“I am stunned to learn here that
a patient-doctor interaction is assumed
to happen in 15 minutes.
That would have to be a kind of haiku.”

— Anna Deavere Smith
A dramatic turn

The doctor-patient relationship takes center stage in performer Anna Deavere Smith’s interpretation of medicine at Yale.

By Cathy Shufro

Learning for the long run

For a quarter-century the Wednesday Evening Clinic has offered steady care to patients and an unequalled lesson in medicine to Yale students.

By John Curtis

“Adrenaline and the ordinary, in varying proportions”

A student’s exposure to medicine in this former Soviet republic reveals a different rhythm in the OR and a vastly different take on relations between doctor and patient.

Letter from Armenia by Sharon Anoush Chekijian
No compliments for alternative care
To the Editor:
I date back way from the class of 1944. In my class were members M Issiah Puzak and James Bunce, noted on the in M emnian pages of the Yale Medicine that recently arrived in my mailbox.
In the same issue, I read of the growing popularity of unregulated alternative or complementary treatments (“Use of alternative medicine widespread among mentally ill,” Et al., Fall 2000 [W inter 2000]. I would prefer to call them unscientific or unproven.
My particular interest in retirement has been the exposure of the alternative care known as chiropractic. There are some 70,000 practicing chiropractors, legally called doctors, with 4,000 new graduates every year, compared to 15,000 medical graduates. In a survey of medical college deans, 67 termed the subluxation and adjustment theory to be false. I witnessed a student perform an adjustment of the neck and back at a chiropractic college, and was appalled. I have written a book to challenge this treatment titled Chiropractic: The Greatest Hoax of the Century? Yet, the practice flourishes.
Things were not so, way back in my student days of ’42. Perhaps the time is appropriate for Yale and other colleges of science to speak out on this subject.
Ludmila A. Choklowski, M.D., ’42
Kensington, Conn.

Building relationships in the classroom and the clinic
When we chose the lineup of feature stories for this issue of Yale Medicine, we didn’t make a conscious decision to focus on the doctor-patient relationship. True, performer and playwright Anna Deavere Smith had made this topic the focus of her one-woman show, Rounding It Out, for which she interviewed several dozen patients, physicians and staff (See Cathy Shufry’s story, “A Dramatic Turn,” page 22). Good communication—between doctor and patient, mentor and medical student—is also an idea running through John Curtis’ portrait of the Wednesday Evening Clinic (“Learning for the Long Run,” page 28). But the issue’s theme was completed when fourth-year medical student Sharon Chekijian filed her letter from Armenia (“Adrenaline and the Ordinary, in Varying Proportions,” page 34), describing the state of health care in her family’s ancestral homeland. Her observations, gathered over the course of a decade and a half-dozen visits to Yerevan, reveal a different rhythm for medicine in this ex-Soviet state, where doctor and patient may toast the success of the operation together and where the surgeon’s fee may be paid in livestock or potatoes.
Is the doctor-patient relationship alive and well where you practice medicine? What do medical students and young physicians learn from the profession about listening and communicating well? Drop us a line at ymm@yale.edu or the address below and tell us what you think.
Michael Fitzsousa
Editor
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How to reach us
Yale Medicine welcomes news and commentary. Please send letters to the editor and news items to Yale Medicine, PO Box 1612, New Haven, CT 06520-1612, or via electronic mail to ymm@yale.edu, and include a daytime telephone number. Submissions may be edited for length, style and content.

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FROM THE EDITOR

YAML MEDICINE SPRING 2001

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Letters

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Keep up the good work
To the Editor:
Yale Medicine has certainly gone upscale. It is quite a magazine—and I suspect a great marketing tool. Keep up the good work.
Dwight F. Miller, M.D., ’55

Visit Yale Medicine on the Web
The content of Yale Medicine is available on the Web in HTML and PDF formats. Visit us at info.med.yale.edu/ymm to view the current issue as well as a searchable archive dating to 1998. Alumni notes will appear on the Web starting with this issue. Additional online content includes video excerpts from Anna Deavere Smith’s performance of Rounding It Out in Harkness Auditorium (See page 20).

Snow falling on Cedar Street
A wet snow clings to the branches of a cedar tree outside Sterling Hall of Medicine in late February.
A drug discovered in a Yale laboratory made headlines this spring in the ongoing debate about the provision of AIDS medications in the Third World. The physician group Without Borders, called on the University, which holds the patent for d4T and ddI, to allow cheaper or generic versions to be sold in Africa. At issue was the fact that the drug’s licensee, Bristol-Myers Squibb, which mod­ified the license agreement in 1986 to allow cheaper or generic versions to be sold as well. The issue surfaced when an Indian pharmaceutical com­pany, Cipla, made an offer to provide triple-therapy AIDS cocktails at $150 per year per patient in developing coun­tries. That package included d4T at 4 cents a tablet. Doctors Without Borders, however, was unwilling to distribute the generic drug because of con­cerns over infringement of patent rights in South Africa. The humanitarian group pressed both the University and Squibb for a solution, and Yale students later joined in calls for price relief. The discussions reached senior levels of the Uni­versity and the Third World AIDS Task Force, which mod­ified the license agreement in order to make the drug more affordable and widely available. Squibb was free to set the price of the drug, the com­pany also sought permission from the University to offer it to patients in South Africa for patent relief in Africa. In recent years the drug, known generically as stavudine and marketed at Zerit, was approved in South Africa at low prices. The physicians’ group Without Borders asked that d4T be made available in South Africa at low prices. Without Borders, however, has no clear goal for prevention. “That is probably the most important thing to realize,” said the Yale faculty member on the committee, Edward H. Kaplan, Ph.D., a professor of both management sciences and public health. “You can get better results not only by increasing the budget, but also by changing the allocation.” The committee was estab­lished by the Institute of Med­i­cine at the request of the Centers for Disease Control and Prevention, which wanted to have a prevention framework in place before the 2000 pre­si­dential election. Merson said. One of the national efforts’ main failures, the report said, is in the allocation of HIV pre­vention resources. Merson for­merly follows reports of AIDS cases, but estimates of new HIV in­fections for 10 years, this approach yields old data. “It rewards peo­ple for counting cases of AIDS instead of preventing HIV infections,” Kaplan said. The report proposed a six­pronged prevention strategy. Allocation of resources should target not reported AIDS cases, but estimates of new HIV in­fections through anonymous testing of “sentinel groups,” such as drug users in treatment. Evaluations of existing pro­grams should determine whether interventions work. HIV prevention counseling should reinforce prevention messages among those already infected. Research and inter­ventions should strengthen local capacity to implement effective programs. Federal agencies should continue to invest in HIV prevention. Finally, the commitee recommend­ed overcoming social barriers to HIV prevention, such as oppo­sition to syringe-exchanges, comprehensive sex education and condom availability in schools, and facilitation of pre­vention efforts in prisons. "Despite the fact that we know so much about how to prevent HIV infec­tions, we can’t get the job done," said public health Dean Michael Merson, to­day, two of Yale’s faculty members on a committee that examined the Uni­versity’s AIDS prevention strategy. A realization of existing resources, the panel found, could reduce the number of new infections by 50 percent. "You can get better results not only by increasing the budget, but by changing the allocation," said Edward Kaplan, above, the other faculty member on the committee.

What's in a Name? Physicians at medical schools around the country usually provide their services through umbrella faculty prac­tice organizations that streamline administration, financial services, compliance programs and practice standards. Yale is no exception. But in recent years the Yale Facul­ty Practice, which represents the medical school’s 4,500 full-time clinical practitioners, has evolved into a more complex organization in order to accommodate the changing landscape of academic medicine. Reflecting this, the prac­tice announced in March that it is changing its name to the Yale Medical Group. According to Director David Luftik, M.D., "Yale's, the school’s senior associate dean for clinical activity, the words "faculty practice" suggested to some people that care was deliv­ered by interns and residents who were practicing as become physi­cians. The name conveys a clear message about our academic medical group and the clinical care we provide."
Pioneer in tobacco research receives first Winslow Medal

Last fall when the World Health Organization began negotiating a new global treaty aimed at curbing tobacco use, particularly among young people, Sir Richard Doll, M.D., M.Sc., looked on with a great deal of satisfaction.

In 1950, Doll published the first convincing evidence that smoking was the cause of lung cancer. This was during an era when a physician might try to calm a patient’s nerves by offering a cigarette. As it was known when it was first published, and is regarded by many in the United States as the founder of the modern discipline of public health. During his tenure at Yale, W. indow expanded the definition of public health from the narrow confines of public hygiene to include the prevention and control of heart disease, cancer, stroke, mental illness and diseases associated with poverty. According to David M (chief H. Merson, M.D.), many important changes occurred during W. indow’s tenure. Biostatistics evolved into microbiology to include parasitology and virology, and public health expanded to include the social aspects of sickness. Merson said Doll was selected as the first recipient of the medal because he is the “foremost epidemiologist of the second half of the 20th century.” Doll’s papers, which are “classics because of the rigor in their study design, the elegance of their analysis, and the clarity of their reporting,” established his reputation as the “epidemiologist’s epidemiologist,” Merson said. During the course of his career, Doll refrained from speaking out against tobacco companies because, as he said in an interview, “my job was to do the research and make evidence...” The active research worker has to disassociate himself from the steps that are taken as a result of his research.” But now that he is no longer actively researching the tobacco issue, he is happy to give his opinion on the continued efforts of those in the tobacco industry who market their products to youth. “It’s like selling heroin,” he said. “Onei he seems to be legal and the other isn’t, but they are both equally morally evil. I don’t object to the manufacture of it. We’re not going to stop that overnight. What I object to is its promotion, encouraging people to use it.” Doll, who received his medical degree in 1937 and his doctor of science in 1950 from the University of London, considers his work on tobacco to be his greatest professional accomplishment. Formerly the director of the United Kingdom Medical Research Council’s Statistical Unit, Doll was appointed the Regius Professor of Medicine at the University of Oxford in 1949. At Oxford he also directed the Cancer Epidemiology and Clinical Trials Unit, and has continued to work with the unit since his retirement as a professor in 1983.

Managing complex data about the brain

In recent years, the state of knowledge about the human brain—whether at the level of molecules, cells, or entire signaling pathways—has increased so much that it has given rise to a whole new field of study. The science of neuroinformatics looks for ways to sort and store these floods of data that will keep them widely accessible, open to interaction with other data and amenable to continual revisions and updates. A big step forward took place in October, when the winners of the Human Brain Project, a $4.6 million grant to the School of Medicine for the establishment of a multipurpose, neuronal database on the World Wide Web. The four-year effort of developing the site, known as Senselab (senselab.med.yale.edu), is headed by Gordon M. Shepherd, M.D., M.Phil., professor of neurobiology, along with colleagues Perry L. Miller, M.D., M.Eng., professor of anesthesiology, and director of the Yale Center for Medical Informatics, and M. Rachel Hines, M.D., Ph.D., assistant professor of research. “The purpose of the site is to support research on the integrative actions of neurons and circuits, in the same way that the Human Genome Project has so effectively supported research on genes and proteins.” —Senselab Director Gordon Shepherd

“The purpose of the site is to support research on the integrative actions of neurons and circuits, in the same way that the Human Genome Project has so effectively supported research on genes and proteins.”

In 1950, Doll published the first convincing evidence that smoking was the cause of lung cancer. This was during an era when a physician might try to calm a patient’s nerves by offering a cigarette.
Yale scientists can now visualize the previously unknowable with upgraded imaging facilities in the Sterling Hall of Medicine. At an open house in January, Frederick Sigworth explained the use of a new electron cryo-electron tomography, which can produce images such as the one below of gap junction membrane channels. These channel images allow for the exchange of ions and signaling molecules. Using electron crystallography, one of the principal approaches supported by the new electron cryo-electron microscopy facility, Vincenzo Unger calculated this image, the first to show the arrangement of membrane-spanning alpha helices on one side of the channel.

