time collaborator of his Yale departmental colleagues Gerhard H. Giebisch, m.d., and Walter F. Boron, m.d., ph.d., whom he is succeeding as chair, Hebert received his medical degree in 1970 from the University of Florida and trained as a resident and fellow at the University of Alabama in Birmingham. He taught in Alabama, Virginia and Texas before joining the Harvard Medical School faculty in 1974 as an assistant professor of medicine (physiology). Hebert was a tenured professor at Harvard and director of the Laboratory of Molecular Physiology and Biophysics, Renal Division, at Brigham and Women’s Hospital when he moved to Vanderbilt in 1997. His research has focused in part on the mechanisms and regulation of potassium, sodium and chloride transport by cells. He and colleagues cloned two of the major genes involved in potassium transport by the kidney, a potassium channel known as ROMK and the Na-K-Cl transporter. A mutation in either gene results in improper salt handling by the kidney and is a factor in end-stage renal disease and related disorders.

Hebert’s other major research focus is on the roles of extracellular calcium as a “first messenger” regulating cell function. Working with Harvard colleague Edward M. Brown, m.d., he identified and cloned a protein-coupled receptor that senses extracellular calcium ions and provides the mechanism for extracellular calcium-mediated regulation of the function of parathyroid gland and of epithelial cells in the kidney and colon.

Hebert received the Carl W. Gottschalk Award from the American Physiological Society in 1995 and the Homer W. Smith Award from the American Society of Nephrology and New York Heart Association in 1997. He is also a founder and board member of two biotechnology companies, Aquabio Products Sciences and Luna Pearls, both of Portland, Maine. His wife, Patricia R. Hebert, ph.d., is an associate research scientist in the Department of Internal Medicine.

The physiology department has 17 primary faculty members, 17 more with secondary appointments, 43 postdoctoral fellows and 34 graduate students. Hebert said he will be recruiting five new faculty members during the next five years, “bringing in people who have a focus in new and emerging areas of science such as the structure and function of proteins, the field of proteomics, and both physical and functional genomics.”

Hebert said he has always had “one foot in clinical programs and the other in the basic sciences” and has the ability to interface between the two. “Particularly important in the post-genomic era is the translation of information obtained in basic sciences to clinical medicine,” he said. “I’m very pleased to have the opportunity to do this, to increase the size of the faculty and shape the department over the next few years.”

Donald Cohen named Sterling Professor of Child Psychiatry

Donald J. Cohen, m.d., who specializes in neuropsychiatric disorders of children, including autism, Tourette’s syndrome and attention disorders, recently achieved one of Yale’s highest distinctions when he was named Sterling Professor of Child Psychiatry.

A child psychiatrist and psychoanalyst, he joined the Yale School of Medicine faculty in 1973 and has directed the Yale Child Study Center since 1983.

Cohen’s clinical and research interests also focus on the interaction between biological and experimental factors in the emergence and treatment of psychiatric disorders, the early roots of personality development, the impact of psychosocial disadvantage on children, national policy for children and adolescents and the impact of acute and persistent stress on children’s development.

He is co-author or co-editor of a dozen books, including “Handbook of Autism and Pervasive Developmental Disorders,” “The Many Meanings of Play in Child Psychoanalysis,” “Understanding Other Minds: Perspectives from Autism and Tourette’s Syndrome and Associated Disorders.” He has written more than 300 articles on neuropsychiatric childhood disorders.

Mary Tinetti, noted for work on health issues of the elderly, assumes Crofoot Chair

Mary E. Tinetti, m.d., the new Gladys Phillips Crofoot Professor of Medicine, has devoted her career to the health of the elderly and has a special interest in interventions that can help prevent older people from falling.

Tinetti is chief of geriatrics at the School of Medicine and director of the Program on Aging and the Claude D. Pepper Older Americans Independence Center. Her studies show that, for many older people, injuries from falls often result in a loss of both mobility and independence and can be the beginning of a series of health problems that eventually lead to death.

Tinetti has earned national prominence for her work on fall-reduction strategies and her studies showing that physical exercise that improves balance and builds lower-body strength, such as dancing and tai chi, has a major impact on reducing falls.

In recent research with Yale colleagues, Tinetti found that the problem of dizziness in elderly people is more often a result of multiple problems—described as a “geriatric syndrome”—than a symptom of a particular illness.

Tinetti has written or co-authored nearly a hundred articles on health issues affecting the elderly, including alcohol consumption, home vs. hospital care for chronic illness, the care of persons with dementia, and older drivers at risk.

University President Richard C. Levin, Ph.D., has named six members of the medical school faculty to endowed professorships. The appointments were recommended by Dean David A. Kessler, M.D., and Carolyn W. Slayman, Ph.d., deputy dean for academic and scientific affairs, who reviewed nominations from department chairs. The candidates were nominated for their excellence in scholarship and teaching.
Pharmacology expert John Krystal is designated Kent Professor. John H. Krystal, M.D., the newly appointed Albert E. Kent Professor of Psychiatry, is an expert on the psychopharmacology and neurobiology of schizophrenia, traumatic stress and alcoholism and substance abuse. His most recent research focuses on the neurobiology of schizophrenia and alcoholism, and he has developed several new investigative paradigms to probe possible neurobiologic abnormalities in schizophrenia. He also established clinical research programs using magnetic resonance imaging and magnetic resonance spectroscopy in order to study the brains of healthy individuals vs. those with psychiatric illnesses. Krystal is deputy chair for research in the School of Medicine's Department of Psychiatry and is deputy director for clinical research in the Abramson Research Faculty at the Connecticut Mental Health Center. He is author or co-author of more than 100 articles on a wide range of subjects, including post-traumatic stress disorder, the body's responses to certain antipsychotic drugs, effects of sleep deprivation on depressed individuals and chronic alcohol use. He has also written numerous book chapters and reviews.

Asthma specialist Jack Elias named a Waldemar Von Zedtwitz Professor of Medicine. Jack A. Elias, M.D., newly named as Waldemar Von Zedtwitz Professor of Medicine, is a noted specialist in asthma and lung diseases and lung injury. One focus of his research is the pathogenesis of asthma, and he has been actively involved in and has defended several new investigational paradigms to probe possible neurobiologic abnormalities in asthma. He has also established clinical research programs using magnetic resonance imaging and magnetic resonance spectroscopy in order to study the brains of healthy individuals vs. those with psychiatric illnesses.

Keith Joiner, expert on infectious disease, also appointed a Von Zedtwitz Professor. Keith A. Joiner, M.D., newly appointed as Waldemar Von Zedtwitz Professor of Medicine, is an expert on infectious diseases whose research has focused on malaria, which kills some two million people each year, and toxoplasmosis, a parasitic infection commonly seen in people with AIDS. A member of the Yale faculty since 1987, he is chief of the Section of Infectious Diseases and director of the School of Medicine's Investigative Medicine Program. He holds joint appointments in the departments of epidemiology and public health and of cell biology.

Joiner has co-authored nearly 200 articles in scientific research publications and lectures widely in the United States, Canada, Europe and Australia on topics ranging from sepsis shock to tropical diseases to bacterial and viral infections. He holds two patents, one as the co-inventor of a method for treating gram-positive septicemia, and the other for a quantitative assay for human terminal complement component C3.

The Program for Humanities in Medicine Lectures, free and open to the public, begin at 5 p.m. in the Beaumont Room, 333 Cedar Street. For more information, call Clara Gyorgyey at (203) 785-4745 or 785-6102. For additional information and current details, please call Clara at (203) 785-4745 or 785-6102. Remaining lectures in the series:

- February 1 Words Over War: Prevention of Deadly Conflict
  Melanie Greenberg, J.D.
  Attorney/Author
  Washington, D.C.

- February 15 Marcus Welby, A.P.R.N.: Paradigm Shifts in Today’s Healthcare
  Linda H. Pellico, A.P.R.N.
  Director of Graduate Program
  Yale School of Nursing

- March 1 Doctors and Patients in Visual Relation
  Ann Starr, M.A.
  Artist, Wellesley, Mass.

- March 22 Patient and Doctor: A Relationship of Healing
  Eric Cassell, M.D.
  Clinical Professor of Public Health
  Weill Medical College, Cornell University, New York, N.Y.

- March 29 Myth, Medicine and the Human Body
  Sherwin B. Nuland, M.D.
  Clinical Professor of Surgery
  Yale School of Medicine

- April 26 The Doctor as an Internationalist
  Michael H. Merson, M.D.
  Dean of Public Health
  Yale School of Medicine

- April 26 A Legacy of Medicine in Art: the Clements C. Fry Collection at Yale
  Susan Wheeler, Consultant
  The C. Fry Collection, Cushing/Whitney Medical Library, Yale School of Medicine

- April 27 Evolution of Infectious Disease
  53rd Annual Keynote Address
  The Associates of the Cushing/Whitney Medical Library
  Joshua Lederberg, Ph.D.
  Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- April 27 Spiritual Life of Patients
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Associate Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Spirit of Patients
  Healer of Broken Hearts: Ruminations of a Cardiologist
  February 22
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Associate Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  May 10
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.

- May 10 Assistant Professor of Internal Medicine, Assistant Dean of Multicultural Affairs
  Healing the Soul of the Community
  When Cocaine and Heroin Were New: America’s First Response
  David F. Musto, M.D.
  Professor of History of Medicine and Psychiatry
  Professor of Child Psychiatry
  Yale School of Medicine

- May 10 Nobel Laureate
  Emeritus President
  Rockefeller University
  New York, N.Y.
Yale physicians have taken on leadership roles in the American Diabetes Association, the nation’s leading voluntary health organization supporting diabetes research, education and advocacy. In July Robert S. Shenwin, M.D., the C.N.H. Long Professor of Medicine, assumed the presidency of the National Board of Directors. William V. Tamborlane Jr., M.D., professor of pediatrics, and alumnus Donald Ross Coutant, M.D., ’68, ’69, Chace/ Joukowsky Professor and Chair of Obstetrics and Gynecology at Brown University School of Medicine, were elected to the board at its 66th annual meeting and scientific sessions, held in San Antonio.