New facility brings cell imaging down to the molecule

Until Frederick J. Sigworth, Ph.D., needed electron cryo-electron microscopy to view the membrane proteins he studies, he sent a graduate student on the train to New York with a therapeutic electron microscope, one of four principal approaches supported by the new electron cryo-electron microscopy facility. Sigworth, one of its members, explained that the new facility is an expanded X-ray crystallography laboratory at the medical school. The new facility brings cell imaging down to the molecule.

To those who gave their bodies to medicine, a gesture of gratitude

As they begin to study medicine, students who aspire to be physicians or physician associates must first view the “patients” in the anatomy lab. “These patients had a wish,” said Lawrence Rizzolo, M.D., professor of anatomy, “that a hard-working, dedicated student would take care of them and use them to advantage.” The students know little about these patients at first—no more than their age, sex, and race. Over the course of six months, however, the students become intimately familiar with them as they chart the geography of the human body. They learn from the callouses on their hands, the scars from prior surgeries, tattoos on their skin and the signs of disease and repair they may find inside.

On Feb. 19, students and faculty held a Service of Gratitude in the Medical Library to thank the donors for their gift to science. During most of the 15 years students have organized the service, it was dyed, in the words of anatomy professor William Stewart, Ph.D., on a 1 1/2-hour meeting. People gathered and offered their thoughts on their first patients. About five years ago students decided to present a more formal program, Stewart said. The 7 1/2-minute ceremony this winter included songs and poems as well as remarks by students. Medical student Katera M Arwala tried to imagine her patient’s personal life in two poems she wrote. “When I examine your heart as a structure,” she said, “I will remember that you kept secrets in it.”

The service, Rizzolo said, allows students to express the frustrations, anger and other emotions that come with the experience of exploring a cadaver. “It is really their first experience with a patient, even though the patient is dead,” he said. “It raises a lot of thoughts about our own mortality and their lives as clinicians.”

Each year, when the anatomy class ends, the bodies are cremated. About every five years, when ashes have accumulated, they are interred in a common grave at Evergreen Cemetery in New Haven. This year, medical students plan to inscribe headstones for each of the five common graves that hold the remains of the bodies.

They learn from the callouses on their hands, the scars from prior surgeries, tattoos on their skin and the signs of disease and repair they may find inside.

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Ilene Wong, a first-year medical student, and Meredith Boudget, a student in the Physician Associate Program, benefited as their anatomy classmates paid homage in February to the donors who made possible their first insights into the workings of the human body. “From the start,” Wong read from her essay, “Remembering Tony,” “our teacher conveyed a service of gratitude to the donors who made possible our ability to explore the workings of the human body.”

New facility brings cell imaging down to the molecule

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Patients underestimate risks, overestimate benefits of elective angioplasty

When it comes to electing to undergo angioplasty, many patients believe that the procedure to open up clogged blood vessels can prevent heart attacks and prolong their lives without any significant danger. According to Yale investigators, this is a misconception and patients need a better understanding of the potential risks and benefits from their health care providers well before they undergo the procedure.

Angioplasty is an invasive procedure in which a balloon is inflated inside a blood vessel, most often a coronary artery, to flatten any plaque that blocks flow through the vessel. A metal device called a stent is often inserted to help keep the artery open. It can relieve chest pain, but there is no definite evidence to date that elective angioplasty will lower the risk of a future heart attack.

T hree-quarters believe the procedure would prevent a future heart attack, and almost as many thought it would prolong their lives. When asked about risks, less than half could recall a single risk associated with angioplasty. Results of the study appeared in the Journal of Internal Medicine in October.

“Our findings show that patients do not have the information they need in a format they can use to make the best decision about angioplasty for themselves,” says H. Olmstead.

“In my opinion, patients need to have a discussion about the benefits and risks of angioplasty before any elective procedure in order to think about the risks and benefits.” To achieve this goal, Olmstead plans to create a multifaceted approach to help inform patients and answer their questions and to set up a program to train young physicians to provide risk explanations patients can understand.

Study knocks popular cough and cold medication ingredient off the market

A study by Yale investigators of phenylpropanolamine, or PPA, one of the most frequently used ingredients in many cough and cold medications, found that it leads to increased risk of hemorrhagic stroke in women. Men may also be at a lesser risk. The findings provided the Food and Drug Administration (FDA) in October to advising ending the marketing and distribution of PPA-containing products, such as Alka-Seltzer Plus, Dimetapp, Eliquil and Robitussin.

The study took place at four research centers and was coordinated by the Yale investigators under a grant from two manufacturers of PPA. The results made front-page headlines worldwide because of the popularity of the products affected. Walter N. Kemeny, M.D., associate professor of medicine, one of four co-investigators at Yale, says of the PPA products, “They’re essentially gone.”

The paper detailing the five-year, $1 million study did not appear in the New England Journal of Medicine until Dec. 14, but the results were released earlier on the journal’s Web site because of the importance to public health. “I think the PPA decision was cautious but very appropriate,” says Kemeny. “There are alternative PPA medications for relief of cough and cold symptoms.”

The study was undertaken because of case reports associating PPA with hemorrhagic stroke—bleeding between the cerebral lobes or around the edges of the brain—an uncommon form of stroke, especially in the 15- to 40-year-old age group that was the focus of the study. The study did not look at ischemic stroke, by far the most common form of stroke.

The investigators examined 700 people who had sustained a hemorrhagic stroke and compared them to twice that number of control subjects who had not had a stroke. That database is the largest of its kind. The investigators are now using it to study other risk factors for stroke. “We expect to find new and more precise information about other risk factors for hemorrhagic stroke, including other drug products,” says Kemeny. “These additional analyses may have important public health implications as well.”

Third of doctors don’t practice what they preach

Public health experts decry health care conditions that result in 30 percent of the American population not getting routine examinations, preventive inoculations and screenings. They often cite barriers to entry into the health care system, such as lower economic status, language difficulties and lack of education. A study of physicians directed by a Yale investigator came up with the surprising result that doctors seem less likely than the rest of the population to have a regular source of care (kx) such as a primary physician.

The study was done while Assistant Professor of Medicine Cary F. Gross, M.D., was a fellow at the Johns Hopkins School of Medicine. Of 125 physicians who graduated from Hopkins between 1977 and 1987, some 5 percent had no kx during a seven-year survey period. While doctors may have other sources of care, those without an kx were much less likely to get cancer screening or an influenza vaccine.

Gross speculates that doctors don’t go to doctors because of what he terms a “fatalistic” belief in their capacity for self-care combined with the time demands of their medical careers. As is true of those who do not seek preventive care, he found that these physicians often also exhibit a “fatalistic” attitude, attributing health outcomes to chance. Gross says of the findings, which appeared in November in the Archives of Internal Medicine, “You have to wonder why we’re not heeding our own advice.” He does not know whether Yale graduates are more or less likely than other physicians to go to the doctor.

It can relieve chest pain, but there is no definite evidence to date that elective angioplasty will lower the risk of a future heart attack.
Shedding new light on depression

A Yale investigator and his Israeli colleagues have shown for the first time that the body has light receptors other than those in the eyes and help some cancer patients. That finding may help explain why using artificial light as therapy helps people with seasonal affective disorder (SAD), a form of depression believed to result from light deprivation, occurring most commonly during winter. It could also help lead to the development of light therapies for other forms of depression, according to the paper’s senior author, Assistant Professor of Psychiatry Dan A. Oren, M.D.

Oren and C. Neill Epperson, M.D., assistant professor of psychiatry and of obstetrics and gynecology, are testing women to see whether light therapy will allow them to avoid antidepressant medications, because of concerns about the drug’s potential side effects and/or toxic effects on the fetus. According to Oren, an open-treatment trial had “very encouraging” results. Yale and two other research centers are now pursuing a pilot study in hopes of undertaking a larger-scale investigation.

Radiation multiplies Salmonella’s anti-tumor properties

Traditional radiation therapy, when combined with a genetically modified form of the deadly bacterium Salmonella, could prove even more effective than the two alone, according to a report published this week in the Journal of Clinical Investigation.

“This is a major step forward,” said Dr. John M. Pawelek, the lead author of the study and associate professor of medicine at Yale University School of Medicine. “We have found that the combination of radiation and Salmonella is significantly more effective than either treatment alone.”

With chest pain, need for treatment can be a matter of perspective

Chest pain is not the same for everyone. It keeps some patients from enjoying daily activities. For others, despite identical diagnoses, the pain does little to reduce their quality of life. According to a Yale study, physicians will provide patients with better care by considering that difference before recommending invasive procedures, such as angioplasty, to improve blood flow to the heart to reduce the pain.

“Given the situational importance of distinguishing between patients’ objective capacity and the patient’s quality of life,” says Harlan M. Krumholz, M.D., professor of medicine and of epidemiology and public health, “and given that some patients are better served by being observed or discharged early, we need to develop a treatment approach that matches the patient’s objectives and capacity.”

A molecular clue for detecting bladder cancer

Discovered three years ago, a gene called survivin holds promise as a diagnostic marker for bladder cancer, according to a study published by Professor of Pathology Dario C. Altieri, M.D., of the Yale Cancer Center, and several colleagues in the Jan. 15 issue of the American Journal of Pathology.

The sixth most common cancer in the United States, bladder cancer has a 5-year survival rate of 75% if it is discovered and treated early.

The current means of diagnosing, cytodxoscopy and biopsy, are accurate but also expensive and painful. What the Yale study found may lead to a noninvasive approach, examining cells that the body abundantly sheds every day into the urine. In an analysis of urine samples from 16 healthy volunteers and 60 patients with various types of cancer, the protein product of the survivin gene appeared in the samples from patients with new or recurring bladder cancer — but not in those from the healthy volunteers or volunteers with various renal, cervical or vaginal cancer.

“The potential outlook for a test like this would be to improve the follow-up measures for patients after treatment,” says Altieri. Since bladder cancer can too often does recur, he adds, “We hope to see this urine-cell analysis develop into an alternative, safe, noninvasive and reliable approach at the first line of diagnosis.”

The lead author of the study was Shannon Smith, M.D., a urology fellow who died in March after a five-year struggle with brain cancer. “Her spirit was strong and inspiring and her commitment to this experimental work, even in the midst of the progressing disease, was admirable,” Altieri said.

et cetera...
Stem cell transplant shows promise for spinal cord repair

For the first time, Yale scientists have transplanted stem cells from an adult primate brain to repair the insulating sheath surrounding spinal cord axons in the same animal. These results, reported at the annual meeting of the Society for Neuroscience in November, raise hopes that patients taking long courses of antidepressant medications.

Antidepressants shown to promote new cell growth in the hippocampus

For the first time, Yale scientists have transplanted stem cells from an adult rat, their nuclei stained red, divide in this image of action potential of a neuron in the hippocampus. In the January issue of Experimental Neurology, the investigators further reported that similar cells derived from the adult human brain can repair axons in a rodent model of demyelination and improve impulse conduction.

Findings

Stem cells from an adult rat, their nuclei stained red, divide in this image from the Kocsis lab. Yale scientists have transplanted stem cells to repair demyelinated axons in primate and rodent models.

For the first time, Yale scientists have transplanted stem cells from an adult rat, their nuclei stained red, divide in this image of action potential of a neuron in the hippocampus. In the January issue of Experimental Neurology, the investigators further reported that similar cells derived from the adult human brain can repair axons in a rodent model of demyelination and improve impulse conduction.

“Finding the way to deliver these therapeutic agents safely and effectively to the brain of a primate, and to observe the beneficial effects, is one of the great challenges that scientists face in treating a range of neurological conditions,” said Ronald Duman, professor of psychiatry and pharmacology. Duman was senior author of the study, published in the Dec. 15 issue of the Journal of Neuroscience.

The hippocampus is the part of the limbic brain that is involved in learning, memory, mood and emotion. It is one of the brain regions where production of neurons in adults occurs, including humans. Previous studies have demonstrated that stressful experiences, both physical and psychological, lead to neuronal loss in the hippocampus and that antidepressants can block this cell loss.

Duman’s laboratory has been studying the mechanism of action of antidepressants in rodents for over 14 years. The researchers have focused on cellular actions of antidepressants, looking at the role of the intracellular signal transduction pathways that control neuronal function. They have identified several actions of antidepressants that indicate that they influence the survival of the number of neurons in the hippocampus.

This study was intended to look at whether antidepressants increased the birth of neurons in the hippocampus. The researchers tested similar classes of antidepressant drugs, as well as electroconvulsive seizure therapy (ESCT) and an antipsychotic medication. ESCT is clinically the most effective treatment for cases of depression that are resistant to available drug treatments. As expected, repeated administration of ESCT increased the number of neurons in the same area by 50 percent to 70 percent. The antidepressants that were administered included a monoamine oxidase inhibitor (tranylcypromine), a serotonin-selective reuptake inhibitor (fluoxetine) and a noradrenaline-selective reuptake inhibitor (reboxetine).

Acute administration of the antidepressants (one to five days) did not lead to any significant cell changes. Results were seen after 14 to 30 days of administration, which is consistent with treatment regimens for the therapeutic response to antidepressants. These studies suggest that increased neurogenesis in the hippocampus could counter the effects of stress on hippocampal atrophy and contribute to the actions of antidepressant treatments.
FINDINGS
Probing the genetic basis of emphysema

In separate studies, Yale researchers have demonstrated that the genes that code for interleukin-1 (IL-1) and gamma-interferon can influence pulmonary emphysema. Using transgenic mice that were genetically engineered to express these genes in the adult mouse lung, Jack A. Elias, M.D., section chief of pulmonary and critical care medicine, and a team of researchers including Zhout Zhu, M.D., Ph.D., Tao Zhang, M.D., Ph.D., Chuan Guan Lee, M.D., Bing M. A., M.D., and Qinghe Chen, M.D., have demonstrated that these genes, which are known to cause inflammation, also cause pulmonary emphysema similar to the kind seen in patients with chronic obstructive pulmonary disease (COPD). COPD affects 65 million people in the United States alone and is the fourth leading cause of death worldwide.

The first study, published in the November issue of The Journal of Clinical Investigation, highlighted the potential importance of IL-1 in the development of emphysema and in the exaggerated mucus production seen in these disorders. Since IL-1 is also thought to contribute to asthma, this study also demonstrated that common mechanisms might underlie the development of both of these lung disorders.

The second study, published in the December issue of The Journal of Experimental Medicine, shed light on the potential role of gamma-interferon in the development of COPD. Elias notes that the symptoms in the two transgenic systems used in the studies can vary from one person to another.

“We saw different types of inflammation, differences in mucus production and different rates of emphysema development in the two different transgenic systems,” said Elias. “These differences recapitulate, in many ways, the individual-to-individual differences seen in groups of patients with COPD and may explain why only some patients have exaggerated mucus production while others have rapidly progressive or slowly progressive disease.”

Elias adds, “The results also provide a mechanistic explanation for the observation that asthmatics who smoke cigarettes have the most rapid rates of loss of lung function.”

In the normal lung, there is a fine balance between proteins that degrade lung tissue, called proteases, and proteins that inhibit protease function, called antiproteases. Researchers have assumed that emphysema develops when the activity of the proteases outweighs the controlling capacity of the antiproteases.

“Pulmonary inflammation is a characteristic feature of lungs from patients with COPD. However, the way that inflammation causes emphysema has not been defined until now,” said Elias. “Our studies demonstrate that IL-1 and gamma-interferon cause the impressive increases in two classes of proteases called matrix metalloproteinases and cathepsins. They also caused selective decreases in antiproteases.

Estrogen deprivation associated with loss of dopamine cells

Estrogen deprivation leads to the loss of dopamine cells in the brain, a finding by Yale scientists that could help explain why Parkinson’s disease is more likely to develop in men than in premenopausal women and why it increases in women after menopause.

“Without estrogen, more than 30 percent of all the dopamine neurons disappeared in a major area of the brain that produces the neurotransmitter dopamine,” said D. Eugene Redmond Jr., M.D., professor of psychiatry and neurogeriatriy and director of the Nervous Transplantation and Regeneration Program. The discovery was made after a team led by Redmond removed the ovaries of female monkeys, thereby depleting their bodies of estrogen and other gonadal hormones.

Within 10 days, key neurons in the brain that protect against Parkinson’s disappeared. After 90 days the cells appeared to be permanently lost. The scientists were able to regenerate the cells by administering estrogen within 10 days. Redmond said monkeys were used in the study because they have menstrual cycles and more other similarities to humans. The researchers were interested in sexual differences in dopamine neurons in the substantia nigra area of the midbrain, whose destruction is associated with Parkinson’s disease and dementia.

The study was published in the December issue of The Journal of Neuroscience. The principal investigator was Caba Larach, M.D., Ph.D., professor of obstetrics and gynecology and of neurobiology. The researchers have assumed that emphysema develops when the activity of the proteases outweighs the controlling capacity of the antiproteases. Researchers have assumed that emphysema develops when the activity of the proteases outweighs the controlling capacity of the antiproteases.

A lesson while dying

The dying young man of Johnson City, Tenn., taught Abraham Verghese, M.D., something about the meaning of life. A professor of medicine at Texas Tech University in El Paso and a contributor to The New Yorker, Verghese is the author of the award-winning My Own Country, his account of treating men who returned from large cities to their Tennessee home after contracting HIV.

Speaking at medical grand rounds in November, Verghese said that as his patients faced death, they told him that wealth, power and appearance mattered little. “Instead, they found that meaning consistently resided in the successful relationships they had negotiated over a lifetime, particularly with parents.”

Clinical research ‘riddled with conflicts’

Protection of human subjects and the integrity of clinical trials are in jeopardy from the new economics of drug development, according to Marcia Angell, M.D., a lecturer on medical ethics at Harvard Medical School and a former editor of the New England Journal of Medicine.

While editor of the journal, she issued an apology to readers for 19 instances in which the journal had published reviews of treatments even though the review authors had informed the editors of financial connections to drug companies. The editors admitted failing to apply journal policy, which prohibits review authors from having a financial interest in a company that makes a product discussed in the article.

As more scientists and institutions have financial stakes in research, she told faculty and students at a meeting of the Medical School Council in February, the drug approval system has become “riddled with financial conflicts of interest.” She suggested making drug company funding, clinical testing and ethical oversight independent of each other. “The result would be a system of checks and balances in which the influence of industry funding would be minimized,” she said.

The ethics of stem cell research

In 1981, before publishing his theory that tissue is made up of tiny particles he called cells, German physiologist Theodor Schwann sought permission outside the realm of science. “He asked the religious authorities whether it was OK,” said Ronald D. McKay, M.D., Ph.D., chief of the laboratory of molecular biology at the National Institute of Neurological Disorders and Stroke, where he studies stem cell differentiation. “The current controversy over stem cells,” said McKay at a meeting of the Medical School Council last fall, “is nothing new.” Embryonic stem cells offer the promise of cures for such diseases as Alzheimer’s and Parkinson’s, but they must be extracted from embryos that are destroyed in the process. “For certain people,” said McKay, “if you take cells out of an early embryo you commit an act of ethical impropriety. We have people who might benefit from these cells, and that is another moral issue. There is no way of moving forward without making ethical decisions.”

The healing power of music

Twenty-five years ago, Oliver Sacks, M.D., tore off his left quadriceps while mountaineering in Norway and was saved by reindeer hunters. Following the accident, “the clumsy limb didn’t seem to be mine. It was as if I had no internal sense of pacing,” he said last fall during “Neurotherapeutic Effects of Music,” a symposium at the School of Medicine that explored the effectiveness of music in treating neurological disorders. Music, he said, helped him recover his “kinetic melody” and walk again. “Suddenly, . . . I ended up starting to play in my mind and in some unconscious way I found myself walking to it,” Sacks, a neurologist and the author of Awakenings and other books, was experiencing the connection between music and healing that he had observed among patients with Parkinson’s disease. Although they could not initiate speech or walk, some were able to sing or dance when music was played. One patient stayed absolutely still with a finger on her eyebrows for most of the day, but came alive playing Chopin on the piano. Said Sacks: “I saw music as a mysterious, liberating power with these people who were otherwise virtually incommunicable.”

—Rachel Engers
The first 200 years

An exhibit prepared for Yale's Tercentennial explores the landscape of New Haven medicine from 1701-1901.

Today, medical students attending Yale have access to close to 1,000 full-time faculty members, modern labs and classrooms and a library containing more than 400,000 volumes and journals, not always the case. In the early days, according to a description from a medical apprentice at the time, the curriculum was made up of "books on the shelf, the skeleton in the closet, the pestle and the pill-slab in the back room, roaming the fields and forests for roots and herbs, and following astride ... the horse which was honored with the saddlebags." If the medical school got started was the subject of Mединe at Yale, 1701-1741, the first in a series of exhibits at the Cushing/Whitney Medical Library in celebration of the University's Tercentennial this year. Based in part on a forthcoming history of the school by its 14th dean, Gerard N. Burrow, M.D., the exhibit touches on early events in medicine at Yale, including the awarding of the first M.D. degree by an American university in 1723 (albeit an honorary one) and the contributions to medicine of such notable Yale College graduates as lexicographer Noah Webster—whose book Webster's T ercentennial this year. Based in part on a forthcoming history of the school by its 14th dean, Gerard N. Burrow, M.D., the exhibit touches on early events in medicine at Yale, including the awarding of the first M.D. degree by an American university in 1723 (albeit an honorary one) and the contributions to medicine of such notable Yale College graduates as lexicographer Noah Webster—whose book Webster's Dictionary of the English Language (1828) was hailed by William Blackwood, the janitor at the time and effort," says Historical Librarian Toby A. Appel, M.D., M.L.S., who curated the exhibit. "It was like a mission for them. They really wanted it to be good."

The first 200 years of medicine at Yale, especially the 19th century, can be summed up as "a strong start and a weak finish," says Burrow, adding that numerous efforts to raise standards almost cost the school its existence at the start of the 20th century. But the best years were yet to come.

"There were a lot of charlatans" trying to pass for doctors, Burrow says. "Medicine didn't seem to be going anywhere." To distinguish itself from the competition—and distance itself from the quacks—the medical school raised its standards. But enrollment suffered, as did the school's finances. Rather than retreat, the faculty members, all of whom were part-time, diverted their Yale salaries to the school and took IOUs. "That is what is remarkable about the medical school, that people who were not getting a great amount of money donated their time and effort," says Historical Librarian Toby A. Appel, M.D., M.L.S., who curated the exhibit. "It was like a mission for them. They really wanted it to be good."

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The exhibit *Medicine at Yale, 1701-1941* may be viewed online. See [http://info.med.yale.edu/library/exhibits/yalemed1/](http://info.med.yale.edu/library/exhibits/yalemed1/).
A dramatic turn

The doctor-patient relationship takes center stage in performer Anna Deavere Smith’s interpretation of medicine at Yale.

I didn’t trust anyone. Doctors wasn’t listening. I had to fight. I had to advocate for myself to get doctors to listen to me. I had to learn to say, “What’s the side effects of this?” Learn to say, “No, I’m not takin’ that, give it to someone else, let someone else try it first.” ... I am very conscious and very responsible for other people’s health when it comes to my virus. And I says [to the doctor], “Look, before you examine me put some gloves on. I have the virus.” She went out of the room and she never came back. She never came back.