Three senior faculty members who came to Yale School of Medicine in the 1960s attained emeritus status this year: Truett Allison, Ph.D., ’62, professor of neurology and neurobiology; Ernst I. Kohorn, M.D., F.A.C.S., F.C.C.O.G., professor of obstetrics and gynecology, and Peter Lengyel, Ph.D., professor of molecular biophysics and biochemistry and senior research scientist. Allison, an expert on visual neurophysiology and cognitive neuroscience, has conducted research in the localization of function in the human brain, the neurophysiology of the human and monkey somatosensory system, the evolution of sleep, the location and functional characteristics of the human cortex within the mesial wall, and visual object recognition. Allison joined the faculty in 1967 and has held concurrent appointments at the VA Connecticut Health Care System in West Haven since 1969. He became a full professor in 1980.

Kohorn, a pioneer in the use of obstetric ultrasound and in gynecologic oncology, first came to Yale as an instructor in 1967. After a year in England, where he developed the first ultrasound unit for obstetrics and gynecology in London, he returned to New Haven to set up the first obstetric ultrasound unit in New England. In 1970 Kohorn established what is now the Yale Center for Trophoblastic disease and was also one of the first gynecologists to use chemotherapy in the management of ovarian cancer. He has been president of the New England Association of Gynecologic Oncologists, the American Urogynecologic Society and the Society of Gynecologic Surgeons.

Lengyel has studied the control of protein synthesis with a focus on the genetics and biochemistry of the action of interferons, the secreted proteins of vertebrates that have antiviral, cell growth regulatory and immunomodulatory activities. Lengyel joined the faculty in 1965 as an associate professor and was appointed full professor in 1969. He also served as director of graduate studies of molecular biophysics and acting director of the division of biological sciences.

Mark R. Cullen, M.D., ’76, ’80, professor of medicine in occupational medicine and of public health, was selected by the Semiconductor Industry Association in October to be a member of an independent Science Advisory Committee. Members provide an independent perspective on possible cancer risks within the U.S. semiconductor manufacturing industry. Cullen is also a member of the Institute of Medicine of the National Academy of Sciences.

The American College of Cardiology presented an award for humanitarian accomplishments to Nelson R. Mandela of South Africa at ceremonies held in Puerto Rico in May. John A. Efferterades, M.D., ’76, ’83, professor and chief of cardiothoracic surgery, was one of two American surgeons invited to speak at the event. Efferterades’ addresses were “Yale Perspectives on the Thoracic Aorta” and “Conventional Cardiac Procedures as an Alternative to Transplantation in Patients with Left Ventricular Failure.”

Arthur C. Evans, Ph.D., assistant clinical professor of psychiatry, has been named deputy commissioner of the Connecticut Department of Mental Health and Addiction Services. Governor John G. Rowland announced the appointment in June. Evans served as director of managed care for the department for the past two and one-half years.

Durland Fish, Ph.D., associate professor of epidemiology in microbiological diseases, has been named editor of *Victor B. Chan, and Zoonotic Diseases, a new peer-reviewed medical journal focusing solely on diseases transmitted to humans by insects or animals. The journal will be published both in print and online.

Gary E. Friedlaender, M.D., ’76, ’74, the Wayne O. Southwick Professor and chair of orthopaedics and rehabilitation, became chair-elect of the American Academy of Orthopaedic Surgeons (AAOS) Council of Musculoskeletal Specialty Societies at its 67th annual meeting in Orlando in March. Friedlaender is chair of the Research Committee and Kappa Delta Research Award Committee for the AAOS. He is also a member of the Council on Education, the Council on Research, the Bone and Joint Disease Committee and the Task Force on Patient-Physician Communication.

Charles A. Greer, Ph.D., professor of neurosurgery and neurobiology and co-director of the Interdepartmental Neurosciences Program, was appointed chair of the National Institutes of Health Center for Scientific Review’s Integrative, Functional and Cognitive Neuroscience Study Section. His two-year term began in July.

Theodore P. Holyoak, M.D., ’59, professor of molecular biophysics and biochemistry, was selected as a 2000 Pew Scholar in the Biomedical Sciences by the Pew Charitable Trusts. She received the award for her research relating to ion channel structure and function and the relay of electrical signals through the membrane of the nervous system.

Jeanette R. Ickovics, Ph.D., associate professor of epidemiology in chronic disease, and of psychology, received the American Psychological Association’s Award for Distinguished Contribution to Psychology in the Public Interest. Her research focuses on women and HIV/AIDS, particularly the acceleration of the disease among women.

Lise R. Heginbotham, Ph.D., professor of molecular biophysics and biochemistry, was selected as a 2000 Pew Scholar in the Biomedical Sciences by the Pew Charitable Trusts. She received the award for her research relating to ion channel structure and function and the relay of electrical signals through the membrane of the nervous system.

Lowell S. Levin, M.D., ’60, professor emeritus and lecturer in public health, has been serving as a senior consultant to the World Health Organization’s new training and policy center in Venice, Italy. Levin developed the center’s initial operational plan and will remain an advisor during its implementation.

Gary E. Friedlaender, M.D., ’76, ’74, the Wayne O. Southwick Professor and chair of orthopaedics and rehabilitation, became chair-elect of the American Academy of Orthopaedic Surgeons (AAOS) Council of Musculoskeletal Specialty Societies at its 67th annual meeting in Orlando in March. Friedlaender is chair of the Research Committee and Kappa Delta Research Award Committee for the AAOS. He is also a member of the Council on Education, the Council on Research, the Bone and Joint Disease Committee and the Task Force on Patient-Physician Communication.
Endowed chair to honor cardiothoracic pioneer

William Glenn and his wife, Amory, attended a reception in his honor in the Historical Library.

The following books by alumni and faculty have recently been published:

Don’t Snore Anymore: Your Complete Guide to a Quiet Night’s Sleep, by Jeffrey N. Hausfield, M.D. ’78, HS ’82, Three Rivers Press (NY), 1999. Snoring is more than just a nuisance; it also leads to sleep loss and fatigue and can be a symptom of a more serious respiratory problem. Detailed medical information for diagnosing and treating snoring-related illness can be found in this consumer reference.

Attention-Deficit Disorders and Comorbidities in Children, Adolescents, and Adults, edited by Thomas E. Brown, Ph.D., assistant clinical professor of psychiatry and associate director of the Yale Clinic for Attention and Related Disorders, American Psychiatric Press, Inc. (Washington, D.C.), 2000. In this book for professionals, 24 internationally recognized researchers summarize what is currently known about treatment of ADHD with various high-comorbidity disorders. The book offers research-based guidelines for assessment and treatment of these complicated cases.

Attention-Deficit Disorders and Comorbidities in Children, Adolescents, and Adults, edited by Thomas E. Brown, Ph.D., assistant clinical professor of psychiatry and associate director of the Yale Clinic for Attention and Related Disorders, American Psychiatric Press, Inc. (Washington, D.C.), 2000. In this book for professionals, 24 internationally recognized researchers summarize what is currently known about treatment of ADHD with various high-comorbidity disorders. The book offers research-based guidelines for assessment and treatment of these complicated cases.

Attention-Deficit Disorders and Comorbidities in Children, Adolescents, and Adults, edited by Thomas E. Brown, Ph.D., assistant clinical professor of psychiatry and associate director of the Yale Clinic for Attention and Related Disorders, American Psychiatric Press, Inc. (Washington, D.C.), 2000. In this book for professionals, 24 internationally recognized researchers summarize what is currently known about treatment of ADHD with various high-comorbidity disorders. The book offers research-based guidelines for assessment and treatment of these complicated cases.
A new year, 106 new careers
Eclectic view of medicine unites first-year class.

When Dagan Coppock came to the School of Medicine as an applicant, he knew he would like it here. His interviewers seemed interested not just in his GPA or what science courses he had taken, but in the poetry he enjoys writing. “I knew they were going to be supportive of other interests,” said Coppock, who took time off after his graduation from the University of Tennessee to study traditional healing in Nigeria.

Encouragement of other activities, the independence offered by the Yale System and the collegiate atmosphere were among the reasons first-year students gave for deciding to study medicine at Yale. “I can concentrate on whatever I want,” said Aaron Berger, a graduate of the University of Pennsylvania from Lexington, Ky. “Laboratory research, volunteer work, you can go ahead and do it.” The school’s strong commitment to basic science research was another draw, he said.

Richard A. Silverman, director of admissions, noted that applications, available electronically through the American Medical College Application Service last year for the first time, were up 43 percent at a time when fewer students nationally are applying to medical school. The increase, Silverman said, was higher than the admissions office had projected. He attributed the increase in part to the new application system and in part to the attraction of Yale.

Because of the increased applicant pool, the rate of acceptances dropped from about 8 percent to 6 percent. “That’s a big difference,” he said, “for a school that’s already selective. I think the change is reflected in the quality of the class in ways that would be very hard to quantify. “It’s not enough to be smart, to be well-grounded in the sciences, to be a good classroom student,” Silverman said. “When we look at applicants, we look for qualities in them that are going to make them good doctors, not just good students.” Among those qualities, he said, are interests and experiences outside medicine.

The 106 members of the Class of 2004 include a former ski instructor, a figure skater, a ballroom dancer with a black belt in karate, and a researcher who spent two years studying RNA at the University of California at San Francisco. Kavita Mariwalla, a 1998 Yale College graduate, decided to leave her job as a Manhattan investment banker for something more fulfilling than enriching other people’s portfolios. “In medicine,” she said, “you can say you did something to help others.”

Coeurildi Louis worked her way through Wellesley as a registered nurse before coming to Yale. Since her childhood in Haiti, she knew medicine would be her calling. She said the moment she saw a White Coat Ceremony was “like when you see your dad in a white coat.”

The promise of the white coat
The first year began, as it has for several years, in a tent on Harkness Lawn where faculty helped the students don the white coats that symbolize their promise as physicians. “What is it about this simple white coat that provides the lifeline between the patient and the physician?” asked Herbert S. Chase Jr., M.D., in his first address as deputy dean for education. “We are promising to our patients that we will be caring, that we will be kind, that we will comfort them, that we will respect their culture, that we will be completely committed to them and responsible for them.”

“When you wear that white coat,” said Dean David A. Kessler, M.D., “people will allow you into their lives. They will tell you things about their lives they will tell no one else. You are going to have to grow into that white coat.”
Under the tutelage of clinical professor Paul Goldstein, second-year students learned how to conduct a pediatric ear exam.

Public health program welcomes 114 master’s students

The entering class at the School of Public Health includes an unusually high number of women, who make up 76 percent of the 114 new master’s students. Usually, says Anne Pistell, associate dean for student affairs, “I don’t attach it to a patient,” said Nancy R. Angoff, M.D., M.H.S., associate dean for student affairs, and Giussa Weissbach-Licht, director of the Office of Education. “You’re going to feel unprepared no matter what,” said Angoff. “We came up with this idea to try to relieve the anxiety of starting on the wards by introducing students to some simple, hands-on skills they didn’t get in great detail before.”

“Why are we talking about the doctor-patient relationship on the first day of school?” asked Nancy R. Angoff, M.D., M.H.S., associate dean for student affairs. “Now is as good a time as ever to start thinking about these relationships, before acquiring any of the notions of how to behave that you are likely to pick up over the next four years.”

At the School of Public Health, incoming students were greeted with gifts of T-shirts from the upper classes.

Graduates of the Physician Associate Program gathered in the courtyard outside Harkness Auditorium before Commencement exercises in early September.

PA Program graduates 35

“You are entering a profession at a time when health care delivery is not as simple as it once was,” speaker William C. Kohlpepp, M.H.A., P.A.C., told the 35 graduates of the Physician Associate Program Class of 2000 at Commencement on Sept. 17. “Managed care and other emerging trends mean we will have new rules, new obligations and new ways of doing business,” added Kohlpepp, chair of the board of the American Academy of Physician Assistants. Physician associates, as they are known at Yale, have proven successful, as has the model that trains them with physicians, he said. “We must remain flexible. We must remain committed to remembering that the patient is our number-one priority,” Kohlpepp said.

New council officers, a new agenda

The new officers of the Medical Student Council hope to address a variety of issues over the next academic year including producing a companion volume to the student guide known as The Kit. Treasurer Jennifer Itzelbaum, president Simran Singh and vice president Satish Nagula also plan to encourage greater faculty use of technology, explore a lowering of the age of financial independence, ask the library to extend hours at busy times and begin a mentoring program that would pair fifth-year students with first-years.

On the first day, an appreciation of other cultures

The first day of class began in Room 110 of the Hope Building with an unusual exercise. On colored slips of paper, students used a word or two to describe themselves in each of five categories. On pink slips they wrote their religion. Ethnicity went on violet paper. Green was for sexual orientation. Orange was for race and bright pink was reserved for socioeconomic class.

The papers were collected, sorted by color, then taped to the walls of the auditorium. Some answers were to the point—“middle class,” “heterosexual,” “Latino.” Others displayed some humor—“boy crazy,” “broke,” “tags to riches,” “part-time Sikh” and “Roman Catholic, at least my mother is.”

The point of the exercise was to highlight the class’s diversity and stimulate a discussion of culture and tolerance. A few moments later, the class divided into groups of seven or eight students to discuss the doctor-patient relationship as described in The Spirit Catches You and You Fall Down, by Anne Fadiman. Fadiman spent eight years documenting a tragic clash of cultures between a Hmong family from Southeast Asia and their doctors in California. While doctors looked to science to treat their infant daughter’s epilepsy, the Lee family sought answers in spirituality.

“In years past, third-year medical students entered the wards armed only with whatever clinical exposure they’d gleaned in their basic science years and at a daylong orientation consisting largely of PowerPoint presentations,” says Angoff. “Now students sometimes left students ill equipped for their first days of clinical studies. ‘I remember someone saying ‘Go get the x-ray machine,’ and not knowing what the x-ray looked like,’ let alone how to attach it to a patient,” said Nancy R. Angoff, M.D., M.H.S., associate dean for student affairs.

To help students through the transition from basic to clinical science, Angoff’s Office of Student Affairs expanded its clinical orientation program this year with a two-day Survival Fair held on June 22 and 23. In addition to lectures from chief residents, hospital staff and others, students received lessons in how to conduct a pediatric ear exam, draw blood and take blood pressure. A session called “Don’t Throw Me the Knife” offered tips on operating room do’s and don’ts.

Singh Nagula Itzelbaum

The Survival Fair was the brainchild of Angoff, Cynthia Andries, M.S., assistant dean for student affairs, and Giussa Weissbach-Licht, director of the Office of Education. “You’re going to feel unprepared no matter what,” said Angoff. “We came up with this idea to try to relieve the anxiety of starting on the wards by introducing students to some simple, hands-on skills they didn’t get in great detail before.”

“Don’t Throw Me the Knife” and other survival skills for the clinic

In years past, third-year medical students entered the wards armed only with whatever clinical exposure they’d gleaned in their basic science years and at a daylong orientation consisting largely of PowerPoint presentations. “Now students sometimes left students ill equipped for their first days of clinical studies. ‘I remember someone saying ‘Go get the x-ray machine,’ and not knowing what the x-ray looked like,’ let alone how to attach it to a patient,” said Nancy R. Angoff, M.D., M.H.S., associate dean for student affairs.

To help students through the transition from basic to clinical science, Angoff’s Office of Student Affairs expanded its clinical orientation program this year with a two-day Survival Fair held on June 22 and 23. In addition to lectures from chief residents, hospital staff and others, students received lessons in how to conduct a pediatric ear exam, draw blood and take blood pressure. A session called “Don’t Throw Me the Knife” offered tips on operating room do’s and don’ts.

The Survival Fair was the brainchild of Angoff, Cynthia Andries, M.S., assistant dean for student affairs, and Giussa Weissbach-Licht, director of the Office of Education. “You’re going to feel unprepared no matter what,” said Angoff. “We came up with this idea to try to relieve the anxiety of starting on the wards by introducing students to some simple, hands-on skills they didn’t get in great detail before.”

“Don’t Throw Me the Knife” and other survival skills for the clinic

In years past, third-year medical students entered the wards armed only with whatever clinical exposure they’d gleaned in their basic science years and at a daylong orientation consisting largely of PowerPoint presentations. “Now students sometimes left students ill equipped for their first days of clinical studies. ‘I remember someone saying ‘Go get the x-ray machine,’ and not knowing what the x-ray looked like,’ let alone how to attach it to a patient,” said Nancy R. Angoff, M.D., M.H.S., associate dean for student affairs.

To help students through the transition from basic to clinical science, Angoff’s Office of Student Affairs expanded its clinical orientation program this year with a two-day Survival Fair held on June 22 and 23. In addition to lectures from chief residents, hospital staff and others, students received lessons in how to conduct a pediatric ear exam, draw blood and take blood pressure. A session called “Don’t Throw Me the Knife” offered tips on operating room do’s and don’ts.

The Survival Fair was the brainchild of Angoff, Cynthia Andries, M.S., assistant dean for student affairs, and Giussa Weissbach-Licht, director of the Office of Education. “You’re going to feel unprepared no matter what,” said Angoff. “We came up with this idea to try to relieve the anxiety of starting on the wards by introducing students to some simple, hands-on skills they didn’t get in great detail before.”
“Pay attention to what is inside,” Commencement speaker urges Class of 2000

Richard Belitsky, M.D., remembers the day during his residency that he had to change the dressings on a badly burned boy. “If you are my doctor, why are you hurting me?” the boy asked him, and for Belitsky, the question opened an emotional vein. “I burst into tears,” he recalled in May, standing at the podium at the Class of 2000 Commencement exercises. “The attending came over. He wanted to console me. ‘Richard,’ he said, ‘if you are going to be a doctor you just can’t let it get to you like that.’”

Belitsky, now an associate clinical professor of psychiatry and the students’ choice as Commencement speaker, had different advice for the graduating physicians. “I wish he had said, ‘Richard, you are a doctor, of course you feel that way. We all feel that way sometimes,’” Belitsky told his audience. “You are going to feel these extraordinary things: fear, wonder, thrills, excitement, even terror, sadness, exhilaration. Whatever it is you feel, I want you to hear a voice inside that says, ‘You are a doctor, of course you feel that way. We all feel that way sometimes.’”

He urged the new physicians to maintain their spiritual equilibrium by staying in touch with their own hearts and reaching into the hearts of their patients. “Talking to patients, he said, will help in their treatment. ‘It is through the telling of your stories and the listening to the stories of others that you will form the relationships that will allow you to bring your own individual humanity into this work.’”

In his closing words he offered more advice. “Take a vacation,” he said. “And I don’t just mean go on a vacation. A vacation is not a time to get caught up on journal reading. It is not a time to write grants. Take a book you’ve been dying to read and, more importantly, take your loved ones with you. Pay attention to what is inside. It is what makes you you.”