When you’re listening to a patient tell you things that you have to integrate into a whole body of knowledge you have, it’s hard to listen well, because your mind is trying to filter out what they’re saying. And consider alternate diagnoses and so forth. So you’re really not listening; you’re trying to solve the puzzle ... and so it just sort of goes by you that they said something very, very important. You didn’t hear it.
The playwright and actress Anna Deavere Smith stands in the well of Fitkin Amphitheater musing about how patients and doctors manage under pressure when she slips on a white coat and transforms herself into Yale physician Asghar Rastegar, M.D.

"I have looked at every single patient as being a phenomenal new experience," says Smith, using Rastegar’s words and his Farsi accent. "Excited to walk in that room. Oh yeah, oh yeah, no question about it. Phenomenally excited. Every time, every time, every time."

Moments later, Smith portrays another doctor, Forrester A. Lee Jr., M.D. ’79, ‘81, a cardiologist and the school’s assistant dean for multicultural affairs, who calmly and deliberately describes how medical training itself can block vital avenues of communication. "When you’re listening to a patient tell you things that you have to integrate into a whole body of knowledge you have, it’s hard to listen well, because your mind is trying to filter out what they’re saying. And consider alternate diagnoses and so forth. So you’re really not listening; you’re trying to solve the puzzle..." and so it just sort of goes by you that they said something very, very important. You didn’t hear it."

Sitting down in a chair, Smith becomes a patient, speaking with a trace of a Southern accent. She is Frankie H Arvis, a woman with HIV who has been treated at Yale.

"I didn’t trust anyone. Doctors wasn’t listening. I had to fight. I had to advocate for myself to get doctors to listen to me. I had to learn to say, ‘That’s the side effects of this.’ Learn to say ‘No, I’m not takin’ that, give it to someone else, let someone else try it first.’... I am very conscious and very responsible for other people’s health when it comes to my virus. And I say [to the doctor] ‘Look, before you examine me put some gloves on. I have the virus.’ She went out of the room and she never came back. She never came back.”

The physicians who crowded into Fitkin for medical grand rounds in mid-November had not come to hear a colleague discussing a disease but rather to watch an outsider make a case for the potential richness of doctor-patient communication. Playwright and actress Anna Deavere Smith used the words of physicians and patients from the Yale community to create Rounding It Out, a 90-minute examination of how doctors and patients view one another.

The recipient of an MacArthur Foundation fellowship for creating a new genre of documentary theater, Smith has appeared in film and on television in The American President, The West Wing and The Practice but is best known for her solo stage performances depicting communities in turmoil. In Fires in the Mirror: Crown Heights, Brooklyn and Other Identities, Smith portrays two dozen real people from city bureaucrats to housewives, to explore the 1991 clash between black and Jewish residents of Crown Heights. In Twilight, Los Angeles, 1992, she examines the riots sparked by the Rodney King verdict.

A less obvious crisis brought Smith to the medical school: the erosion of intimacy between patient and physician. In 1997 Ralph L. Horwitz, M.D., chair of the Department of Internal Medicine, and Rastegar, the subject of the opening scene and the department’s associate chair for medical education, had been discussing how to train novice doctors to listen better. When they heard Smith speak on campus on Martin Luther King Day in 1998, “It struck us that she is probably the best listener we had ever seen,” Rastegar recalls. And so Smith came to Yale last summer and fall to interview 22 physicians, nurses, and patients and their families to create what she calls “a first draft,” weaving together excerpts from the interviews with her own commentary and songs sung by Lynette Dupree and Suzzy Roche. In Fitkin and again the next day in Harkness Auditorium, Smith performed for packed houses that included the five physicians and six patients whose words she spoke from the stage. Noting that “the intimacy of transactions is dissolving” in our socie...
For a long time medicine took the view that if you perfected yourself as a physician, you would have a full and complete life. That everything else would fall into place. That the perfect doctor would be the perfect person. And there's nothing more arrogant. And nothing less true.

Smith portrayed Associate Dean Ruth Katz, M.M.H.S., M.D., an oncology fellow reported that Katz's chart had been lost and that he had to take a new history from the very beginning. He came to the question of her occupation and learned that Katz was associated dean of the medical school. Now he looks up and he said, 'At this medical school?' And I said, 'At the Yale School of Medicine.' He found my files within a half an hour.

The last patient portrayed on the stage was Karina Darves, a woman with cancer. "People think that just because you have a terminal illness, or chronic or whatever they want to call it, all of a sudden every day is just precious and wonderful. I still beep my horn when somebody's at the red light for too long." She pauses. "I wish sometimes people would feel sorry for me. Ya know? Because it's really tough living this... I am a young woman... dying."

The presentation was an "amazing reminder of how valuable and privileged our connections with patients are," said Stephen J. Huot, M.D., associate professor of medicine. "It was wonderful to see humanity as part of medical grand rounds. First-year medical student Michael Shapiro said watching Smith portray Yale doctors made him ask himself again how well he listens. "Anna Deavere Smith in essence was holding a mirror up to the audience and saying, 'Look at you, look at what you're doing.'"

Shapiro's classmate Jenny Yee, said that by inviting Smith to campus, the medical school administration had validated Yee's belief that doctor-patient communication is vital. Some students, Yee said, believe that understanding science is more valuable than understanding patients. "They regard the required first-year course known as: 'The Doctor-Patient Encounter' as a 'blah-blah-class," said Jenny Yee. "Let's go study biochem now."

Musician Roche, formerly of The Roches, said she felt elated after performing a script about medicine for an audience of physicians.
It’s tough. It’s like playin’ God to say who is gonna live and who’s gonna die. So I was lucky. I passed all their tests. So then comes the waiting and that’s the hardest part. You get there and you’re wondering. They tell you, “You’re on the list now.” You’re waiting for this heart to come. Gender, race, nothing makes a difference.

People think that just because you have a terminal illness, or chronic or whatever they want to call it, all of a sudden every day is just precious and wonderful. I still beep my horn when somebody’s at the red light for too long. I wish sometimes people would feel sorry for me. Ya know? Because it’s really tough living this.

It’s what theater could really be. Instead of big stars and People magazine, it could be relevant to people’s lives in their own community.

For third-year resident Christopher Ruser, M.D., Rounding It Out served as an antidote to the effects of residency. “I think residency has a tendency to depersonalize patients because of pressures, time limitations, fatigue. Watching Smith reminds us why we chose this career. We are privileged to be able to sit in a room and hear everything, to find out what their illness means to them as a complete person.”

Establishing that kind of connection with a patient is essential to good care, according to Rastegar. “People recognize quickly if you see them as a whole human being or are just treating them as a disease. Despite all the wonderful therapeutic modalities we have developed, there are many diseases we cannot cure. So our role is helping them adjust to the illness and go on with their life. You need to know the whole person to do that. It’s in a marriage between scientific understanding and understanding of the human being in his or her totality that we can provide the best care.”
Learning for the long run

For a quarter-century the Wednesday Evening Clinic has offered steady care to patients and an unequaled lesson in medicine to Yale students.

Story and photographs by John Curtis

At the Wednesday Evening Clinic, medical students provide the first line of care, taking histories and examining patients before presenting their cases to the attending physicians in the clinic. Here, Sarah McKenzie goes over the details of a case and her proposed treatment plan with Morris Dillard, right, one of the clinic’s founders and, until five years ago, its director.
Kathleen White, M.D., likes to tell the story of the clinic patient who worried that her doctor was not there to care for her. Although surrounded by people in white coats with stethoscopes dangling from their necks, none of them was the person who knew and understood her medical history and with whom she had established a bond. They were doctors, but they were not her doctor. Her doctor was a medical student, working under the supervision of attending physicians. And the patient had been receiving her primary care at the Wednesday Evening Clinic.

Since the mid-1970s, the clinic has provided care to the New Haven community while giving students a chance to practice "longitudinal," or long-term, medicine and learn how to connect with their patients. "This is the only place in medical school," said Fran Balamuth, the clinic’s student director, "where you get to see the same patient again and again."

This is no small thing. Typically medical students spend no more than four weeks on each of their clinical clerkships. That time is often spent watching residents work, with an occasional chance to practice hands-on medical care under supervision. Some schools offer longitudinal preceptorships in the first two years of medical school, and some student-run clinics provide opportunities to assist in emergency care or serve as patient advocates. The University of Connecticut places first-year medical students with practicing clinicians, a match that continues through the third year of medical school, White said. But in general, at Yale and around the country, medical students have few opportunities to follow patients over time.

At the Wednesday Evening Clinic, the students are the first to see patients, the first to take histories and the first to conduct physical examinations. "The whole idea of longitudinal care struck me as being an awfully important one," said John E. Whitcomb, M.D., ’77, one of the clinic’s earliest student participants, who now practices emergency medicine in Milwaukee. "I wanted to have a relationship with people."

Added Lynn E. Sullivan, M.D., ’66, ’81, ’00, who spent 18 months in the clinic when she took time off from medical school to have her second child, "It isn’t the fleeting kind of experience you have on your clerkships. My patients would ask for me by name and only want to see me." Sullivan, now an assistant clinical professor of medicine, is also one of the clinic’s attendings.

A year ago the clinic’s student practitioners honored the man they credit not only with founding the clinic a quarter-century ago, but with keeping it going and making it a warm and welcoming place to learn medicine. They held the first lecture in recognition of G. Morris Dillard, M.D., M.D., who served as the clinic’s director until five years ago. Howard K. Koh, M.D., ’77, M.P.H., now Commissioner of Public Health for the Commonwealth of Massachusetts, was the first speaker at the Morris Dillard Honorary Lecture, in January 2000. "On rare occasions, one has the incredible fortune to gain a mentor who changes your life," Koh said of Dillard. "Dr. Dillard believed in us and in our full potential. He encouraged us to become doctors in our own way. When he adopted you as a student, he would stand by you forever." Dillard has counseled students, nurtured them and bucked up their flagging spirits. Each Thanksgiving he cooks one of his legendary gourmet dinners for the clinic. "He made it very warm, friendly and cohesive group of people," said White, who succeeded Dillard as the clinic’s medical director five years ago. "He is the heart and soul of the clinic," said Wendy Garnett, who is in her seventh year of the M.D./Ph.D. Program and until recently served as the clinic’s student director.

The clinic started in the mid-1970s, when students asked the medical school administration for a longitudinal primary-care experience. The administration declined, but invited students to organize their own program.

"They gave the students the responsibility for forming the clinic, running the clinic and obtaining the appropriate support from the faculty," recalled Dillard. Students found space in the conference room that serves as meeting place, dining room, lounge, office and consulting room for the Wednesday Evening Clinic, director Kathleen White and student director Fran Balamuth discuss one of the evening’s cases.

"Don’t stop exercising," Sarah Nikiforow tells her patient, Mary Jacob, who’s in for a checkup. Nikiforow, who mentions Jacob’s cerebral palsy, tests her patient’s arm strength.

This is the only place in medical school where you get to see the same patient again and again.

— Fran Balamuth, student director of the Wednesday Evening Clinic.
in the Primary Care Center, which was closed evenings, and enlisted the support of physicians, nurses and support staff willing to volunteer their time. “At first it was very difficult to get patients,” said Dillard. “But we were the only clinic open at night in the hospital. We were the first clinic to have an on-call physician. We could be contacted 24 hours a day, seven days a week, every day of the year.”

Then, as now, patient population came largely through the Primary Care Center, the emergency department and self-referrals. Although it had the virtue of being open at night, the clinic also acquired a stigma it has since overcome. “The students endured the discrimination of being a student clinic, despite the presence of attending,” said Dillard, who, along with clinic director White, leads a rotating cadre of faculty and community physicians who supervise the students.

A white-haired, bespectacled doctor who listens quietly as students present cases, Dillard tells her 35-year-old with cerebral palsy. “That’s what’s called post-traumatic stress disorder. It’s a difficult patient from the Sudan with a calcified worm under her skin. Often the group breaks up into two or three smaller sessions for case reviews with an attending. By 6 p.m. the students are ready for the two to four patients each of them will see.

“We do a thorough history,” said M. Odaniel. “We do a physical exam and formulate our own thoughts, then present the patient to the attending.” The student returns to the examination room with the attending, who may obtain more history or conduct another physical exam. “The student may have already come up with a plan of treatment”, said White, “and the attending will verify specific exam findings and confirm the plan or alter or add to it.”

Some nights, when attendings are in short supply, the students wait their turn for a consult. Some students huddle with attendings in a corner or the doorway as others squeeze into the conference room to look for patient charts or grab a slice of pizza. Their cases run the gamut—a 76-year-old woman with a lung obstruction, a patient with diabetes, a woman suffering from osteoporosis, a patient with chest pain, a refugee from Sierra Leone with post-traumatic stress disorder.

One evening Sarah N. Kikfrow’s patient was Mary Jacob, a 36-year-old with cerebral palsy. With five years at the clinic (she’s in her eighth year of the M.D. Program), N. Kikfrow is the clinic veteran. Jacob, who has arthritis and occasional muscle spasms, has been her patient for years. “I don’t stop exercising,” N. Kikfrow told her, after a physical exam. “That’s what’s keeping you in such good shape.”

Opening relationships with patients are but one of the benefits of the clinic for students. Another is the chance to work with a network of physicians they will see repeatedly over the course of a year or longer. During their time at the clinic the students observe a variety of styles, including Dillard’s. “He steps back and does nothing at times and the students take over and make a decision,” said clinic director White. “He has made it a very academically challenging place.” Such longitudinal clinics, White said, provide an obvious benefit to medical students. “You watch them start as clumsy ducksling and then blossom into competent and caring clinicians.”

The clinic blends elements of the real world and an idealized vision of medicine. With their limited case loads and no need to make a living from clinical practice, students have the luxury of time denied many physicians. They are on call and often accompany their patients to other medical appointments or the hospital. “It’s a great opportunity for the patients,” said Shelly H. Arjan, M.D., who’s worked at the clinic for three years. “The students do excellent follow-up.”

“Patients who have medical students helping to take care of them are some of the best- cared-for patients,” said Sullivan. “The students are just aching to see patients and start being doctors. This is a way in which they can do it in a very organized, safe and nurturing environment.”

Dorothy M. Odey, a patient at the clinic since 1988, has never thought twice about being seen by medical students. “I had it all good ones,” she said. “I knew if I had a problem I could call someone. They are helping me through my crisis right now. When my husband passed away in May, Dr. Dillard was right there for me.”

The students themselves, White said, have asked for some changes in the program. They want more constructive criticism from the attendings and more detailed instruction in giving a physical examination. “The nature of the clinic is that we attempt to give feedback at the time, as difficult as it is,” White said, adding that Herbert S. Chase Jr., M.D., deputy dean for education, is planning an evaluation of the clinic’s value as a teaching tool.

A year in the clinic replaces a month-long primary-care clerkship, making it very attractive to students in the M.D./M.P.H. Program, who have filled most of the 14 student staff positions for the past three years. The clinic lets them advance their clinical skills while they work on their research projects and it provides a welcome break from days in the lab. Students in the clinic are trying to broaden their outreach and recruit more students outside the M.D./M.P.H. Program.

By 9 p.m. the students are seeing their last patients of the evening. Long after patients have left, the students will stay on, writing up their notes from the evening’s cases. Few leave before 10 p.m. and some stay until midnight, filling out charts. “There is no doubt in my mind that the care our patients receive is surpassed by no other clinic,” said Dillard. “The original clinic was designed by students to meet one a week throughout the entire year, to be responsible for patients every day throughout the year.” In return, the students receive an educational experience equal to the clinical responsibility.”
“Adrenaline and the ordinary, in varying proportions”

A student’s exposure to medicine in this former Soviet republic reveals a different rhythm in the OR and a vastly different take on relations between doctor and patient.
On the surgical service at First Hospital in Yerevan, the Republic of Armenia’s only teaching hospital, rounds begin each morning at 9:15. This might seem late to a doctor from New Haven, where residents and students “pre-round” at 4:30 a.m. in preparation for the daily ritual two hours later. But here in Yerevan the surgeons virtually live at the hospital and there is little need to catch up each morning.

Rounds are conducted in Russian, the lingua franca of professional and intellectual life in this former Soviet state, and consist mostly of a seated discussion in a smoky room. There is no operative schedule as such, no operating-room start time. The operating room is reserved on a first-come, first-served basis by alerting the nurse in charge that there will be a patient arriving shortly, after which begins the process of negotiating for staff to assist in the surgery.

Emergencies are numerous and take priority, but the hospital has no emergency room. Patients are evaluated in the driveway, the hall or the doctors’ offices depending on the severity of their illness.

On this hot, dry morning, Gevork Yaghjyan, M.D., Ph.D., and I are back in his office by 10:15, the time when patients and doctors begin to file in for the day’s consultations. The door opens without a knock: “Gevork Vigenovitch, ais deh a?”

“Is Gevork Vigenovitch here?”

An assistant professor, Gevork is the youngest faculty member at Yerevan State Medical University, and at the age of 31 he has already earned his patronym, a sign of respect. Gevork is one of eight microsurgeons in Armenia, a country of 3.3 million inhabitants bordered by Azerbaijan, Georgia, Iran and Turkey.

Every day is different: no clinic days, no operative days, just a combination of adrenaline and the ordinary in varying proportions. There is no call every third or fourth night. There is call whenever you are lucky to be on the schedule. And if you are one of the only specialists in the country, call is every day. Doctors here ask for extra duty. It is their only true source of income, not counting the official pay of about $20 a month. How many of us would enter a profession with numbers like that?

In addition to what they earn from the hospital, the surgeons receive fees from their grateful patients. What they are paid depends on the means of the patient’s family. It is not unheard of to receive a ton of potatoes, or even a cow, from a patient unable to pay in cash. ... In outlying country hospitals, the pay might be a home-cooked meal followed by toasts of vodka brought to the hospital by the family to celebrate a successful operation.

Sharon Chekijian graduated from the School of Medicine in May and will begin a residency in surgery this summer at the Hospital of the University of Pennsylvania.
Artur was among a group of medical students traveling to the region when soldiers stopped their bus at a checkpoint. The worried students stepped out onto the road to be searched. Artur recognized the scarred hand of one of the soldiers from a photo he had seen in a lecture in Yerevan. “Was Gevork your surgeon?” Artur asked, thinking quickly. The soldier said, “No, Gevork was not my surgeon.” He paused and looked at Artur, sizing him up, then wrapped his huge arms around the student in a bear hug. “Gevork,” he declared, “is my brother.” With that, Artur and his fellow travelers were sent on their way.

Our scrupulous avoidance of treating one’s own family or friend is unthinkable in a country where all business is conducted on the basis of personal contacts and many patients and doctors become friends for life. Gevork is well known in Nagorno-Karabakh. During the peak of the fighting in the early 1990s, he made dozens of trips by helicopter to perform reconstructive surgery. The first time Gevork invited me to the hospital in Yerevan, it was to help him change the bandages of a soldier from Nagorno-Karabakh who had been flown to the capital after a land-mine explosion. Each day in First Hospital brings new surgical challenges. One day, a girl from a region near ex-Soviet Georgia was brought in. Local doctors had treated her after a bad car accident, but her leg became so infected that the skin had to be removed from the knee to the ankle. We treated her with antibiotics and then skin was grafted from both hips to cover the defect.

There was the patient with a gunshot wound to the buttocks that had severed the sciatic nerve. Another gunshot victim arrived with the third and fourth metacarpal bones of the hand fractured beyond recognition. There was a young girl with a facial nerve severed by a small injury who looked fine until she smiled and her face took on a twisted shape. For the longest time I forgot about what we commonly think a plastic surgeon does. In the middle of the relative chaos of First Hospital, there are the rare few who seek cosmetic surgery, breast augmentation, rhinoplasty or facelifts. These seem frivolous in a place where every induction of anesthesia and every operation bear an unbelievable risk compared to those done in the vastly more controlled settings of the operating rooms back home.

Gevork knows that world as well. Early last year, he came to Yale to study the physiology of surgical flaps with J. Grant Thomson, an associate professor in the section of plastic and reconstructive surgery. It falls to Gevork as surgeon to make sure that the anesthesiologist, nurses and others who assisted receive fair compensation—a matter that can become quite complicated when the currency is livestock. Remuneration comes in other forms, too. In outlying country hospitals, the pay might be a home-cooked meal followed by toasts of vodka brought to the hospital by the family to celebrate a successful operation. It was difficult for me to imagine American surgeons sitting down to a meal with the patient’s family. They laughed when the doctors told them that I was not used to such close relations between patient and doctor.

The personal touch in Armenian medicine is apparent in other ways as well. Apartment buildings usually have a doctor living there. So that even when doctors are home, for all intents and purposes they are on call. Any emergency is their responsibility—not a legal or an administrative responsibility but an ethical and human one that everyone takes for granted.

Once a medical student named Artur was traveling in the mountains of Nagorno-Karabakh, six hours away from Yerevan. Nagorno-Karabakh is an historically Armenian land and a focus of Armenian art and culture. Under the Soviets, Stalin redrew maps of the region and included Nagorno-Karabakh in the Soviet Republic of Azerbaijan. Fighting broke out there in 1988, shortly after the region asked to be annexed to the Soviet Republic of Armenia, and the conflict intensified in 1992 when Nagorno-Karabakh asked to become an independent state, as had Armenia and Azerbaijan. A cease-fire has been in effect since 1994, with Nagorno-Karabakh now functioning as an independent republic.

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reconstructive surgery. Gwork, back in Armenia last May, will return to Yale later this year as a Fulbright scholar to conduct clinical outcomes research with cardiologist Harlan M. Krumholz, who came to New Haven as a Fulbright scholar to perform three open-heart surgeries a day and was ginning widely when I last saw him.

Since arriving at Yale as a first-year medical student in 1997, I have had five more opportunities to return to Armenia. Each trip has been a chance to reformulate plans, to re-evaluate decisions and to reflect. These trips have been a break from the ordinary and a chance to understand how truly fortunate we are. For me, travel has served as both a catalyst and a period of contemplation and intervening periods of action. I began my thesis, Leg of American, Public and Policy Barriers to the Development of Organ Donation and Transplantation in the Republic of Armenia, in 1998 in cooperation with the Armenian Ministry of Health.

My initial contact with the Department of Plastic and Reconstructive Surgery at the University of Michigan Medical Center in Yerevan was as an instrument manipulator. At this time, I had been studying for the last six years and an education in reconstructive surgery that has continued despite the distance. Gwork and his colleagues have shared their work with me via long-distance, e-mailing images of their most interesting cases. I have spent long hours with Gwork and his colleagues there...
New chairs appointed in three departments; clinical leadership changes

Dean David A. Kesler, M.D., has announced the appointment of three new chairs to lead the departments of Cell Biology, Pharmacology and Surgery.

Ira M. Elman, Ph.D., became chair of the Department of Cell Biology in December. Elman, who earned his doctoral degree in genetics from Yale in 1978, has been on the faculty since 1981. He is a member of the Ludwig Institute for Cancer Research, which provides research support to his laboratory and increasingly to Yale as a whole, and serves as editor-in-chief of The Journal of Cell Biology and on the editorial boards of Cell and The Journal of Experimental Medicine. He is also a professor of immunobiology and the founding director of Yale's interdepartmental graduate program in immunobiology and the founding director of the Biological and Biomedical Sciences (BiMS).