The following prizes were awarded to School of Medicine faculty and students at Commencement:

- Bohmfalk Prize: Michael E. Caplan, M.D., Ph.D., professor of cellular and molecular physiology and genetics
- Healthcare Foundation of New Jersey Humanism in Medicine Faculty Award: Nancy R. Angoff, M.P.H., M.D., associate dean for student affairs
- Healthcare Foundation of New Jersey Humanism in Medicine Student Award: Joanna B. Sheinfeld

The Courtlandt Van Rensselaer Creed Award: Dirk C. Johnson

The following prizes were awarded to School of Medicine faculty and students at Commencement:

- Bohmfalk Prize: Michael E. Caplan, M.D., Ph.D., professor of cellular and molecular physiology and genetics
- Healthcare Foundation of New Jersey Humanism in Medicine Faculty Award: Nancy R. Angoff, M.P.H., M.D., associate dean for student affairs
- Healthcare Foundation of New Jersey Humanism in Medicine Student Award: Joanna B. Sheinfeld

The Courtlandt Van Rensselaer Creed Award: Dirk C. Johnson

Commencement speaker Richard Belitsky joked with students before ceremonies began on the main campus.

Melissa Wolfe and fellow graduates marched in procession from Sterling Hall of Medicine to the tent on Harkness Lawn for Commencement.
Idealism, inequity and public health

As a young woman in her native India, Geeta Rao Gupta saw her dream of graduate studies in the United States dashed because of her gender. The men who ran the scholarship program told her she would be a poor investment; she would probably marry, have children and stop working. “I had lost a chance to pursue graduate studies because I was a woman,” said Gupta, who now holds a PhD and heads the International Center for Research on Women, a Washington-based non-profit organization that studies the roles women play in developing countries.

Discrimination against women around the world is a public health concern, Gupta said in her Commencement address to the School of Public Health Class of 2000. Women of color between the ages of 15 and 25 are at greatest risk for trichomoniasis, she said. Ailments related to pregnancy and childbirth claim half a million women each year, despite knowledge of how to prevent such deaths. And domestic violence is a “devastating reality” in the lives of women around the world. “Clearly there is an unequal power balance in society,” she said, “a power balance that is determined by gender as much as by class, race and other identities.”

Gupta urged the new graduates not only to recognize but also to attempt to redress these social inequities. “They will undermine your work unless you incorporate them into your analyses and interventions,” she said. To achieve this, Gupta argued that idealism is essential. She suggested that public health workers’ efforts subscribe to three truths.

“The first truth is that empowerment of women, the poor and minorities is not a zero-sum game,” she said. “More power to one does not mean less power to others. More power to one means more power to all.”

“The second truth is that cultural and social structures are not cast in stone. When cultural practices cause health damage, they must be adapted, changed, or even cleverly co-opted. To feel, for example, that female circumcision is a cultural practice that must be tolerated because the culture cannot be changed, is unacceptable.”

“The third truth: Remember that individuals in communities, no matter how disempowered or marginalized, are actors and agents of change in the drama of their lives. If you include them, if you take the time to listen with humility, if you do not presume to know, you will be rewarded with rich insights and new realizations.”

Gupta’s emphasis on the idealism fundamental to public health echoed that of student speaker Jacob Harley Creswell. “So what is public health?” he asked. “The question could be, ‘What isn’t?’ There are so many different fields we will be entering, so many ways to improve health, no matter how daunting a task this may seem. … Over the last 21 months we have heard all kinds of stories, some saddening, some uplifting, some horrifying and some enlightening. We have learned about death and disease. We know what the world has to offer, and yet if I didn’t believe the world could be healthy, I would not be here.”

The School of Public Health awarded master’s degrees to the 123 members of the Class of 2000, and one doctor of public health degree. The Graduate School of Arts and Sciences awarded 11 doctor of philosophy degrees.
Surgical society gathers steam, honors “the great teachers”

Six years ago, Yale faculty laid the groundwork for an organization they hoped would help keep alumni of the Department of Surgery in touch with one another in the years following residency. The first event, an all-day meeting during the annual meeting of the American College of Surgeons in Chicago in 1994, was attended by just a handful of Yale-trained surgeons.

That fledgling group has grown to become the Yale Surgical Society (YSS), which has attracted more than 700 members and organized annual events since 1996 as part of the medical school’s Alumni Reunion Weekend. YSS reunion activities have included tributes to former faculty, historical glimpses through the department’s past and, in 2000, a daylong symposium exploring current research in surgery at Yale.

Next year’s event, a dinner on June 30, will honor Max Taffel, m.d., ’51, clinical professor of surgery, and Wayne O. Southwick, m.d., professor emeritus of orthopaedics and rehabilitation.

The program reflects the society’s desire to “honor the great teachers,” according to Andrew J. Graham, m.d., ’63, a general surgeon in New Haven who is the society’s president. Previous programs have paid tribute to Gustav E. Lindblad, m.d., ’42, William W.L. Glenn, m.d., John A. Kirchner, m.d., ’94, and Bernard Lytton, m.b.b.s., r.c.s.c.

Graham says that the June 30 gathering will focus on Taffel and other faces from the Memorial Unit years in Yale surgery as well as on Southwick and the story of the Department of Orthopaedics and Rehabilitation.

During the 1950s and early 1960s, surgery in the Memorial Unit of Grace-New Haven Hospital functioned as an extension of the Department of Orthopaedics and Rehabilitation. Taffel, who held the first diploma issued by the American Board of Surgery, was a legendary figure in the Memorial Unit during these years.

Southwick was chief of the orthopaedics section from 1958 to 1979 while it was part of the Department of Surgery. Southwick’s work in building the section led to its expansion as the Department of Orthopaedics and Rehabilitation in 1986 under present-day chair Gary E. Friedlander, m.d., who was trained by Southwick.

Membership in the Yale Surgical Society is open to former residents who trained in the department, current and former Yale surgery faculty, and Yale medical school graduates who have entered the field. The society has an 11-member board including four officers: Graham, Vice President Bauer E. Sumpio, m.d., Ph.d., ’56, Treasurer James M. Donahue, m.d., ’97, ’71, and Secretary Santanu A. Roman, m.d., ’16, ’98. The society’s Web site can be found at http://yalesurgery.med.yale.edu/yss.

The Yale Surgical Society is open to surgeons who trained in the department, current and former Yale surgery faculty, and Yale medical school graduates who have entered the field. If you would like to become a member, please complete the application to the left and mail with dues to Sharon Cullen, Executive Secretary, Yale Surgical Society, c/o Yale-New Haven Hospital, Clinic Building, Room 2010, 20 York Street, New Haven, CT 06510.

Please accept my tax-deductible donation. Enclosed is my check for:

- One-Year Membership $50.00
- Lifetime Membership $500.00
- Retired, Voluntary Donation ______

Name
Date of Birth
Year Graduated from Yale School of Medicine
You completed residency and/or years of faculty appointment
Residence Address
City/State/Zip
Residence Telephone (include area code)
Office Telephone (include area code)
E-mail Address
Spouse or Significant Other
Children’s Names/Ages

The Yale Surgical Society Application Form

Yale Medicine Fall 2000 | Winter 2001

64

Yale Medicine Fall 2000 | Winter 2001

65

ALUMNI NEWS

ALUMNI NOTES

40s

Donald W. Seldin, m.d., ’51, a retired pediatrician and president emeritus of the International Diabetes Center in Minneapolis, was presented the Shotwell Award in May by the Hennepin Medical Society (hms) in recognition of his dedicated service and contributions to the improvement of health care delivery. Established in honor of Mr. and Mrs. James D. Shotwell by the Metropolitan Medical Center in 1971, the award is presented annually by Hms to a distinguished individual who has contributed significantly to the cause of medical education.

50s

Donnell D. Eutziwiler, m.d., ’55, ‘91, former chief of surgery at the University of California, San Diego, and the Salk Institute for Biological Studies in recognition of that integral role in its growth. Seldin is vice president for medical center relations for the Southwestern Medical Foundation and clinical professor of internal medicine at ut.

60s

Robert F. Maudslay, m.d., ’63, was appointed dean of the faculty of health sciences for medicine and nursing at Aga Khan University in Karachi, Pakistan. Maudslay had been vice dean of medicine at Queens University in Kingston, Ontario, from 1998 to 1996, and associate dean for health sciences at McMaster University in Hamilton, Ontario, from 1981 to 1984.

Carinth is a port city of 12 million people, and the university is situated on a beautiful campus with stunning architecture,” Maudslay wrote in an e-mail message to Yale Medicine.

65

Malcolm R. Ing, m.d., ’59, ’61, professor and chair of ophthalmology at the University of Hawaii’s John A. Burns School of Medicine, received the David S. Friendly Fellowship Award for 2000. This annual award is given to a graduate of the Pediatric Ophthalmology Fellowship Program at Children’s National Medical Center in Washington, D.C., for outstanding original research and service in the field of pediatric ophthalmology. Ing writes, “The medical school here in Hawaii has recently been energized this past year by the arrival of Edwin C. Cadman, m.d., former Yale chair of medicine, to be the new dean of the school. Yale lost (to Hawaii) gain!”
Medical authority. Ferguson is adjunct associate professor of health informatics at the University of Texas Health Science Center in Houston.

Neil A. Solomon, M.D., ’50, has joined CareGuide Inc., a care management company for older adults, as senior vice president and chief medical officer. Solomon will oversee all customer communications, as well as content of the Web site. He formerly held executive positions at the national headquarters of Kaiser Permanente. During the past 10 years, Solomon concurrently practiced internal medicine.

Correction
On page 46 of the Summer 2000 issue of Yale Medicine, this photograph of Harry C. Miller Jr., M.D., ’54, was mistakenly placed next to an item about Leo H. Berman, M.D., ’53. Our apologies to both.

Fortieth Reunion
James J. Nora, M.D., ’54, wrote this poem after attending his 40th reunion with his classmates in 1994. Unable to attend his 45th last year, he sent this poem to Yale Medicine instead.

Many of us had retired.
Already one-seventh of our class had died.
This was, I calculated, the last time when morbidity and mortality would be delayed enough to allow a substantial turnout.

I thought I’d like to remember when we looked the way we felt—young, vigorous, optimistic.
Most of our past histories had required no more than a few short sentences scrawled in—in beginning the longer narratives that would be tucked between the aluminum chart covers of our lives.
Required supplements would eventually extend through many pages—many volumes.
Was I prepared to blow the dust off the records?
It would have been easier if I had attended other reunions along the way.
We could have glanced past a few of each other’s progress notes about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about thinning hair and about...
Affirmative action, however, placed pressure upon students to prove themselves. "I knew as minority students we would be asked questions. ‘Are you here at Yale because you're black, or are you here at Yale because you're smart?’" said panelist O'Dell M. Owens, ’76, medical director for United Health Care in Cincinnati.

"I am a product of affirmative action," said panelist Rashida N’Gouamba, ’02, who pointed out that affirmative action merely opens the door, without guaranteeing success. "Affirmative action doesn’t get you the grades you’re going to get. It doesn’t make you do anything other than work hard."

Doris Wethers, ’52, the third African-American woman to graduate from the medical school, recalled getting along with most of her classmates, although she was the only minority student. From Yale she went to Washington, in a hospital that had desegregated its wards and staff, although the city remained segregated. "There was a little ... and Surgeons. For decades she has led a continuing study of sickle-cell anemia at St. Luke’s-Roosevelt Hospital. Owens told of returning to Cincinnati, ’76, an assistant professor of surgery at Harvard Medical School, spoke of her time, first as a resident and now as an attending, as the only black woman on a staff of White acknowledged that physicians cannot be well-versed in the nuances and protocols of each culture they encounter. "We cannot be cultural anthropologists for ... benefit for all society. “Supporting diversity,” she said, “does not just serve the minority community. It serves everyone.”

Affirmative action, however, placed pressure upon students to prove themselves. "I knew as minority students we would be asked questions. ‘Are you here at Yale because you’re black, or are you here at Yale because you’re smart?’" said panelist O’Dell M. Owens, m.d. ’76, medical director for United Health Care in Cincinnati. "I am a product of affirmative action," said panelist Rashida N’Gouamba, ’02, who pointed out that affirmative action merely opens the door, without guaranteeing success. "Affirmative action doesn’t get you the grades you’re going to get. It doesn’t make you do anything other than work hard.”

Doris Wethers, m.d. ’52, the third African-American woman to graduate from the School of Medicine, recalled getting along with most of her classmates, although she was the only minority student. From Yale she went to Washington, in a hospital that had desegregated its wards and staff, although the city remained segregated. "There was a little friction,” she said. She now lives in New York City, where she is a professor of pediatric medicine at the Columbia University College of Physicians and Surgeons. For decades she has led a continuing study of sickle-cell anemia at St. Luke’s-Roosevelt Hospital. Owens told of returning to Cincinnati, where patients occasionally walked out when they saw their physician was black. Panelist Yvedt M. Matory, m.d. ’85, an assistant professor of surgery at Harvard Medical School, spoke of her time, first as a resident and now as an attending, as the only black woman on a staff of 90 surgeons. "I have spent a lot of my time educating my colleagues and the residents,” she said.

White acknowledged that physicians cannot be well-versed in the nuances and protocols of each culture they encounter. "We cannot be cultural anthropologists for every culture, but there is a need for more education in this area,” he said. And, added Matory, there is a benefit for all society. “Supporting diversity,” she said, "does not just serve the minority community. It serves everyone.”

"Supporting diversity does not just serve the minority community. It serves everyone.” —Panelist Yvedt Matory

In medicine, affirmative action means more than simply ensuring that African-Americans, Native Americans and Latinos get a chance to become physicians. It is critical to providing minorities with the same quality of health care that whites receive, says Augustus A. White III, m.d., ph.d., ’66. Affirmative action is also essential to fostering respect among the diverse groups of people whose paths cross in hospitals, doctors’ offices and medical school classrooms, according to White, the keynote speaker, and panelists who joined him for a discussion of “The Many Faces of Medicine.” About 100 people at this year’s reunion attended the program exploring race, ethnicity and affirmative action through the experiences of minority alumni and students.

White, a professor of orthopaedic surgery at Harvard Medical School and surgeon-in-chief emeritus at Beth Israel Medical Center, delivered the keynote address, “The Importance of Affirmative Action to the Health Care of Our Nation.” White argued that members of minority groups don’t receive the same quality of medical care as do whites. The proof is in the statistics: Infant mortality, a key health indicator, is 2.5 times higher among African-Americans than among whites. African-Americans are less likely to receive pain medication for long-bone fractures in the emergency room and are less likely to receive cardiac bypass surgery. Minority patients, he continued, are often subject to disrespectful treatment such as the following: a physician who greeted an Asian woman as “Mrs. Thai Lady,” caregivers who failed to draw the curtains when undressing an African-American patient, and an Italian patient who heard it suggested that he must have a Mafia connection. Those acts of insensitivity were not committed by “skinheads,” said White, who was a professor of orthopaedic surgery at Yale in the 1970s. "We need to do some things differently,” White said, “Minority doctors are more likely to practice culturally competent medicine. Diverse medical care teams can educate each other through interpersonal relationships as well as relationships with patients.”

Affirmative action has had a dramatic effect on minority enrollment at the medical school during the past 30 years, Forrester A. Lee, m.d. ’79, told the audience. Lee, associate professor of medicine and associate dean of multicultural affairs, reported that from 1810 to 1900, only 10 blacks received medical degrees from Yale. During the succeeding five decades, not a single black graduated from the school, and from 1950 to 1970 a black student graduated every two to four years. Then, with the advent of affirmative action in 1970, the number of black graduates rose sharply to 10 to 12 per year. The 105-member Class of 2003 includes 13 African-Americans, 11 Hispanics, 22 Asian-Americans and 43 women, noted Nancy R. Angoff, m.p.h. ’84, m.d. ’90, ph.d. ’93, associate dean for student affairs. FullMedicine Fall 2000 | Winter 2001
The future is here
Yale perspectives on the Human Genome Project.

When the Department of Human Genetics was founded at Yale almost 30 years ago, the field was narrow: Its investigators studied a handful of rare genetic disorders in children. “Three decades later,” says Deputy Dean Carolyn W. Slayman, Ph.D., Sterling Professor of Genetics and professor of cellular and molecular physiology, “we now know that genetic mutations play a role in most, if not all, common diseases in adults and must be taken into account by every practicing physician.”

During this year’s reunion, just three weeks before the announcement of the Human Genome Project’s rough draft of the human genome, Slayman moderated “Mapping the Future: The Human Genome Project, Yale Perspectives,” a presentation by three Yale researchers who discussed the genome project’s profound implications for research, medicine and medical education.

Peripheral to its main goal, the project has spawned a variety of research technologies over the last six years, said David C. Ward, Ph.D., professor of genetics and of molecular biophysics and biochemistry. “A lot of this is brand-new,” said Ward, the creator of two such technologies, the widely used fluorescent in situ hybridization, or FISH, and a newer technique, rolling circle amplification, developed with Paul M. Lizardi, Ph.D., and Paul M. Lizardi, associate professor of pathology. Among the innovations to result from the genome project are new methods of genetic testing and microarrays that can be used to analyze thousands of tissue samples and create databases with a prognostic value, Ward said. “While they are experimental today, they are heading to the clinic, and rapidly,” he said.

Richard P. Lifton, M.D., Ph.D., chair of the Department of Genetics and a Howard Hughes Medical Institute investigator, stressed the speed of new discovery. (See interview, page 42).

“Over the last five years we have gone from almost zero understanding of the molecular basis of human disease to a milestone of understanding over 1,000 human diseases at the molecular level,” said Lifton, who, with colleagues, has identified several genes related to hypertension. Identifying gene mutations that are linked to specific disorders, he said, provides insight into the mechanisms of disease, allows clinicians to identify susceptible patients before disease develops, helps investigators identify targets for therapies and allows them to tailor treatment to specific abnormalities.

“We are going to know all the genes, all the common variations of those genes,” he said.

“We will be able to piece together whether they are implicated in human disease.”

Rapidly changing information, said Margretha Reed Seashore, Ph.D., professor of genetics and pediatrics, has increased both the pace and scope of new findings.

“The development of the human genome, however, has increased both the pace and scope of new findings. The accolades for Robert H. Gifford, M.D., ’57, who spent more than 30 years at the medical school as a resident, teacher, associate and deputy dean, continued with his honorary induction into the Association of Yale Alumni in Medicine (AXAM) at this year’s reunion. Association President Gilbert F. Hogan, M.D. ’57, called it a “particularly special honor that is rarely given.”

“We are going to induct a very special person as a member of the alumni association because of his contributions to the school, Hogan said. “Bob has been a teacher, a scholar and, in recent years, dean of students, where he has won the affection and love of generations of students.”

The AXAM also honored three alumni with Distinguished Service Awards for outstanding contributions to the School of Medicine and the profession: Martin E. Gordon, M.D., ’46, clinical professor of medicine; Margretha R. Seashore, M.D. ’61, ’88, professor of genetics and pediatrics; and Paul Calabresi, M.D., ’55, professor emeritus of medicine at Brown University.

Gordon’s award cited his dedication as a teacher, his treaties on global medicine and, over the past 20 years, his devotion to the medical library. As chair of the Board of Trustees of the Associates of the Cushing-Whitney Medical Library, he has contributed to the expansion of electronic resources and increased the membership of the library’s association.

The AXAM cited Seashore for her 30 years as a model educator, researcher and physician. “Scores of medical students, residents and fellows have benefited from your knowledge and insight,” read the AXAM’s citation.