Elman's research focuses on how cells control the composition of their intracellular membranes. He is credited with the discovery and definition of cell organelles known as endosomes, which enable cells to take up macromolecules such as hormones, and with the identification of mechanisms enabling individual cells to generate and maintain the asymmetries required to produce complex multicellular structures such as organs and tissues. His laboratory group is now investigating the cellular basis of the immune response and has revealed the inner workings of dendritic cells, which are uniquely responsible for initiating virtually all known immune responses. Lynn Coffer, Ph.D., associate professor of genetics and cell biology, will succeed Elman as director of the BiMS.

Joseph Schlesinger, Ph.D., arrived at Yale on Feb. 1 as the new chair of the Department of Pharmacology. Schlesinger, who heads the pharmacology department at New York University School of Medicine and directed the Skirball Institute of Biomedical Research, is one of a handful of scientists leading the signal transduction field. For the past 25 years he has been the single most visible figure in the area of signal transduction via receptor tyrosine kinases, molecules at the cell surface that tell cells when to grow or stop growing. Schlesinger, who was elected a member of the National Academy of Sciences last year, is one of the most frequently referenced authors in biomedical science and a co-founder of Abgen Inc., a biotech company in South San Francisco that was acquired in 1999 by Pharmacia and Upjohn. He serves on the boards of a dozen journals, including The EMBO Journal, Cell, and Molecular Cell. In conjunction with Schlesinger’s arrival, the school will renovate portions of the B-wing of Sterling Hall of Medicine and build a 5,000-square-foot addition.

Robert Udelsman, M.D., M.S.R., M.D.A., will become chair of the Department of Surgery on June 1. Udelsman is currently the Richard Dannatt Professor of Surgery at Johns Hopkins, where he is also director of endocrine and oncologic surgery. Udelsman completed his medical training at George Washington University School of Medicine and Health Sciences and his surgical residency and chief residency at the Johns Hopkins Hospital. In addition, he has completed fellowships in surgical oncology at the National Cancer Institute, in endocrinology at the National Institute of Child Health and Human Development, and in gastrointestinal surgery at Johns Hopkins Hospital. He is research and clinical interests focus heavily on endocrine surgery, particularly endocrine oncology. His clinical practice focuses on surgery of the thyroid, parathyroid and adrenal glands and endocrine-creas. His clinical research focuses on outcome research, particularly on innovative techniques for minimizing the trauma of surgery. These are particularly relevant to laparoscopic adenectomy and outpatient minimally invasive parathyroidectomy.

Dean's office appointments

Several key administrative appointments were announced recently as well.

Richard L. Edelson, Ph.D., ‘70, professor and chair of the Department of Dermatology, was named deputy dean for clinical affairs. His responsibilities include activities related to research, training and service for the Yale clinical enterprise. He will also serve as the chief clinical liaison between the dean’s office and the clinical leadership of Yale-New Haven Hospital.

David J. Leffell, M.D., ’86, professor of dermatology and director of the Yale Medical Group, was promoted to senior associate dean for clinical activities and strategic planning. Leffell will help to develop, initiate and carry out plans necessary for the ongoing growth and sustained health of the medical school’s clinical programs.

Norman J. Siegel, M.D., professor of pediatrics and medicine and chair of the Yale Medical Group’s finance committee, was named senior advisor for planning and priorities. Siegel will lead the school’s ad hoc committee on long-term financial planning. He will also become the school’s chief liaison to its affiliated hospitals in Connecticut, especially in regard to the implementation of the 1998 affiliation agreement between the medical school and the Yale New Haven Health System.

Searches are under way for new chairs for the departments of Obstetrics and Gynecology and Pediatrics and for a section chief in medical oncology.

Aghajanian, Hostetter elected to Institute of Medicine

George K. Aghajanian, M.D., professor of psychiatry and pharmacology, and Margaret K. Hostetter, M.D., professor of pediatrics, chief of the section of pediatric endocrinology and director of the Yale Child Health Research Center, were elected in October to the Institute of Medicine.

Aghajanian was named a senior member and Hostetter a member. Aghajanian is best known for his basic research on drugs and chemical neurotransmission in the brain. His recent work on serotonin and glutamate has influenced investigations into treatments for neuropsychiatric disorders. Hostetter’s research focuses on virulence factors in two important pathogens: Streptococcus pneumoniae, the leading cause of death in infants from respiratory infections, and Candida albicans, the predominant cause of fatal fungal infections in patients with compromised immune function. Hostetter co-founded the first clinic specializing in the medical and developmental evaluation of internationally adopted children and has transplanted this model to Yale. She serves on the council of the National Institute of Child Health and Human Development.

Thomas Steltz honored with Sterling Professorship

Thomas A. Steltz, Ph.D., internationally known for his work in X-ray crystallography, has been honored with an appointment as Sterling Professor of Molecular Biophysics and Biochemistry.

Steltz’s research interests include the molecular structure of proteins and nucleic acids, the structural basis of enzyme mechanisms, and protein–nucleic acid interactions. He and his research team recently made a landmark scientific stride in determining the atomic structure of the ribosome’s large subunit (See Findings, Fall 2000; Winter 2001, page 51).

Steltz joined the Yale faculty as an assistant professor in 1970 and currently serves as chair of the Department of Molecular Biophysics and Biochemistry. Steltz has been a Howard Hughes Medical Institute investigator since 1986 and is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the Connecticut Academy of Science and Engineering.

Patricia Goldman-Rakic named Eugene Higgins Professor of Neurobiology

Patricia S. Goldman-Rakic, Ph.D., a world leader in the study of the brain’s cellular mechanisms for memory and cognition, has been appointed the Eugene Higgins Professor of Neurobiology.

Goldman-Rakic has conducted much of her research on the prefrontal cortex, the brain area most concerned with reasoning and thought. She has studied such issues as the development and organization of this area’s neural circuitry and its physiological and pharmacological properties in relation to its memory functions. Her work has shown how the molecular structure of neural connections constrains these functions.

Before joining the Yale faculty in 1979, Goldman-Rakic was chief of the division of developmental neurobiology at the National Institute of Mental Health. She is a fellow or member of the National Academy of Sciences, the Institute of Medicine, the American Academy of Arts and Sciences, the American Association for the Advancement of Science and the Society for Neuroscience. She served as president of the latter organization in 1999.
Jennifer A. Doumdja, M.D., professor of molecular biophysics and biochemistry and an associate investigator at the Howard Hughes Medical Institute, has been chosen to receive the 2001 E.L. Lilly Award in Biological Chemistry. This award, one of three to be presented by the American Chemical Society's Division of Biological Chemistry in August, recognizes an individual who has accomplished outstanding research in biochemistry that reflects unusual independence and originality. Doumdja’s work is aimed at determining the structural basis of axonal catalysis using X-ray crystallography and biochemistry.

Eileen E. Grant, M.P.H., M.D., associate professor of surgery (otolaryngology) and managing partner of the Southern New England Ear, Nose, Throat and Facial Plastic Surgery Group in New Haven, is president-elect of the American Academy of Otolaryngology Head and Neck Surgery and will assume the presidency in September. Lee is the author of Essential Otolaryngology.

K.J. Lee, M.D., associate clinical professor of surgery (otolaryngology) and managing partner of the Southern New England Ear, Nose, Throat and Facial Plastic Surgery Group in New Haven, is president-elect of the American Academy of Otolaryngology Head and Neck Surgery and will assume the presidency in September. Lee is the author of Essential Otolaryngology.

William H. Prusoff, Ph.D., professor emeritus and senior research scientist in pharmacology, has been honored by the creation of the William Prusoff Young Investigator Lecture Award. The award, supported by an endowment from Bruce M. Kessler, sponsor of the Prusoff Laboratory, will be given annually by the International Society for Antiviral Research. Its intent, the two organizations said in a statement, is to honor “one of the most talented and beloved members of the society and a loyal member since its inception. His contributions to the development of antiviral and anticancer drugs are legendary, and his dedication to mentoring young scientists makes him the obvious choice for this award.”

Heping Zhang, Ph.D., associate professor of epidemiology and a member of the Child Study Center faculty, has been named to the William S. Brookes Professorship in Indian Biostatistics at Yale. The Brookes Professorship is supported by the William S. Brookes Trust: a $1 million bequest by two grateful former students. Zhang was named to the professorship in 2000. The endowed chair was established by the William S. Brookes Trust in recognition of the contributions to the field of medicine and public health of Howard M. Pollack, M.D., former professor of medicine and co-founder of the Yale School of Medicine.

M. Bruce Shields, M.D., professor and chair of ophthalmology and visual science, has been honored by the Duke University Eye Center with a professorship in his name. The endowed chair was made possible by a $1.2 million bequest from two grateful patients. Shields served on the faculty at Duke for 35 years before coming to Yale in 1997.

The following books by or about alumni and faculty have recently been published. Descriptions are provided by the publisher.


Fragile Success: Ten Autistic Children, Childhood to Adulthood and Ed., by Virginia Walker Sperry, M.A., research affiliate in the Child Study Center, and the late Sally Provence; Paul H. Brookes Publishing Co. (Baltimore), 2001. For more than three decades, Sperry meticulously traced test results, experiences, social habits, family life, and work arrangements of 10 individuals with autism. Her book offers a unique child-to-adult look at autism—a severe developmental disorder characterized by social withdrawal and an inability to relate to others—and is an invaluable source of support to parents.

International Public Health: Diseases, Programs, Systems, and Policies, edited by Michael H. Merson, M.D., dean and professor of public health, Robert E. Black and Anne J. Mith, Aspen Publishers Inc. (Gaithersburg, Md.), 2001. By emphasizing diseases, programs, health systems, and health policies, this textbook helps students understand the scope and depth of challenges posed by public health issues and the various approaches nations adopt to deal with them.

Leonardo da Vinci, by Sherwin B. Nuland, M.D. (Yale University Press, New Haven, CT), 1995. "Leonardo was both a scientist and an artist. He is the perfect example of the scientist of the Renaissance. He was a man of many parts and interests, and this book captures his life and work."

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Benefit for the hungry and homeless raises $25,000
New Haven’s mayor, deans Merson and Chase take bids at eighth annual auction.

The eighth annual Hunger and Homelessness Auction achieved a number of firsts in November as it raised more than $25,000 for New Haven charities. For the first time, organizers recruited an auctioneer from outside the medical school — New Haven Mayor John DeStefano Jr. The auction had its own Web site and it expanded from one day to a four-day event, including two days of bidding.

“We wanted to create awareness,” M. Ilaria Parasa, a public health student and one of five auction coordinators, said of the expanded schedule. “Over the course of the four-day activities included a canned-food drive sponsored by the Tercentennial committee at the School of Public Health, the screening of a movie on homelessness, a fast involving approximately 50 medical and public health students, and silent and live auctions offering 234 items and services. Bidding on the silent auction began the day before the live auction. On the block were “25 hours of babysitting,” “editing for two major papers by Yale English LIT. degree holder” and lessons in everything from piano to rock climbing to figure skating.

Coordinators also had practical reasons for spreading the bidding over two days. “We figured it would be more efficient, way of collecting the money,” said Parasa. As a result, said medical student M. At Kromann, the coordinators had $25,000 in hand the day of the live auction.

DeStefano said the first on the list, a plane ride over New Haven piloted by Fred S. Kantor, M.D., 1950-60, the Paul B. Beeson Professor of Medicine. “You can go over the suburbs, too, if you really want to,” said DeStefano. The flight went for $2,000.