Calabresi received the AXAM’s recognition for his services to medicine and to Yale. As a physician, Calabresi was one of the pioneers of combination chemotherapy for cancer. He has chaired the National Cancer Advisory Board and served on the President’s Cancer Panel. Calabresi is chair emeritus of the Department of Medicine at Brown University School of Medicine.

At its annual meeting the AXAM executive committee named Francis M. Lobo, M.D., ’92, secretary of the association. Donald E. Moore, M.D. ’81, M.P.H. ’81, was named to his first two-year term as a member, and Arthur C. Covarrubias, M.D., ’54, ’61, and Romeo A. Vidone, M.D., ’57, ’68, were named to their second two-year terms. Jocelyn Malkin, M.D. ’81, ’84, ’88, and Deborah D. Desir, M.D. ’80, ’85, were named to three-year terms as AXAM representatives to the Association of Yale Alumni.

Honors to Gifford and alumni

Carolyn Slayman moderated a discussion of the Human Genome Project and its effects on the teaching and practice of medicine.

John D. Thompson was a leader in the field of health services research whose expertise ranged from the design of health care payment systems to the social and architectural history of hospitals and the story of Florence Nightingale. On his death in 1995 at the age of 75 he was professor emeritus of public health and nursing administration. Thompson was a regis- tered nurse and in 1995 received an M.S. in hospital administration from the School of Medicine. Friends, col- leagues and family members gathered at this year’s reunion for the first Annual John D. Thompson Health Man- agement Dinner to honor his contribu- tions to the field. The Department of Epidemiology and Public Health has established the John D. Thompson Academic Development Fund at Yale, an endowed fund that will support the academic mission of EPH’s Division of Health Policy and Administration and the School’s Health Management Program. Attend- ing this year’s dinner were, back row from left, Thompson’s son, Anthony Thompson; his daughter Margaret Thompson; son-in-law James Roberso; in the front row, from left, Susan D. Hamilton, widow Adonico Thompson; sister Martha Carrell, daughter Julie Walpole, and daughter Sibthorpe Thompson.
1935
50th Reunion
As the only member of the class present, I enjoyed the overall reunion—one of the best ever—accompanied by my wife Ethel. Moderately active, I still teach four to five mornings a week and also serve as chair of planned giving for the School of Medicine Alumni Fund.

1945
55th Reunion
On a warm June day in 1945, few in our class could have expected that so many of us would be coming again to the Sterling Hall of Medicine on another lovely June day in 2000. This reunion, as arranged by Dick and Verne Breck, was the heart structured and most enjoyable of any of our get-togethers in many years. Not only were the attendees able to come, but they were also standing tall and had a spring in their step. Along with the Breck, attending were Andy and Claudine Cockrell, Ed and Daise Daniels, with son Ben, Dick Dyer, Bob and Ruthie Easton, with lovely granddaughter Paul James, Sid Feuerstein, Ray and Pat Gagliardi, Bob Hollan, Bill and Marj Jenney, Lee and Barbara Jones, Mike and Jeni Lau, Mark and Margaret Lindsey, George and Michelle Naumburg and Fritz and Mildred Pannell. It was sad to realize that since our last meeting we had lost Albert Atwood, Philip Good, Ira Hirata, John Howick, Hans Hueessy, Joseph Stanton, Kenneth Steele, Sam May and Dick Dyer's wife Nut.

Friday and Saturday were largely spent telling each other how good we looked, all things considered, and remembering old times. We even managed to remember things that never happened. One member recalled when our class voted not to take the Hippocratic Oath. No one else remembered it. As we talked and joked and remembered the fun things that lightened the darkness of those war years, we were reminded what an exceptional group of people made up the Class of 1945. While we didn't have a program of our own, we enjoyed what we heard and saw. For those who came, the 50th reunion was a satisfying and memorable event; to those who could not be there: you were missed. Lodging and accommodations, most of which were arranged by Sylvia Axelrod and Jane Shumway, were the most delightful part of our stay, including a hospitality suite and our class dinner Friday night. Each of us was invited to speak about memories of our time at Yale and our subsequent careers, lives, losses and accomplishments. We remembered those who were no longer with us. It was a moving experience and a most satisfying way to bring closure to the half century since we started out together.

We were enthusiastic about organizing an interim reunion in a couple of years before our 60th in New Haven. This was such a good one, we hope everyone can get to that one. You will all know the if, where, and when of that reunion. We will be true to the tradition to follow Berkeley's performance in 2000, but this class was never one to flinch or falter in the pursuit of excellence.

—Raymond A. Gagliardi

1950
50th Reunion

For those who came, the 50th reunion was a satisfying and memorable event; to those who could not be there: you were missed. Lodging and accommodations, most of which were arranged by Sylvia Axelrod and Jane Shumway, were the most delightful part of our stay, including a hospitality suite and our class dinner Friday night. Each of us was invited to speak about memories of our time at Yale and our subsequent careers, lives, losses and accomplishments. We remembered those who were no longer with us. It was a moving experience and a most satisfying way to bring closure to the half century since we started out together.

Many classmates wanted to come but because of health or family concerns, coupled with prior travel plans, were unable to do so. Mike Allison was one of the travelers and, I think, the only one left who is still seeing patients.

We were enthusiastic about organizing an interim reunion in a couple of years before our 60th in New Haven. This was such a good one, we hope everyone can get to that one. You will all know the if, where, and when of that reunion. We will be true to the tradition to follow Berkeley's performance in 2000, but this class was never one to flinch or falter in the pursuit of excellence.

—Raymond A. Gagliardi

1955
45th Reunion

This reunion was one of the best and most enjoyable for all the attendees. We had 18 members of the class attending by 14 others.

The first event of importance was the dedication of The Paul Calabrese Conference Room in the Yale Cancer Center on Friday, June 2. This honor was bestowed on Paul for his work in cancer research and treatment. Five or six of our classmates arrived early enough to attend, along with Paul's wife, Celia, and his brother, Guido Calabrese.

The U.S. Court of Appeals judge and former dean of the Yale law school.

So there really got hopping then with the arrival of about another to classmates for the Dean's reception, where Dean David A. Kessler acknowledged that he indeed was not the "real David Kessler" and tipped his hat to our own Dr. David Kessler (see photo top right), and the outdoor clambake. This event terminated with a beautiful sunny day and the blooming of Sarah's roses, rhododendrons, peonies and irises.

On Sunday, Margaret Lyman, who had been unable to come to New Haven, hosted a delightful brunch at her Middlebury home, a most pleasant country interlude, and a delightful finale to a wonderful reunion.

1960
40th Reunion

The millennial reunion of the class of 1960 was a splendid affair. Of the 66 remaining members of our class, 28 attended, most with spouses or significant others, for an extraordinary attendance rate of 43 percent. As has been our tradition, the class had its own reunion seminar. Es Eiselstyn made a remarkable presentation on dietary intervention in cardiovascular disease. He demonstrated coronary artery disease reversal with full restoration after significant narrowing, after as little as six weeks on an extremely rigorous diet that was devised by Es, which was equivalent to the dietary intake of the victims of famine in sub-Saharan Africa. For our class of leaders, I then made a presentation on "When Illness Strikes the Leader." This sobering one-two punch was followed by a clambake, replete with drawn butter, lobster, shrimp, clams, roast beef au jus, and shrimp, followed by fried chicken and heaps of vegetables served with the clambake. This event terminated with a beautiful sunny day and the blooming of Sarah's roses, rhododendrons, peonies and irises. We enjoyed an atmosphere of close fellowship despite being a diverse group of personalities with many different interests. See you at the 50th.

—S. Jack Landau
1965  
35th Reunion

On the Saturday evening of reunion weekend, Bob and Sue Weiner hosted a French Country picnic at their summer cottage on Long Island Sound in Madison. Attending were Phil and Marjorie Alksne, Frank and Donna Gaddy, Reid and Elise Neffner, Dave and Gintchon Hill, Gary Burnham Johnson, Ron Karpick, Mehndas and John-Kim, Mark Lischner, Mike and Lilli Mayer, Larry and Linda Ossias, Bob and Mary Pickens, Jobby Rackleff, and John and Greta Seashore. Mark traveled the farthest (California). Ginny traveled the least (Guilford), and Jayby arrested by assault! Despite most of us being in practice 30 years, I was only the one fully retired. Many others were cutting back and considering joining the gainfully unemployed. Hopefully, by 2001 most of the class will have hung up their stethoscopes for good, and will have nothing better to do than attend our 40th reunion.

- Robert G. Weiner

1970  
30th Reunion

The class reunion dinner was held on Saturday night at Anne Curtis and Jim Fischer’s house in Madison. Attendees included John Blanton and Kate Dyer Remley, and Mary Sue Burke, Michael and Janice Danziger, Margaret Delano, Jonathan and Rosanne Ecker, Robert Epstein, Paul and Patricia Hessler, Jonathan and Susan Katz, Leonard and Ellen Adelberg, Dennis and Rosalind Shelid, Richard and Laurinda Solomon, Phillip Steeves and Karl Wustrack.

Anne Lucky called to say hi to everyone. The evening was a success and a good time was had by all.

- Anne McIl Curtis

1975  
25th Reunion

Quality not quantity made for a good time at Adriana restaurant on Saturday night for the class of 1975. Paul Johnson and Liz Gaware took off from their busy medicine and pediatrics practice to stop by in New Haven on the way to a vacation in Italy and brought with them the official class picture with our 1975 mug shots—so not only did we talk about you, we commented on your picture, too. Sue and Susan Romesan didn’t have to travel far from Waterbury and Sunderland dermatology practice, and at Friday’s damn baking, daughter and Yale medical student Sally joined us as well. Waterbury was also well represented by the Rachmans, where Mark is an ophthalmologist. Mannis Westfied drove up from New York City and his dermatology practice, and updated us on his turn toward natural remedies. Jim Rosenbaum filled us in on what was happening in dermatology in Portland, Ore., home of many naturalists. Jim is still running marathons. Jim’s wife, Sandy, has a busy cosmetic dermatology practice there as well. Sandy Henthorn came from c.u. where she practices psychiatry. Jamie Robertson came up from Philadelphia and his cardiology practice.

Faculty credit Henry Gaulin and his wife, where two-year-old was in the care of her 10-year-old brother, with regular phone advice from Henry, represented the New Haven contingent. Yours truly is still trying to juggle the roles of delayed childbearing mother of a 10- and 13-year-old, and manicure Maven. Sid Spiegel couldn’t make the dinner—but some of you may have read in the Yale Bulletin and Calendar about Sid’s new patented ice-cube-making device. Now that’s practical pediatrics (See pages).  

1980  
20th Reunion

A good crowd including 17 class members and seven spouses convened on New Haven to celebrate our 10th reunion. On Friday evening we enjoyed a charming cocktail party at the residence of Joel and Carol Brown. At Saturday night we gathered at Zinc, a trendy New York eatery on the New Haven Green. At the dinner much backslapping and hugging were as common as relationships were renewed. Dean Kastler even paid a surprise visit as he had decided to drop in on some of the “younger” reunion classes.  

Travelling farthest was Kim Swartz from Portland, Ore., where he practices general and vascular surgery. Kim and his wife, Teresa, have two young children, Kyle and Daniel. Hailing from Houston were Alan Schlesinger and his wife, Paula Chang Schlesinger, M.D., ’81. Alan is a pediatric radiologist at Texas Children’s Hospital. Paula is also busy both at home with children Katie, Jack and Madeline, and at work as a pediatrician at the Keay-Solcild Clinic. Soon to join Alan in Texas will be Eric Nesterl and his wife, along with David, Matthew and Jane. Eric will be assuming the chair of the Department of Radiology at UT Southwestern Medical Center in Dallas. Mary Hill and Robert Wise drove in from Portland, Ore., where he practices family medicine. Mary happily practices family medicine with the help of her husband, who doubles as office manager as well as being a massage therapist. Together they have four children.

Heather, Seth, Alex and Joshua Mark is still running marathons. His wife, Sandy, has a busy cosmetic dermatology practice there as well. Sandy Henthorn came from c.u. where she practices psychiatry. Jamie Robertson came up from Philadelphia and his cardiology practice.

Faculty credit Henry Gaulin and his wife, where two-year-old was in the care of her 10-year-old brother, with regular phone advice from Henry, represented the New Haven contingent. Yours truly is still trying to juggle the roles of delayed childbearing mother of a 10- and 13-year-old, and manicure Maven. Sid Spiegel couldn’t make the dinner—but some of you may have read in the Yale Bulletin and Calendar about Sid’s new patented ice-cube-making device. Now that’s practical pediatrics (See pages).  

1985  
15th Reunion

Continuing the trend set at the 10-year class reunion, avoiding New Haven appears to be a class trait. Those few of us who did choose to gather enjoyed an evening reminiscing about the rest of you. Four class members and their partners spent a pleasant evening at Jeanne Burger’s house in New Haven.

Sam Gess, committed dermatologist, arrived at our sunny home armed with enough

Lynn Tannen, M.D., ’72, also on the faculty at Yale in pulmonary medicine. They have three children, Robert, Krista and Grant. Gary and Debrah Dyett Desir live in Woodbridge and are busy with four boys, Alexander, Christopher, Matthew and Carl. Gary is on the medical faculty at Yale specializing in nephropathy.

Deborah is a rheumatologist in private practice. Ann Heef-fer (a.k.a. Henderson) with husband Ben Shroder compaled our dinner group. Together they live in New Haven, sharing responsibility for two adolescent children, Charlotte and Sophie. Ann enjoys practicing with Guilford Pediatrics while Ben continues orthopaedic private practice in New Haven. And so until the 35th. Be there or be square.

- Patricia C. Brown
sunscream to keep our entire
gathering safe from the sun.
Barbara mentioned
enjoying a lovely dinner at
Clapton's restaurant in New
Haven. She and her
husband are expecting their
first child this summer.
Bruce Barker
remained at Yale
and is completing
his residency in psychiatry
for the third year. John
Astin is in the Bay
area and is married to a
psychologist.
Nancy Angoff,
Yale's associate
dean for student affairs,
helped host our class dinner
on Saturday evening at the
Graduate Club. Will Andrews,
married with a son, is
preparing to
complete his medical training.
Bruce Beck
represented at the reunion
and enjoyed a
sunny New
Haven weekend. Jay
and Ruth
reported that they enjoyed
doctoring at their
day job.
Meghan was born in
our third year? Jay and Ruth
reported that
they enjoyed a
sunny New
Haven weekend. Bruce
represented at the reunion
and enjoyed a
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
Kate Hallin
and Michael
(3rd) report
that they enjoyed
doctoring at their
day job. They
are planning to
return due to commitments in
California, where he is a
Robert Wood Johnson scholar.
New Haven locals who
came in were
JoAnne and
husband Michael
(3rd). JoAnne continues to
enjoy her pediatric practice
at Yale.
James M. Giffin, M.D. ’76, received his medical degree from Yale. He was an associate clinical professor of psychiatry at Weill Cornell Medical College and was known by colleagues as a gifted and sensitive therapist and teacher.

James M. Giffin, M.D. ’76, died Jan. 27 in Bar Harbor, Maine. He was 80.

James M. Giffin, M.D. ’76, was born in Brooklyn, N.Y., graduated from Phillips Andover Academy in 1950 and from Harvard University in 1957. He received his medical degree from Yale and completed his internship and residency training at Boston Hospital and the Mallory Institute of Pathology. Pratt was a surgical fellow at the Massachusetts General Hospital and had later practiced in New York City. He served in the Army Corps in World War II. After his retirement in 1977, he moved to Fort Hood, Texas, and practiced surgery for 15 years.

He was a diplomate of the American Board of Colon Rectal Surgery and a member of the American Association for the Study of Colon Cancer, the American Society for Colorectal Surgery, the American College of Surgeons and the Association of Military Surgeons of the United States.

Dietrich graduated from the University of Kansas for two years before transferring to Yale to complete his bachelor’s degree in 1959. He received his medical degree from Yale in 1962 and completed his internship at Barnes Hospital in St. Louis, Mo., and was awarded a fellowship.

Giffin practiced surgery for 17 years in Springfield, Mo., before moving to Colorado in 1979 to serve on the staff of Delta County Memorial and Montrose Memorial hospitals. In 1993, during Operation Desert Storm, he was called to active duty and served at the Fitzsimmons Army Hospital in Denver, the Fox Army Hospital in Huntsville, Ala., and the 4th Medical Group of the United States Army in Seoul, Korea, and at the 438th Air Force Hospital in Taiwan.

Dietrich attended the University of Kansas for two years before transferring to Yale to complete his bachelor’s and medical degrees. He was enrolled in the Navy in 1952 to serve as a surgical resident at St. Louis, Mo., and was named assistant chief of diagnostic radiology in 1957.

During his career, Doppman developed and performed various semi-surgical and robotic procedures, including angiography. He also did research on vascular malformations of the spinal cord and developed ways to visualize and treat them. His later research concentrated on endocrinology and techniques for locating ectopic or elusive glandular tumors.

In 1977, Williams entered practice in Hartford as one of the first medical oncologists in the state of Connecticut.

After serving in the Army Medical Corps during World War II, Robison opened a private practice of obstetrics and gynecology in Stamford, Conn. He also served as chair of the Department of Obstetrics and Gynecology at the University of Connecticut School of Medicine for 26 years.

In 1969, Robison was appointed assistant professor of St. Joseph’s Hospital in Stamford, Conn. He then retired from active practice in 1979.

Robison wrote a book on the Great Pyrenees breed of dog, which he raised in the Snowy Range Mountains of Wyoming. He also wrote a book on the care of dogs, cats and horses.

Malcolm Hill, M.D. ’77, of New York City, died of cancer July 16. He was 70.

He was a graduate of Swarthmore College and

James M. Giffin, M.D. ’76, retired surgeon and author, died of cancer Aug. 11 at his home in Ridgway, Colo. He was 64.

Born in New York City, Giffin graduated from Amherst College, received his medical degree from Yale and traveled in surgery at Barnes Hospital in St. Louis, Mo. He went on to become the chief of surgery at Beach Army Hospital in Mineral Wells, Texas, and at the 4th Medical Group Hospital at Tay Ninh, Vietnam. He was awarded a Bronze Star.

Giffin was a fellow of the American College of Obstetrics and Gynecology and a supporter of the anatomical gift program of the University of Connecticut School of Medicine.

Sanford Roy Dietrich, M.D. ’44, of Santa Barbara, Calif., died Aug. 10 at home. He was 87.

In 1979, he was named assistant dean for administration of the Johns Hopkins Medical Schools in Baltimore and assistant professor of pediatrics. He later became a professor at New York University School of Medicine and was named vice president of medical affairs in 1979.

Dietrich practiced plastic and reconstructive surgery in California until his retirement. He also served as president of the Santa Barbara County Medical Society.

John L. Doppman, M.D. ’51, died of cancer Aug. 31 at the National Institutes of Health (NIH) Clinical Center in Bethesda, Md., where he served as chief of diagnostic radiology for 25 years. A resident of Phoenix, Ariz., Doppman graduated from Holy Cross College.

Born in Hartford, Conn., Doppman attended the Los Angeles School for undergraduates and medical studies at Yale, where he completed his internship and residency training at Johns Hopkins University School of Medicine and Hartford Hospital for his service in the Army Medical Corps in Europe during World War II.