This year also marked the auctioneering debuts of public health Dean Michael H. Mer- son, M.D., and Herbert S. Chase, Jr., M.D., deputy dean for education. “What could be more romantic than a July weekend on Martha’s Vineyard for two?” Merson asked, while soliciting bids on the getaway home of Frederick J. Sigworth, 1974-77, professor of cellular and molecular physiology. What question from the audience brought laughter: “Is this a romantic weekend with Dr. Sigworth?”


— John Curtis

The Hunger and Homelessness Auction in December had its own Web site for the first time, but students also resort to old-fashioned chalk for this advertisement on the driveway in front of Sterling Hall of Medicine.

Diana Bojorquez, a third-year medical student, received the Herbert W. Nickenick M.D. Minority Merit Medical Scholarship for 2000, which was announced in the fall by the Association of American Medical Colleges. The scholarship honors the work of M Nick- enick in promoting justice in medical education and health care and is given to outstanding minority medical students who have demonstrated lead- ership in eliminating inequities in those areas.

Corey Martin, a third-year medical student, was one of six scholars selected from applicants representing 35 U.S. medical schools to receive a 2000 Scholarship from the Fiscano Leadership Foundation Inc., the philanthropic foun- dation of the American Board of Family Practice Inc. The scholarships, valued at up to $10,000 each, provide educational training and funding for outstanding third- and fourth- year medical students who have been identified as future leaders in the field of family practice. Martin is helping to establish a Tar Wars Program at Yale to discourage children from smoking, implementing a long-term family physician’s shadowing program for inter- ested medical students, and was a delegate to the Con- necticut Academy of Family Physicians.

— Claire Bessinger

Harkness renovations heralded
High-speed Internet access, other amenities bring aging dormitory up to snuff.

A $10 million renovation of E.S. Harkness Hall has brought new plumbing, heating and electrical wiring to the aging dormitory as well as new windows. In December had its own Web site for the first time, but students also resort to old-fashioned chalk for this advertisement on the driveway in front of Sterling Hall of Medicine.
Reports from Suriname, East Timor and Vietnam

Students return with insights on traditional healing in the Amazon, the effects of war in East Timor and a needle exchange program in Vietnam.

Second-year medical student Christopher Herndon spent last summer in Suriname’s Amazon jungle working on a project that seeks to improve the health care of indigenous people while preserving the skills of their traditional healers. Shamaris, Herndon said, possess a wealth of information about medicinal plants and herbs in the Amazon. Yet the Westernization of their cultures has led to a loss of that knowledge. “Many of these shamans are over 80 years old,” Herndon said during a presentation in October. “I don’t have apprentices to whom they can transmit this knowledge that has been accumulated over the years.”

Medical Mission Suriname, which delivers primary care to remote regions of the country, has begun a pilot program in which shamans work alongside primary care physicians. Shamans and physicians refer patients to each other and participate in joint workshops to learn about their respective healing systems. “This is an unprecedented opportunity to create a model for the integration of traditional medicine into primary care delivery in indigenous communities throughout tropical America,” Herndon said.

He was one of three students to make presentations at the Fall Symposium, Poster Session and Reception sponsored by the Committee on International Health. The annual event, held on Oct. 11 last year, highlights the work of students in medicine, public health, nursing and the Physician Assistant Program who have conducted research abroad. Joining Herndon in making presentations in the Hope Building were Bahar Firoz, a second-year medical student in the Physician Assistant Program who has conducted research abroad, and Erik Weiss, the medical student who portrayed John Curtis, a Yale faculty member and expert in tropical diseases who encouraged students to learn by doing. “In all of you who traveled abroad to do research, he would have found a kindred spirit,” said Curtis L. Patton, Ph.D., professor of epidemiology (microbiology) and director of the O’Dows program.

Firoz surveyed the mental health of patients in the Baro-pite Clinic in Dili, the capital of East Timor. After Indonesia invaded and occupied the country in 1975, the East Timorese population lived under martial law in a land where assassinations, kidnapping, rape and torture were commonplace. Violence increased in late 1999 after East Timor, in internationally monitored elections, voted for independence.

Firoz recounted the story of a 27-year-old woman who fled to the mountains during an attack by militias opposed to independence. After three weeks in hiding, the woman returned to her village to find her home and possessions burned. “This is very common in the lives of most people I spoke with,” Firoz said. Of the more than 100 patients she interviewed, 14 percent had experienced similar trauma and lost family members in the violence. A preliminary data analysis found depression in about 40 percent and symptoms of post-traumatic stress disorder in about 7 percent of those she interviewed. “The timing of this was very important,” Firoz said of her study, which was done on-site within months of the trauma. “Most studies on mental health are done a couple of years after the event.”

Phan, who was born in the United States to Vietnamese parents, traveled to Ho Chi Minh City, home to almost a third of Vietnam’s 200,000 injecting drug users. The Hope Café is one of two sites in the city offering clean syringes to drug users, who are most at risk for infection in the country’s growing HIV epidemic. “It is the first big step at embracing harm reduction,” Phan said of the cafe.

Most of the 150 drug users who responded to Phan’s survey reported that heroin was their preferred drug and that they did not share needles. Despite high levels of syringe hygiene, they reported low levels of sexual-risk reduction. Prevention efforts, Phan said, should be expanded to all 32 districts in the city, and their scope should include prevention of sexual transmission of HIV.

—in John Curtis

Chase scenes

Second-year show an initiation of sorts for new education dean.

Anyone who has met the relentlessly upbeat deputy dean for education, Herbert S. Chase Jr., M.D., M.P.H., knows that he’s not like the grumpy schemer depicted in 2001: A Chase Odyssey, the Class of 2001’s second-year show. As most faculty members will attest, being lampooned in the show is a rite of passage, a sign of acceptance. For Chase, who took up his duties in July, this show was his initiation.

The plots of most recent shows revolve around an errant faculty member engaged in shenanigans for the perceived betterment of the medical school. This show was no exception. It has Chase arriving at Yale after two decades at Columbia only to be horrified by what he finds — boring lectures, low attendance at classes and widespread apathy among students, all things which surely never happen here. It is scheme to subvert the hallowed Yale System by suborning students to fail exams goes awry when a copy of the plan finds its way into The Kit, the orientation guide for first years. With the help of Yale’s own Charlie’s Angels, Chase succeeds in confiscating all but one of the kits. The plot then detours through the medical school as it follows the remaining kit, poking fun along the way at targets such as Britney Spears, medical students, Top Gun, the med school dining hall, Japanese cooking shows and, of course, the Yale System.

In the end Chase comes to realize the virtues of the Yale System and all is forgiven. Erik Weiss, the medical student who portrayed Chase, was joined onstage by three deans who bought their way into the show at the annual auction to benefit the homeless and hungry. Associate Dean Ruth Katz, M.D., M.P.H., and Associate Dean for Student Affairs Nancy R. Angell, M.D., M.P.H., M.S., M.D. ’80, I.B.S. ’91, appeared onstage as a ladybug and bumblebee. Dan David A. Kessler, M.D., hopscotched his way in a bunny suit, with his microphone disguised as a carrot. “At this year’s auction, I bid some money,” said Kessler, “for the tune of Louis Armstrong’s Wonderful World. ‘That’s why I’m here, dressed as a bunny. And I think to myself, what a wonderful school.’

—in John Curtis
This dispatch arrived recently from A. Harry CMP, M.D. 47. “At the age of 77, I am still active in my specialties of neurology and psychiatry; my major responsibility is the administration of an electroencephalographic service in a hospital in the inland Brazilian city of Bahia, population 350,000. In the past, I have authored two books and various articles on psychiatry and neurology in The Lancet, The British Journal of Psychiatry, and three Brazilian medical journals: the books were published by an American medical publisher. I have four children, ranging in age from 12 to 49—M. Inara Celeste, America Araujo, Marcola Arthur and Jose Enrique—and numerous grandchildren. Life for me, like most people in Brazil, goes on largely in the context of a large extended family of cousins, in-laws and others. My wife, Eliza Mendes de Almeida Chapman, and I are in reasonably good health. I was last in the States in 1965, but I speak English every day in hearing from anyone who remembers me. Any letter sent to Chapman, CP 98, 41000- 000, Comodoro BA, Brazil, will reach me.”

40s

This is the story of medical school—by a student and postdoctoral fellow in biophysics at Yale in 1940, when the way scientists classify life on Earth, and the existence of a third group of organisms, the archaea, which are very simple in genetic makeup and tend to live in extreme environments thought to resemble that of Earth in its early stages. I am a molecular biologist turned eukaryote,” says Woese, who holds the Stanley O. Ikenberry Endowed Chair at UI. He calls the discovery of the archaea “central to the understanding of the nature of the ancestor common to all life.”

50s

In recent years I have continued on page 41.

After 60 years, “I’ve never left” Nicholas Spinnelli, a devoted son of Yale, finds that dedication is a two-way street.

In 1941 Nicholas P. Spinnelli, M.D., ’44, crossed the campus from Yale College, where he had spent his undergraduate years, to begin the next phase of his education at the School of Medicine. Six decades later, he would say, “I’ve never left.”

Born in Stratford, Conn., Spinnelli never strayed far from his roots. After service in the Army he returned to his hometown and to Yale, where he completed a residency in internal medicine. He always found time for his alma mater. He taught and counseled medical students, helped them with scholarships and, years later, provided funds for the first White Coat ceremony, which has become an annual event to welcome the first-year class.

In honor of his contributions to the medical school, two rooms were dedicated in Spinnelli’s honor on Nov. 10, one at the McGraw Neurosurgery Building of the School of Medicine at Yale and another in the Fielding-West Health Sciences Library on the New Haven campus.

In the remarks to faculty, students, and their family, Mount Sinai, New York, president and CEO and outgoing dean, said, “I can’t tell you how gratifying it is to bring Dr. Spinnelli and his wife, Pat, to tour the field of the school we both call home. We are honored to have him here today.”

Spinnelli’s contributions to the medical school were honored with the School of Medicine’s distinguished alumni service award in 1994 and the Yale Distinguished Alumni Service Award in 1996. He has also served as president of the Association of Yale Alumni in Medicine (AYAM) from 1991 until 1998, when he was named director of alumni affairs by then-Den Leon Rosenberg, M.D. Since retiring as director in 1999, Spinnelli has remained active in alumni affairs. He also serves as president of the Association of Yale Alumni in Medicine (AYAM) from 1991 until 1998, when he was named director of alumni affairs by then-Den Leon Rosenberg, M.D. Since retiring as director in 1999, Spinnelli has remained active in alumni affairs. He also serves as president of the Association of Yale Alumni in Medicine (AYAM) from 1991 until 1998, when he was named director of alumni affairs by then-Den Leon Rosenberg, M.D. Since retiring as director in 1999, Spinnelli has remained active in alumni affairs.
Harvard Medical School and Children’s Hospital Boston. I am also affiliated with the Institute for Quantitative Health, Medicine, and Society, which focuses on ethics, spirituality and disability. I am co-editor of the journal of Religion, Disability and Health, which publishes articles on the intersection of spirituality and health in caring for and being with people with disabilities. My research also involves work on the etiology, definition, classification, treatment and prevention of intellectual disability (mental retardation).

H. Steven Moffic, M.D., professor of psychiatry and behavioral medicine at the Medical College of Wisconsin, reports that he was the only psychiatrist appointed to the Wisconsin Turnpoint Initiative, a large effort to transform the state’s public health system and create a healthier Wisconsin. Moffic also received a startup grant to establish a mental health program for refugees in Milwaukee, who number about 20,000 and come from Southeast Asia, Eastern Europe, Africa and other regions.

Alison I. Barel, M.D., a gynecologist and gynecologist at Kaiser Santa Teresa in California, received the Alumnae Medal of Honor from Mount Holyoke College in South Hadley, Mass., at its 1999 reunition celebration last June. The medal recognized Barel’s service to the college and her work as a member of its board of trustees. Barel has been chosen by the People to People Ambassador Programs of Spokane, Wash., as a delegate to China for two weeks beginning June 1. The program sponsors groups in various professions to meet with colleagues in other countries. This group will be touring hospitals, attending roundtable discussions and learning about Chinese medicine.