He received his medical degree from Yale and traveled in surgery at Barnes Hospital in St. Louis, Mo. He went on to become the chief of surgery at Beach Army Hospital in Mineral Wells, Texas, and at the 4th Medical Group Hospital at Tay Ninh, Vietnam. He was awarded a Bronze Star.

Giffin advocated the expanded services of the center by one of Puzak’s former students at Georgetown University Medical School. Under a grant from Puzak’s family, the expanded services of the center were used to increase awareness of sports-related incontinence and the newest treatments for pregnancy-related and older-age incontinence.

Sanford Roy Dietrich, M.D. ’44, of Santa Barbara, Calif., died Aug. 10 at home. He was 87.

In 1979, Dietrich attended the University of Kentucky for two years before transferring to Yale to complete his bachelor’s and medical degrees. He was enrolled in the Navy in 1952 to serve as a surgical resident at St. Louis, Mo.

Dietrich practiced plastic and reconstructive surgery in California until his retirement. He also served as president of the Santa Barbara County Medical Society.

James M. Giffin, M.D. ’76, died of cancer Aug. 31. He was 80.

Born in Hartford, Conn., Doppman graduated from the Los Angeles School for undergraduates and medical studies at Yale, where he completed his internship and residency training at Johns Hopkins University School of Medicine and Hartford Hospital for his service in the Army Medical Corps in Europe during World War II.

He received his medical degree from Yale and traveled in surgery at Barnes Hospital in St. Louis, Mo. He went on to become the chief of surgery at Beach Army Hospital in Mineral Wells, Texas, and at the 4th Medical Group Hospital at Tay Ninh, Vietnam. He was awarded a Bronze Star.

Giffin practiced surgery for 17 years in Springfield, Mo., before moving to Colorado in 1979 to serve on the staff of Delta County Memorial and Montrose Memorial hospitals. In 1993, during Operation Desert Storm, he was called to active duty and served at the Fitzsimmons Army Hospital in Denver, the Fox Army Hospital in Huntsville, Ala., and the 4th Medical Group of the United States Army in Seoul, Korea, and at the 438th Air Force Hospital in Taiwan.

Dietrich attended the University of Kansas for two years before transferring to Yale to complete his bachelor’s and medical degrees. He was enrolled in the Navy in 1952 to serve as a surgical resident at St. Louis, Mo.

Dietrich practiced plastic and reconstructive surgery in California until his retirement. He also served as president of the Santa Barbara County Medical Society.

James M. Giffin, M.D. ’76, died of cancer Aug. 31 at the National Institutes of Health (NIH) Clinical Center in Bethesda, Md., where he served as chief of diagnostic radiology for 25 years. A resident of Phoenix, Ariz., Doppman graduated from Holy Cross College.

Born in New York City, Giffin graduated from Amherst College, received his medical degree from Yale and traveled in surgery at Barnes Hospital in St. Louis, Mo. He went on to become the chief of surgery at Beach Army Hospital in Mineral Wells, Texas, and at the 4th Medical Group Hospital at Tay Ninh, Vietnam. He was awarded a Bronze Star.

Giffin practiced surgery for 17 years in Springfield, Mo., before moving to Colorado in 1979 to serve on the staff of Delta County Memorial and Montrose Memorial hospitals. In 1993, during Operation Desert Storm, he was called to active duty and served at the Fitzsimmons Army Hospital in Denver, the Fox Army Hospital in Huntsville, Ala., the 24th Evac Hospital in Seoul, Korea, and at the 438th Air Force Hospital in Taiwan.

Giffin retired in 1993 with the rank of lieutenant colonel and moved to Ridgefield. Dietrich attended the University of Kansas for two years before transferring to Yale to complete his bachelor’s and medical degrees. He was enrolled in the Navy in 1952 to serve as a surgical resident at St. Louis, Mo.

Dietrich practiced plastic and reconstructive surgery in California until his retirement. He also served as president of the Santa Barbara County Medical Society.

James M. Giffin, M.D. ’76, died of cancer Aug. 31. He was 80.

Born in Hartford, Conn., Doppman graduated from the Los Angeles School for undergraduates and medical studies at Yale, where he completed his internship and residency training at Johns Hopkins University School of Medicine and Hartford Hospital for his service in the Army Medical Corps in Europe during World War II.

He received his medical degree from Yale and traveled in surgery at Barnes Hospital in St. Louis, Mo. He went on to become the chief of surgery at Beach Army Hospital in Mineral Wells, Texas, and at the 4th Medical Group Hospital at Tay Ninh, Vietnam. He was awarded a Bronze Star.

Giffin practiced surgery for 17 years in Springfield, Mo., before moving to Colorado in 1979 to serve on the staff of Delta County Memorial and Montrose Memorial hospitals. In 1993, during Operation Desert Storm, he was called to active duty and served at the Fitzsimmons Army Hospital in Denver, the Fox Army Hospital in Huntsville, Ala., the 24th Evac Hospital in Seoul, Korea, and at the 438th Air Force Hospital in Taiwan.

Giffin retired in 1993 with the rank of lieutenant colonel and moved to Ridgefield. Dietrich attended the University of Kansas for two years before transferring to Yale to complete his bachelor’s and medical degrees. He was enrolled in the Navy in 1952 to serve as a surgical resident at St. Louis, Mo.

Dietrich practiced plastic and reconstructive surgery in California until his retirement. He also served as president of the Santa Barbara County Medical Society.

James M. Giffin, M.D. ’76, died of cancer Aug. 31. He was 80.

Born in Hartford, Conn., Doppman graduated from the Los Angeles School for undergraduates and medical studies at Yale, where he completed his internship and residency training at Johns Hopkins University School of Medicine and Hartford Hospital for his service in the Army Medical Corps in Europe during World War II.

He received his medical degree from Yale and traveled in surgery at Barnes Hospital in St. Louis, Mo. He went on to become the chief of surgery at Beach Army Hospital in Mineral Wells, Texas, and at the 4th Medical Group Hospital at Tay Ninh, Vietnam. He was awarded a Bronze Star.

Giffin practiced surgery for 17 years in Springfield, Mo., before moving to Colorado in 1979 to serve on the staff of Delta County Memorial and Montrose Memorial hospitals. In 1993, during Operation Desert Storm, he was called to active duty and served at the Fitzsimmons Army Hospital in Denver, the Fox Army Hospital in Huntsville, Ala., the 24th Evac Hospital in Seoul, Korea, and at the 438th Air Force Hospital in Taiwan.

Giffin retired in 1993 with the rank of lieutenant colonel and moved to Ridgefield. Dietrich attended the University of Kansas for two years before transferring to Yale to complete his bachelor’s and medical degrees. He was enrolled in the Navy in 1952 to serve as a surgical resident at St. Louis, Mo.

Dietrich practiced plastic and reconstructive surgery in California until his retirement. He also served as president of the Santa Barbara County Medical Society.
The case of the CIA and butter clam toxin

“While much of America is viewing the Senate hearings on the activities of the Central Intelligence Agency with some dismay,” Yale Medicine reported in its Fall 1975 issue. J. Murdoch Ritchie, Ph.D., D.S.C., Eugene Higgins Professor of Pharmacology, was watching them with considerable concern.

“The object of Dr. Ritchie’s concern is a supply of the poison, saxitoxin, which the agency kept in violation of a Presidential order in 1969 to halt the development of biological and chemical weapons, and to destroy existing stockpiles. The Senate Select Committee on Intelligence, chaired by Senator Frank Church, learned this summer that a middle-level official of the CIA had failed to destroy supplies of saxitoxin and cobra venom.

Saxitoxin, which is derived from tissues of butter clams and other shellfish, was developed by the CIA for various possible covert activities. In testimony that seems more likely from a James Bond novel than a Senate hearing, one source claimed that the agency considered using the poison in suicide pills so that U.S. agents could kill themselves if they were caught by enemy agents. According to Dr. Ritchie, the amount of saxitoxin retained by the CIA, if properly administered, could kill up to 5,000 persons.”

The article went on to say that Ritchie had asked the agency and the Senate Committee to prevent the destruction of the shellfish toxin on the ground that it could be “extremely valuable for medical research on diseases of the nervous system and for our understanding of how the nervous system normally works.”

“The toxin,” he wrote in a letter to Church, “reacts in extremely small concentrations with a critical component of the nerve membrane, to block conduction in nerves. It can, therefore, be used to study the functional integrity of the nervous system.”

Asked about the outcome of the case, Ritchie (who continues to conduct research in the Department of Pharmacology as the Eugene Higgins Professor) told the rest of the story in a letter to Yale Medicine in September. “In the end the toxin was not destroyed,” he wrote. “At first, it was suggested that I take charge of the CIA’s saxitoxin, with the idea that I would be responsible for its appropriated distribution to scientists who asked for it. However, I realized that there would be too many applicants for the toxin, which was in somewhat limited supply. So I would be forced to ration it, or even deny some applications, and would surely make enemies. I therefore declined the offer but strongly suggested that it be held by the NIH, a recommendation that was indeed accepted.

“My work did not come up with any method of counteracting the effects of the poison saxitoxin or the development of new kinds of anesthetics—that neither has anyone else. It did, however, account for the main defect in multiple sclerosis, which is the inability of nerves that have demyelinated to conduct nerve impulses. Nerve conduction fails and paralysis ensues.

“Unfortunately, the ultimate cause of the demyelination leading to MS remains unknown.”

The Yale Management Program for Physicians in New York City

February – May, 2001
Seven Saturday sessions
An innovative educational program designed for physicians by physicians
A joint program of the Yale School of Management, the Yale School of Public Health, and the Faculty Practice of the Yale School of Medicine
Now accepting applications For more information contact: Manjula Shyam Yale School of Management Phone: (203) 432-0868 Fax: (203) 432-5734 E-mail: manjula.shyam@yale.edu www.managementmd.com