Richard L. Neubauer, M.D., ’78, medical staff education director at the Alaska Regional Hospital, has been elected director of the Alaska chapter of the American College of Physicians-American Society of Internal Medicine (ACP-ASIM). He was installed in the post at the national organizations annual meeting in Atlanta last April. His responsibilities during the four-year term will include planning scientific meetings, credentialing new members and disseminating college policy.

Alfredian Alaskan members by serving on the national ACP-ASIM board of governors.

Carroll Schilling, M.D., ’73, chief executive officer of The Enterprise Center, a nonprofit organization created in 1999 by Yale University, the United Illuminating Co. and New Haven Savings Bank, is being honored as one of” the most important people in New Haven.” Schilling was formerly the entrepreneur-in-residence at the Yale School of Management, helping students in the M.A. program to evaluate the business potential of discoveries made at Yale and in the community. He also serves on the business and industry committee of the Association of Yale Alumni in Public Health.

Thomas D. Fogel, M.D., ’72, owns and operates eight free clinics in California, and is past president of the American Academy of Family Physicians. He is also past president of the American Cancer Society’s California division and is a member of the organization’s national board of directors.

Alumni Hall of Fame of the North Plainfield (N.J.) High School for a lifetime of achievement in the field of medicine. Schilling also serves on the board of directors of the Wisconsin T urning Point program to evaluate the business potential of discoveries made at Yale and in the community. He also serves on the business and industry committee of the Association of Yale Alumni in Public Health.

Alumni Notes (continued from page 52)

Margaret L. Neubauer, M.D., ’78, a cardiologist to President Dwight D. Eisenhower. "After a short while, I decided the grass was not greener there and when I came back I was content," he said.

From World War II until the late 1960s, Kushlan practiced internal medicine and gastroenterology in New Haven and taught as a member of the clinical faculty. He served from 1967 until 1997 as associate physician-in-chief at Yale New Haven Hospital and also as clinical professor of medicine. After retiring from the latter position in 1997, he retired as a Harvard medical and legal office for the next five years. An active member of the alumni association since 1936, his bequest and endowed professorship was established three years ago with a life income. Kushlan’s work in gastroenterology was centered around Yale, "Kushlan said. The Peter Parker M. edal, which Kushlan calls the capture of his medical career, is named for a youth cultural missionary to China educated at Yale’s medical and divinity schools. The medal is the first recognition Kushlan has received at Yale. The Samuel D. Kushlan Lecture, established 12 years ago, brings some of the best and brightest names in the field of gastroenterology to campus annually.

Almost seven decades later, Kushlan, who has dedicated his life to Yale and New Haven, was awarded the medical school’s highest honor, the Peter Parker Medal. Kushlan, who celebrated his 89th birthday on Feb. 27, has never retired from medicine. He is far to help students and his curiosity about science make him a familiar figure on campus particularly in the Department of Internal Medicine, where he attends grand rounds every Thursday and morning medical report nearly every day.

It’s like having a mystery story every morning..."

Send alumni news items to: Claire Borsinger, Yale Medicine Publications, P.O. Box 7012, New Haven, CT 06510-7012.
In memoriam

James F. Ferguson Jr.

Dr. George Horstmann, a pioneer in the field of medicine and health, died on July 3, 1981. He was a member of the medical school and a scientist who helped battle a polio epidemic in New Haven. Horstmann was a founder of the chair in epidemiology and a leader in the study of polio. He also wrote a text on the use of an obscure drug from the Amazon named curare. Horstmann was a member of the National Academy of Sciences, consult for pharmaceutical firms and served on committees of the National Institutes of Health.

During World War II, Horstmann conducted research on the use of an obscure drug from the Amazon named curare. Horstmann was a member of the National Academy of Sciences, consult for pharmaceutical firms and served on committees of the National Institutes of Health.

Louis V. Avioli, M.D., ’57, the Sidney M. Shoenberg Professor of Medicine, professor of orthopedic surgery and director of the Division of Bone and Mineral Diseases at Washington University School of Medicine, died of cancer at his home on Nov. 21. He was 68.

Avioli graduated magna cum laude from Princeton University. After receiving his medical degree at Yale he trained at the University of North Carolina at Chapel Hill and the National Institutes of Health. In 1960 he joined the faculty of the New Jersey College of Medicine and in 1966 began his career at Washington University as an assistant professor of medicine.

Avioli served on the NASA Skylab Project. The Endocrine Society Council and the board of the Page’s Disease Foundation and as a consultant to the Public Health Service of China, Finland, Australia and Canada. In 1979 he founded the American Society of Bone and Mineral Research, and in 1994 he founded the Association of Osteobiology. James F. Ferguson Jr., M.D., ’40, died July 1. He was 61.

Born in New Haven, Ferguson graduated from Yale College in 1936 before entering the School of Medicine. After his graduation he served his internship in New Jersey, then returned to Connecticut in 1949 to be a family doctor in Wallingford. He was in practice there until his retirement in 1978.

From the Winter 1975 issue of Yale Medicine: “Dr. George Palade, chairman of the section on cell biology, was awarded the 1974 Nobel Prize for Physiology or Medicine, for his discoveries concerning the structural and functional organizations of the cell. He shares the honor with Dr. Albert Claude, his former professor and colleague at Rockefeller University, and Dr. Christian de Duve...” Palade’s skill and his enthusiasm for unraveling the intricacies of the fine structures of cells attracted many students and research associates to his laboratory... There is seemingly no letup in the pace at which new and important observations emerge from the Palade laboratory.”
rional Medal for Excellence in Preventive Medicine. He came to Yale in 1940. As the Darien Foundation Fellow in Physiology and remained a research fellow in physiology until 1942. Kaufman was in private practice in Connecticut and then became an executive with a New York medical information company until his retirement in 1971. Kaufman served for many years as American editor-in-chief of the International Archives of Allergy and Applied Immunology.

Robert I. Levy, M.D., ’63, an international authority in lipid metabolism and a research visionary who linked cholesterol reduction to the prevention of coronary disease, died of pancreatic cancer on Oct. 28 at a New York hospital. He was 63.

Levy, born in the Bronx and a resident of Manhattan, N.Y., was a graduate of Cornell University and Yale School of Medicine. He joined the National Heart, Lung and Blood Institute at the NIH in 1965 and served as its director from 1973 to 1980. At the NIH, he studied lipid disorders and atherosclerosis. He was a co-discoverer of the internationally used classification system of hypercholesterolemia, describing five distinct types. When awarding him a public health award in 1980, the Lasker Foundation cited his work in the Hypertension and Follow-up Program, which proved that the treatment of even mildly hypertensive patients was lifesaving.

Levy’s unique professional experience and expertise led him to serve as a vital link and advocate for government, academia and industry. He was an active member of the Institute of Medicine of the National Academy of Sciences. In 1981, Levy joined Tufts University School of Medicine as vice president and dean. He was also vice president for health sciences and professor of medicine at the Columbia University College of Physicians and Surgeons. From 1988 to 1993, he served as president of the Sanford Research Institute, and in 1992, he joined American Home Products Corp. (now) as president of its Wyeth-Ayerst Research division. In 1998 he was named senior vice president for science and technology at 119.

Margaret S. Lyman, M.D., ’50, died Nov. 27 at the Midhudson Convalescent Center in Middletown, Conn. She was 96.

Born in Middletown, Conn., Lyman graduated from Smith College before entering the Yale School of Medicine. In 1964 Lyman joined the faculty at New York University Medical Center as an assistant professor of pediatrics. From 1988 until her retirement in 1992, she was an associate clinical professor of pediatrics. She was also on the staff at Bellevue Hospital.

She provided pediatric care to the children of recovering addicts at Odyssey House and volunteered her time providing recreational activities for residents of the Queens Convalescent Home, now Highview Health Care Center. Lyman was on the board of directors of the Lyman Farm in Connecticut and wrote a supplement to the genealogy of the Lyman family.

Joseph L. Melnick, Ph.D., ’59, a founder of modern virology who taught epidemiology at Yale, died of Alzheimer’s disease on Jan. 6 in Houston. He was 86.

Melnick was born in Boston and moved to New Haven as a boy. He graduated from Wesleyan University in 1939 and then earned a Ph.D. in physiological chemistry at Yale. Melnick stayed at Yale, becoming a professor of epidemiology in 1954. He became a chief virologist at the division of biological standards at the National Institutes of Health in 1957. He moved to Baylor University in 1958, where he became the founding chair of the medical school’s Department of Virology and Epidemiology.

A pioneer in polio research and a leader in environmental science, Melnick was among the first to discover that the polio virus belonged to a larger group known as the enteroviruses and that these viruses only rarely invade the central nervous system. In the early 1940s, Melnick found that the virus appeared in sewage when new polio infections peaked in the summer, but dwindled at other times of the year. That insight pushed him to the forefront of environmental virology work.

Melnick began his scientific career at Yale under polio expert John R. Paul, M.D. Melnick died five days before Dorothy M. Horstmann, M.D., another polio pioneer and Yale colleague with whom he wrote scientific papers.

James J. Smith, M.D., ’40, died Sept. 9 in Washington D.C. He was 88.

At the age of 14 Smith joined the Brothers of the Christian Schools to prepare for a career in teaching and philosophy. His study of the scholastic philosophers and their dictum “a healthy mind in a healthy body” led him to petition the Vatican for a release from his vows so that he could study medicine. While at Yale School of Medicine he married classmate Beatrice Goldscheider, who was his professional collaborator for 54 years.

Smith served as his intern at Bellevue Hospital and was a medical officer at the U.S. Army First General Hospital during World War II. He was later appointed chief of medical intelligence for the Office of Strategic Services in Europe. He returned to New York, where he founded and directed two research laboratories and an outpatient clinic at New York University-Bellevue Medical Center. In 1946 Smith began a private practice in internal medicine and endocrinology. He also developed and promoted the uses of ultrasound and received a Pioneer Award from the American Institute of Ultrasound in Medicine.

Smith held faculty appointments at George Washington University School of Medicine and Georgetown University’s Center for the Advanced Study of Ethics. From 1972 to 1985, as director of the Nuclear Medicine Service for the Veterans Administration (VA), he devoted considerable energy to developing a state-of-the-art service for the VA network of 173 hospitals. In 1981, a wing of the Salt Lake City VA hospital was dedicated to him.

Continuing Medical Education at Yale

For information, contact the Office of Postgraduate and Continuing Medical Education, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520. Tel: (203) 785-4578

September 7
Friday
Glucoma Symposium
Course Director: M. Bruce Shields, M.D.
Farmington Marriott, Farmington, Conn.

September 7-8
Friday and Saturday
Workshop on Positron Coincidence Imaging
Course Director: Chin K. Ng, Ph.D.
New Haven Hotel

September 19-22
Wednesday to Saturday
The 25th Yale PA Board Review/Primary Care Conference
Course Director: Mary Warner, PA-C, M.M.Sc.
Mary S. Harkness Auditorium, Sterling Hall of Medicine

October 5
Friday
Growing Up with HIV
Course Directors: Ann Williams, R.N.C., Ed.D., F.A.A.N.
and Jane Burgess, A.C.R.N., M.S.
Farmington Marriott, Farmington, Conn.

October 26-27
Friday and Saturday
Irritable Bowel Syndrome
Course Director: Irvin Modlin, M.D.
Omni Hotel, New Haven

November 6
Tuesday
Fourth Annual Frisbee Foundation Stem Cell Symposium
Course Director: Edward Snyder, M.D.
Omni Hotel, New Haven